

WHO – DFC sponsored Project on

**DEVELOPING GUIDELINES FOR CLINICAL
RESEARCH METHODOLOGY IN AYURVEDA**

PRINCIPAL INVESTIGATOR

PROF. M. S. BAGHEL

INVESTIGATOR

DR. RAJAGOPALA S

**INSTITUTE FOR POSTGRADUATE TEACHING &
RESEARCH IN AYURVEDA**

GUJARAT AYURVED UNIVERSITY

JAMNAGAR – 361 008

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PREFACE

Traditional medicine in general is the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses [3]. The theories and concepts of prevention, diagnosis, improvement and treatment of illness in traditional medicine historically rely on a holistic approach towards the sick individual, and disturbances are treated on the physical, emotional, mental, spiritual and environmental levels simultaneously. As a result, most systems of traditional medicine may use herbal medicines or traditional procedure-based therapies along with certain behavioural rules promoting healthy diets and habits. Holism is a key element of all systems of traditional medicine. Ayurveda, the indigenous medicine to India involves all the above said facts. In addition to the physical and mental health component, it adds the spiritual and social health also in to account and give a complete definition to health which of course a unique to itself.

Research is a process that converts data into information, information to knowledge and knowledge to wisdom and practice. Ayurveda, the ancient life care wisdom of Indian subcontinent is an apt example for this; the vast observations (research of that ancient time) of the Seers of the yore were converted into a huge repository of information and knowledge which is in practice till today without any alterations in its original thoughts and principles. Ayurveda is not an experimental based medical system, but experience based medical system being practiced since centuries with a profound literary heritage. Research should be a balanced approach, comprehensive and having equal emphasize on literature, experimental and clinical fields. It is a continuous process and should be able to put its impact on the fields of academics, pharmacy and practice. The ancient research methodology and the present day modern research methodology are totally different in their path, though the end point is same i.e. benefit to patient.

Present day Ayurvedic researches are failing in this aspect as they are unable to disseminate the knowledge gained from the exercises. Ayurvedic research of the last 50 years has not changed the practice of Ayurveda neither text books were enriched with these new researches. Prof. RH Sigh has made the same observation *“Ongoing research is proceeding in such a way that it is of more value to modern medicine than Ayurved. It doesn’t strengthen Ayurveda and Ayurvedic practice, Ayurvedic research outcomes have not trickled down to professional use; neither do they benefit Ayurveda students or practitioners”* [1]

The current methodologies of research being applied in Ayurveda should be analyzed critically. Starting from Col. Chopra to many of his disciples have worked extensively on herbal pharmacology, but except for Reserpine, not much quotable evolved. CDRI (1965-1975) made attempts to screen more than 2000 medicinal plants for their biological activities and this decade long arduous, expensive study could hardly produce any results. Renowned pharmacologist Ranita Aiman, a

disciple of Col. Chopra while delivering the Chopra memorial oration ^[2] at AIIMS (1978) accepted this fact and suggested that perhaps the fundamental principles of Ayurveda have their significant role in defining the pharmacological activity of plants, and called Ayurveda as “sleeping beauty” and expected that some day it will awake which is still elusive.

The drug researches conducted in the field of Ayurveda for the last six decades have not enriched the Ayurvedic understanding or Ayurvedic concepts though these researches have created a better understanding of Ayurveda by the modern medical fraternity. The researches on herbal pharmacology have led confirmation of few concepts like reverse pharmacology, use of whole crude drugs in place of isolation of fractions for clinical trails etc. These leads have changed the mindset of researchers in herbal medicine. In last decade, too much of interest has been generated in medical world regarding Ayurveda and other traditional medicines. However, these all efforts have led to the enrichment of the knowledge of the modern medicine and inclusion of some Ayurvedic herbs in to the Modern Materia Medica (IP/BP).

During the last couple of decades, knowledge and use of Ayurveda medicine has expanded globally and has gained popularity. It has not only continued to be used for primary health care in India, but has also been used in countries where conventional medicine is predominant. With this expansion of the use of Ayurveda medicine worldwide, safety and efficacy as well as quality control of medicines and procedure-based therapies have become important concerns for both health authorities and the public. There are no international standards and appropriate methods for evaluating traditional medicine. The challenge now is to ensure that traditional medicine is used properly and to determine how research and evaluation of traditional medicine should be carried out.

The quantity and quality of the safety and efficacy data on traditional medicine are far from sufficient to meet the criteria needed to support its use worldwide. The reasons for the lack of research data are due not only to health care policies, but also to a lack of adequate or accepted research methodology for evaluating traditional medicine. It should also be noted that there are heaps of published and unpublished data on research in traditional medicine, but further research in safety and efficacy should be promoted, and the quality of the research should be improved. The methodologies for research and evaluation of traditional medicine should guarantee the safety and efficacy of herbal medicines and traditional procedure- based therapies and also they should not become obstacles to the application and development of traditional medicine following its holistic principles. Thus, the efficacy of traditional medicine has to be evaluated in an integrated manner.

Since last few years it has been felt that there is a great need for a separate research methodology for Ayurveda particularly for the clinical research. WHO has made an attempt in this regard for Traditional medicines in 2000 ^[3] (WHO/TRM guidelines). The guidelines focus on the current major debates on safety and efficacy of traditional medicine, and are intended to raise and answer some

challenging questions concerning the evidence base. The guidelines present some national regulations for the evaluation of herbal medicine, and also recommend new approaches for carrying out clinical research. The quality of life (QOL) manual was developed by the WHO Program on Mental Health, and may also be used to evaluate the results of clinical research in traditional medicine [3]. This document has strongly recommended the exhaustive training of man power of Ayurvedic institutions for research methodology. But the system has failed in production of true Ayurvedic researchers owing to the facts narrated above i.e. lack of a clear understanding of modern research methodology as well as its non-suitability for Ayurveda and other Traditional systems of Medicines. Because of this various researchers in the country started to feel that conventional clinical trial regimen is not fit for Ayurveda. Dr. Ram Manohar [4] has opined that Ayurveda is based on 5000 years of clinical practice hence in place of conventional EBM (Evidence Based Medicine) clinical trials, practice based clinical trials should be organized for Ayurveda.

This is my strong view that the regime of EBM clinical trial with its evidence based hierarchy is not fit for Ayurvedic clinical trials, limitation of EBM clinical trial regimens limit the use of Prakriti, Dosha Anubandha-Anubandhyatwa, Arambhaka and Anugami Dosha Vikalpa, Swanidana Prakopa Avaranajanya Prakopa, Prakriti Sava Samaveta – Vikritivishamasaveta, Amavastha, Pakvavastha, etc. which leads to variation of dose, dosage, form, Aushadhasevana kala, Anupana - sahapanaa, Pathya-apathya, therapeutics like Panchakarma and Kriyakalpa procedures to be adopted etc., hence if desired results of actual clinical practices are to be recorded, the protocols should be prepared on these lines supported by EBM suitable for the purpose. Ayurveda requires research in the areas of Ayurvedic diagnostic principles taking into consideration of Dosha, Dushya, Agni, Ama, etc. units of Samprapti , so that the Ayurvedic diagnosis can be made more pinpointed leading to more effective treatment strategies. Ayurveda is a pure science based on strict logical explanation, which are called Darshana. In last 2000 years, very less conceptual development in Ayurveda is evident however whatever has been added is less explained or obscure. Due to socio-political reasons, redaction (Pratisamskara) of Ayurvedic Samhitas could not be done in last 2000 years which was mandatory every 1000 years. This means that the present Samhitas are lagging behind to present the knowledge. Many of the diagnostic tools have been missed in between and new principles like Avarana added later on are remained unexplained.

Need of Ayurveda clinical trials is for revalidation of facts enumerated in Ayurvedic classics leading to the explanation of fundamental principles, to find out better treatment modalities for the existing diseases and for newer diseases, to standardize the treatment procedures scientifically and to establish dose, duration, indication and side effect profile of any given drug. Hence, if Ayurveda have to provide much needed support to the modern medicine in the management of the diseases it requires more tedious research in the areas of fundamental principles and diagnostic tools in place of drugs. For this purpose the conventional modern research methodology is not suitable and there is a need for a paradigm shift in the research methodology of Ayurveda.

Dr. Nandini Kumar ^[5] has also opined that there is need to stem the misuse of Indian traditional knowledge and there is dire need to gear up ourselves to show the science carried out in Ayurvedic way but also use modern science to produce interpretative evidence. Though ICMR advocates that protocols for Ayurvedic researches had been prepared in consultation with ayurvedists however it does not fulfill the actual need of strengthening Ayurveda.

Dr. Valiathan and his team, Dr. Ashok Vaidya and his team have started 'Science Initiatives in Ayurveda', in order to explore Ayurvedic fundamentals like Prakriti in the parlance of Genomics etc., for the welfare of the Humanity which is most welcome. Genetic and epigenetic responses are being understood by some scientists in the light of Prakriti, Oja, Bala and Rasayana. This is the beginning of the study and will not go fat, if all the fundamental principles of Ayurveda are not taken into consideration while initiating these projects.

Ayurveda looks like a mesmerizing 'sleeping beauty' for the modern medical scientists, this illusion is due to the failures of modern medicine in curing metabolic disorders, autoimmune disorders and cancer etc., however Ayurveda has much more to offer than Oja, Bala and Prakriti. There are many fundamental principles in Ayurveda which can be helpful in understanding the maladies in modern medicine. But more than these there are many more fundamental principles described in Ayurveda in brief and they are still not understood properly by ayurvedists themselves. So while talking to holistic approach of Ayurveda, the principles of Ayurveda should be applied in toto.

Looking into all these facts, years long effort on developing a pure ayurvedic patient screening proforma was prepared, and with the help of learned Ayurveda scientists / educationists it was revised, later a proposal was sent to WHO Country Office India for conduct of a national workshop on this topic, it was with the timely support received from WHO, we could organize a national workshop in November 2009, srotas wise symptoms were graded for clinical evaluation, considering some major diseases of particular srotas also into account. But these are in Sanskrit language and solely can be understood by a person who is well versed in Ayurveda terminologies and concepts. The finalized drafts were again scrutinized in an expert meet held in March 2011, and a draft document is prepared, now it is in your hands. This documents are again not final, it requires field trails, the lacunae are to be identified and possibly after a couple of years of field trails we could be in a position to call it standard.

The purpose of the guidelines are - These guidelines have been developed to improve the situation described above, and to promote the proper use and development of Ayurveda particularly to have a standard clinical research pattern all over. It also aim to develop specific guidelines for clinical research for Indian system of medicines i.e. Ayurveda, and also to develop a specific assessment criteria based on disease and QOL parameters as explained by Charaka viz. Agnibala, Dehabala, Chetasa Bala. The second aim is to prepare standard scoring pattern for classical Ayurvedic symptom / signs to give more objectivity to subjective sign and symptoms so that uniformity and reproducibility of data is

made easy, and to improve the quality and value of research in Ayurveda and this in turn will provide appropriate evaluation methods to facilitate the development of regulation mechanism in Ayurveda research.

It is my strong believe that the outcome of this format will positively contribute for better understanding of the pathogenesis concepts of Ayurveda in terms of Dosha, Dhātu, Srotas, Guna, etc. and finally will help in strengthening Ayurveda. Now it is high time that we should take cognizance that whether the use of conventional research methodology for Ayurveda research or to use a separate methodology developed incorporating leads from conventional methods and Ayurvedic principles in a symbiotic manner. I wish this effort will be a starting point in this direction and in the days ahead, we will be in a position to have a strong base of research methodology and clinical research in Ayurveda.

- **Prof. MS Baghel**
Director, IPGT&RA
Principal Investigator

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Dr. Rajagopala S
Project Co-investigator

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A GUIDELINE TO USER'S OF THIS MANUAL

- This clinical research format is meant for clinical research personnel who have prior exposure to Ayurveda and Ayurvedic terminologies.
- This guideline is presented in three parts, first part deals with general instructions and some examples for calculation of overall effect of therapy and *Agnibala* of the patients. The second part in CRF – 1 which is for patient data recording, a preliminary screening Proforma and the third part comprises of the gradation of symptoms. The gradation of symptoms are presented in two forms, viz. one general symptoms seen in *Srotas* and second is with symptoms specific diseases corresponding to the *Srotas*.
- **CRF – 1** [Clinical Research Format – 1] comprises of assessment of *Roga bala Deha bala Agni bala* and *Satva bala* of the patients as per the description given in Charaka Samhita (Ref. Charaka Samhita, Vimana Sthana Chapter 4).
- The specific disease related symptom presentation should be appended with CRF – 1 i.e. questions specific to the diseases according to the *Roga* and its variants such as *Dosha* etc.
- *Roga Bala Pariksha* is done in three headings viz. *Kapha Varga*, *Pitta Varga* and *Vata Varga*. In each category it is further divided into *Dosha Pariksha*, *Srotas* involvement and other systemic examination findings and supportive modern investigations if any pertaining to these *Srotases*.
- Systemic examinations of the modern clinical methods are included within the *Srotases* concerned, and so no separate systemic examination may be required.
- For each symptom of the *Srotas* involved suitable scoring pattern or gradation to be adopted.
- Some symptoms are seen repeated in many places, such symptoms are kept under ‘General symptomatology’ heading; they are to be applied in required *Srotas* and diseases by the research scholar. Similarly more one type of gradation may be applied to one symptom from different angle of evaluation; they are also kept side by side in the text.
- *Agni Bala*: A *Agni Bala* Index (ABI) calculation is given in this which is basically for *Snehapana*. But the same may be used in other research works too, wherever *Agnibala* is in question.
- With regards to Quality of Life (QOL) parameters, the established WHO’s QOL parameters may be used in research works of Ayurveda.
- Wherever parameter is expressed in terms of numbers i.e. Numerical Data / Quantitative Data (e.g. *Mutra Madhurya* or glycosurea is expressed in terms of percentage; body

temperature in terms of degree centigrade or Fahrenheit), there is no need of any gradation, the number itself is to be considered as grade; increase or decrease (as the case may be) in the number is improvement in the grade of the symptom.

- A ‘*Prakriti* Self Analysis Questionnaire’ and ‘*Prakriti* Analysis Proforma’ (to be performed by the observer) are given as Annexure, which may be used by research scholars to assess the *Doshic Prakriti* of the patients.
- With regards to Good Clinical Practice (**GCP**), the guidelines issued by Dept. of AYUSH for Ayurveda, Unani, Siddha system of medicines is to be followed.
- The ICMR “**Ethical Guidelines for Biomedical Research in Human Participants**” also to be followed in all clinical research projects wherever applicable.
- The **WHO guidelines for TRM** give basic information regarding conduct of clinical research in traditional systems of medicines; the applicable parts may be utilized in Ayurveda clinical research too.
- Ethical clearance from the Institutional Ethics Committee or appropriate body is mandatory for all clinical research projects.
- The plan of research should include specific inclusion & exclusion criteria, good and appropriate (blinding – single/double/triple, black box, pilot study, single case study etc.) study design and the outcome should be evaluated by applying suitable statistical methods. The sample size to be calculated by applying appropriate sample size calculation method as put forth by WHO, ICMR and such other research agencies. For evaluation of the outcome specifically for the *Srotas* the given gradation of symptoms may be used.
- Research personnel are advised to note that where ever short forms are used, it is to be clearly defined.
- A unique arbitrary scoring method has been developed for evaluation of total outcome of the clinical research. This arbitrary scoring method may be adapted to each clinical research where in the total score would be 100; it is divided in four sectors relating to *Rogabala*, *Dehabala*, *Agnibala* and *Chetas / Satvabala*, by giving due consideration and weightage to *Rogabala*. The quality of life outcomes are measured using *Dehabala*, *Agnibala* and *Chetas / Satvabala*. The disease in which *Roga* is strong in comparison to other, then *Rogabala* will get maximum weightage, disease in which *Satvabala / Chetasbala* is weak and needs maximum improvement, there it will get more weightage in this scoring method, however the maximum being 100.

- The research team should decide the arbitrary scoring division in the beginning itself before starting the clinical research work, with a suitable hypothesis so that at the end outcome may be measured.
- All the accepted grading systems of modern medicine to be adopted as such without any alterations in appropriate symptoms or signs.
- The technical words of Ayurveda are given in Sanskrit language in the whole of the text and glossary (meaning near to the Sanskrit word) for the same is also provided.

Overall assessment of therapy:

An arbitrary scoring can be framed by the research team depending upon the disease on which the study is planned and also on the expected outcome. While framing this, the division should be made in such a way that the more severe complaint where the result is highly expected should be given higher preference and the chronic and less important complaint should be given minimum importance. *Deha Bala*, *Agnibala* and *Satvabala* should be given proportionate significance in the 100 marks scoring pattern.

The gradation or score given here are representative scores depending upon the severity of individual symptom and its importance in the particular disease, this gradation may not match with that given in the third part of the manual. Research scholars are at their liberty to make suitable adjustments in the scoring pattern to suit to the disease and the role and importance of that particular symptom in the given disease. Sometimes the scoring may have to be done in decreasing or negative order in order to get the correct reading, and at some places scoring either side may also be required (e.g. -1, 0, +1 etc.), this again depends upon the disease and symptom in question.

The scoring pattern (clinical symptom gradation) used here may vary with that given in the next section of this manual, suitable modification in the scoring pattern to be made by the research scholar, which is dependent upon the research question or disease and anticipated outcome. It is the liberty of the research scholar to do necessary modifications without altering the basic structure of the arbitrary scoring pattern and care to be taken that it should not cross 100 in total, within this how much importance to be given to *Rogabala*, *Agnibala*, *Dehabala* and *Chetasabala* is purely dependent upon the disease and the immediate result anticipated by a particular treatment protocol. For e.g. in *Tamaka Shwasa*, *Roga bala* is given more importance and percentage whereas in a disease of psychiatric origin *Chetasabala* will be given more importance and percentage of points. Few examples are given below:

EXAMPLE 1: TAMAKA SHVASA:

Total 100 score has been divided in following- *Rogabala*, *Dehabala*, *Agnibala* and *Chetasabala* as -

<i>Rogabala</i>	60
<i>Agnibala</i>	20
<i>Dehabala</i>	10
<i>Chetasabala</i>	10

ROGA BALA (60)

Rogabala has been given 60 score out of 100 for degree of disease activity and symptoms.

This score has been further subdivided as following.

Shvasa Kashtata - 25

Dyspnoea	5	Duration	4
Intensity	4	Presence of <i>Pranavaha Sroto Dusti Lakshana</i>	4
Frequency	4	<i>Asino Labhate Saukhyam</i>	4

Kaasa - 10

<i>Kaasa</i>	4	<i>Kaasatah Sanniruddhyate</i>	2
<i>Kaphanishtivanama</i>	2	<i>Shleshma Vimokshante Saukhyama</i>	2

Associated Symptoms - 10

<i>Peenasa</i>	2	<i>Parshvashula</i>	2
<i>Kanthodhvansana</i>	2	<i>Ushnabhinandati</i>	2
<i>Trita / Vishushkasyata</i>	2		

Wheeze - 5

A.E.C - 5

PEFR - 5

AGNIBALA (20)

It has been further divided into as follows;

<i>Abhyavaharanashakti</i>	6	<i>Jaranashakti</i>	6
<i>Ruchi hi Aaaharakale</i>	4	<i>Vata Mutra Purisha Retasam Mukti</i>	4

DEHABALA (10)

It has been further divided into as follows;

<i>Balavridddhi</i>	4	<i>Swara Varna Yoga</i>	4	<i>Sharira Upachaya</i>	2
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SATVABALA (10)

It has been further divided as follows;

<i>Nidra Labhoyathakalam</i>	4
<i>Sukhena Cha Pratibodhanam</i>	2
<i>Vaikarikanam Cha Swapnanam Adarshanam</i>	2
<i>Mano Buddhi Indriya Avyappatti</i>	2

OVERALL ASSESSMENT OF THERAPY:

On the basis of percentage relief in sign, symptoms and investigation reports further scores have been allotted e.g. If *Jarana Shakti* was having 60% Relief then this has been given 3.6% score from the total 6 scores given to *Jaranashakti*.

Total Score obtained in *Rogabala, Dehabala, Chetasabala & Agnibala* assessed in terms of

No improvement	-	0
Mild improvement	-	0-25
Improved	-	26-50
Marked improvement	-	51-75
Complete remission	-	76-100

To establish the results statistically each sign & symptom may be given a specific score:

1) Frequency of *Shvasa Vega*:

- 0 - No attack during last 1 month
- 1 - Frequency of attack once in a month
- 2 - Frequency of attacks once in two weeks
- 3 - Frequency of attacks once in a week
- 4 - Frequency of attacks twice in a week
- 5 - Frequency of attacks once or more than once in a day.

2) Duration of attack

- 0 - No episode of attack
- 1 - Attack lasting for duration of 1/2 - 1 hr.
- 2 - Attack lasting for duration of 1 - 6 hr.
- 3 - Attack lasting for duration of 6 - 12 hr.
- 4 - Attack lasting for duration of 12 hr.
- 5 - Attack lasting for duration of more than 12 hours.

3) Intensity of attack:

- 0 - Asymptomatic and normal lung function between exacerbations.
- 1 - Intermittent symptoms < once a week. Brief exacerbation (from a few hours to few days), night time symptoms < 2 times a month.
- 2 - Symptoms > once a week but < once per day, exacerbation affect activity & sleep, night time asthma symptoms > twice a month.
- 3 - Symptoms daily exacerbations affecting activity and sleep, night time asthma symptoms > 1 times a week.
- 4 - Continuous symptoms, frequent exacerbations, frequent night time asthma symptoms& physical activity limited by asthma symptoms.

4) Shvasakrichhrata :

- 0 - No sign of *Shvasakrichhrata*
- 1 - Mild intercostal retraction, Nasal alae flurring & can speak complete sentences during dyspnoea.
- 2 - Intercostal retraction, sternocleidomastoid muscle use & speaks in phrases or partial sentences during dyspnoea.
- 3 - Tracheosternal retraction, Intercostal retraction, sternocleidomastoid use & speak in single words during dyspnoea.
- 4 - Nasal alae flurring & cannot able to speak during dyspnoea.
- 5 - All accessory muscles are working & not able to speak, expresses by body language.

5) Asino labhate Saukhyam :

- 0 - Relief on lying position
- 1 - Temporarily feels better in sitting posture
- 2 - Sitting posture gives relief.
- 3 - Spontaneous sitting posture, can't sleep.

6) Presence of *Pranavaha Sroto dushti lakshana* :

Absent	-	0
Less than 25%	-	1
Between 25 - 50%	-	2
Between 50 - 75%	-	3
More than 75%	-	4

7) Kaasa:

- 0 - No cough
- 1 - Cough dry without pain / wet with easy expectoration.

- 2 - Dry cough with pain & expectoration with slight difficulty.
- 3 - Dry cough with severe pain stabbing, cutting / feeling of restlessness because of difficulty in expectoration.
- 4 - Frequent coughing due to which patient becomes unconscious / Fainting.
- 8) *Kapha Nistivanam* :**
- 0 - No *Kaphanishtivanam*
- 1 - *Kapha nistivanam* only in the early morning
- 2 - *Kapha nistivanam* 2 - 3 times daily
- 3 - Always *Kapha nistivanam*.
- 9) *Kasatah Sannirudhyate*:**
- 0 - No such feeling
- 1 - Occasional *Kasatah Sannirudhyate*
- 2 - Very often *Kasatah Sannirudhyate*
- 3 - Always *Kasatah Sannirudhyate*
- 10) *Shleshma Vimokshante Muhurtam Sukham*:**
- 0 - No such feeling
- 1 - S.V.M. *Sukham* during attack
- 2 - Very often S.V.M. *sukham*
- 3 - Always S.V.M. *sukham*
- 11) *Wheezing*:**
- 0 - No wheezing
- 1 - Wheezing only at early morning; doesn't require any medicine
- 2 - Wheezing at early morning; requires medicine
- 3 - Wheezing at early morning & occasionally during day time.
- 4 - Wheezing throughout the day & requires medicine
- 5 - Wheezing throughout the day & not responding to any medicine, requires hospitalization.
- 12) *Ronchi / Crepts*:**
- 0 - Absent on normal breathing but few ronchi on forced breathing.
- 1 - Few scattered bilateral ronchi on normal deep breathing.
- 2 - Ronchi in between grade 1 & 3 on normal deep breathing.
- 3 - Innumerable high pitched bilateral ronchi on normal deep breathing.
- 13) *Peenasa*:**
- 0 - No *Peenasa*
- 1 - *Peenasa* during attack & subside 1-2 days after attack

- 2 - *Peenasa* during attack & persists for a week after attack
- 3 - *Peenasa* very often without attack
- 4 - *Peenasa* always persisting

14) *Urahshula / Parshvashula:*

- 0 - No *Urahshula*
- 1 - *Urahshula* along with the attack
- 2 - Very often *Urahshula* even without attack but relieved by local *Snehana* & *Swedana*
- 3 - Very often *Urahshula* without attack & not relieved by local *Snehana* & *Swedana*
- 4 - Always *Urahshula*

15) *Kanthoddhvansanam (Irritation in throat)*

- 0 - No *Kanthoddhvansanam*
- 1 - Occasional *Kanthoddhvansanam*
- 2 - Very often *Kanthoddhvansanam*
- 3 - Always *Kanthoddhvansanam*

16) *Trit (Trishna) / Vishushkasyata:*

- 0 - No *Trit / Vishushkasyata*
- 1 - Occasional *Trit / Vishushkasyata*
- 2 - Very often *Trit / Vishushkasyata*
- 3 - Always *Trit / Vishushkasyata*

17) *Ushnabhinandati:*

- 0 - No particular
- 1 - Likes if available
- 2 - Always prefer
- 3 - Can't take cold things

AGNI BALA:

18) *Jaranashakti:*

Scoring according to *Jeerna Ahara lakshana* present after 6-8 hrs after taking food

They are *Utsah, Laghuta, Udgarshuddhi, Kshut, Trishna pravritti Yathochit malotsarga.*

- 0 - presence of five symptoms
- 1 - Presence of four symptoms
- 2 - Presence of three symptoms
- 3 - Presence of two symptoms
- 4 - Presence of one symptom
- 5 - Absence of all the symptoms

19) Abhyavaharan Shakti :

- 0 - Taking food in good quantity twice / thrice
- 1 - Taking food in normal quantity twice a day
- 2 - Taking food in moderate quantity twice a day
- 3 - Taking food in less quantity twice a day
- 4 - Person taking food in less quantity once in a day
- 5 - Person not at all taking food.

20) Ruchi :

- 0 - Equally willing towards all the *Bhojya padartha*
- 1 - Willing towards some specific *Aahara / Rasavishesha*
- 2 - Willing toward only one among *Katu/Amla/Madhura* food stuffs.
- 3 - Willing towards only most liking foods not to the other.
- 4 - Unwilling for food but could take the meal
- 5 - Totally unwilling for meal.

21) Vaata Mutra Purisha Retasam Mukti :

- 0 - Occurs easily in normal routine times
- 1 - Difficulty in defecation but *Malapravritti* daily with discomfort in abdomen.
- 2 - Can't pass stool daily & feeling heaviness in abdomen.
- 3 - Passes stool after 2-3 days having gaseous distension
- 4 - Passes stool after 3-4 days with *Grathita, Sakasta Malapravritti* & having gaseous distention with *Udgarapravritti*.

DEHA BALA:

22) Balavridhi:

- 0 - No weakness
- 1 - Slight weakness
- 2 - Feeling of weakness but ability to work unaffected
- 3 - Ability to work affected
- 4 - Can't do any type of work

23) Swara Varna Yoga :

Texture, Lusture & voice :

- 2 - Patient looks gloomy
- 1 - Lethargic & tired
- 0 - Patient looks cheerful

24) Sharira Upachaya

- 0 - No change
- 1 - Increases weight by 2kg
- 2 - Increases weight by more than 2kg

SATVABALA:

25) Nidra Labho Yathakalam :

- 0 - Sound sleep
- 1 - Sleep gets disturbed in the early morning
- 2 - Sleeps with disturbed interval & remains unsatisfied with sleep
- 3 - Disturbed sleep in night tries to compensate in day
- 4 - No sleep in day / night

26) Sukhena - Cha - Pratibodhanam:

- 0 - Total relief & feeling of well being at physical & mental level
- 1 - Improved in physical comfort level
- 2 - Improved in physical & mental level
- 3 - Not feeling well & not interested in any work

27) Vaikarikanama - Cha - Swapnanam Adarshanam:

- 0 - Absent
- 1 - Occasionally
- 2 - Daily

28) Mano Buddhi - Indriya Avyapatti:

- 0 - Enthusiastic, Vigorous, having concentration & interest in routine work
- 1 - Less enthusiastic & not concentrating but interested in routine work
- 2 - Less enthusiastic & not interested in routine work
- 3 - Loss of enthusiasm, concentration & vigor.

Criteria of Assessment:

Symptomatic relief obtained by the treatment given was assessed B.T. (Before Treatment) and A.T. (After Treatment) with following criteria; they were graded on the basis of scoring pattern.

1. Frequency of Swasa Vega

- 0 - No Attack.
- 1 - 2-3 Times in 3 Week.
- 2 - 2-3 Times in 2 Week.
- 3 - 2-3 Times in 1 Week.

2. Duration of Attack

- 0 - No episode of attack
- 1 - Attack lasting for duration of 10 min.
- 2 - Attack lasting for duration of 20 min.
- 3 - Attack lasting for duration of 30 min.

3. No. of emergency med. Taken/ wk.

- 0 - not needed.
- 1 - 2-3 doses occasionally in a Week.
- 2 - 2-3 doses occasionally in Alternate days.
- 3 - 2-3 doses regularly.

4. Presence of *Pranavaha Srotodusti Lakshana*

(Dyspnoea / Freq. Exp. / Very restricted Exp. / Prolonged Exp./ With Loud sound painful / Difficulty in speaking / Sweating)

- 0 - Absent.
- 1 - Any 1 or 2
- 2 - Any 2 or 3
- 3 - More than 4.

5. *Asino Labhate Saukhyam* (relieved with sitting position)

- 0 - No effect.
- 1 - Temporarily feels better.
- 2 - Sitting posture gives relief, patient can sleep.
- 3 - Spontaneous sitting posture / can't Sleep.

6. *Kasa* (coughing)

- 0 - Absent.
- 1 - Cough with expectoration with slight difficulty
- 2 - Cough with pain difficulty in expectoration, patient can tolerate.
- 3 - Freq. coughing with more difficulty in expectoration, patient can't tolerate.

7. *Kapha nisthwana* (Sputum)

- 0 - Absent.
- 1 - Only in morning.
- 2 - 4-5 times / day.
- 3 - Continuously.

8. *Kasatah sannirudhyata* (feeling of unconsciousness in effort to expel out the sputum)

- 0 - Absent.
- 1 - During Attack

- 2 - Without attack at any time.
- 3 - Always.

9. *Shleshma vimokshante sukhum* (Get relief after expel out the sputum)

- 0 - Absent.
- 1 - During Attack
- 2 - Without attack at any time.
- 3 - Always

10. *Peenasa* (Coryza)

- 0 - Absent.
- 1 - During attack & subside 1-2 days after attack
- 2 - During attack & persists for a wk. after attack
- 3 - Very often without attack

11. *Parshvasula* (Pain in thoracic region)

- 0 - No *Shula*
- 1 - Along with Attack / Cough
- 2 - Very often without attack, relived by *Snehana / Swedana*
- 3 - Very often even without attack, not relived by *Snehana / Swedana*
- 4 - Always.

12. *Kanthodhvansanam* (Throat irritation)

- 0 - No
- 1 - intermittent without cough.
- 2 - During cough.
- 3 - without cough.

13. *Trita*

- 0 - Normal feeling.
- 1 - Increased by 4-5 times / day.
- 2 - Increased by 6-8 times / day.
- 3 - More than 8 times.

14. *Usnabhinandati* (Liking for hot food & drink)

- 0 - No such feeling.
- 1 - Generally avoid Cold thinks.
- 2 - Prefer hot drinks.
- 3 - Always take hot food & drinks.

15. Wheeze

- 0 - No wheezing
- 1 - Few wheezing
- 2 - Few scattered unilateral.
- 3 - Few scattered bilateral.

EXAMPLE 2: AMAVATA

The improvement in the patients were assessed on the basis of *Roga Bala*, *Agni Bala*, *Deha Bala* and *Chetasa Bala* which were scored as follows:

60	-	<i>Rogabala</i>
20	-	<i>Agnibala</i>
10	-	<i>Dehabala</i>
10	-	<i>Chetasabala</i>

These points are discussed in detail as follows:

- **ROGABALA**

Rogabala has been given 60 score out of 100 for degree of disease activity and symptoms of Amavata. It has been further divided into (30+30):

I. 30 score to –

Degree of disease activity to be assessed on the basis of American Rheumatism Association criteria (*modified*)

Grade	0	1	2	3
1) Fatigue	Not there	Work full time despite fatigue	Patient must interrupt work to rest	Fatigued at rest
2) Grip strength	200 mmHg or more	198 to 120mmHg	118 to 70 mmHg	Under 70mmHg
3) Spread of joints	Not there	0 to 50	51 to 100	Over 100
4) Westergren ESR (in 1 st hour)	0 to 20	21 to 50	50 to 100	Above 100
5) Haemoglobin (gm%)	12.5 or more	12.4 to 11	10.9 to 9.5	<9.5
6) General function	All activity without difficulty	Most activity but with difficulty	Few activity cares for self	Little self care mainly on chair & bed
7) Patients estimate	Fine	Almost well	Pretty good	Pretty bad
8) Physicians estimate	Inactive	Minimally active	Moderately active	Severely active
Apart from these criteria of ARA (1987) two other criteria were added here.				
9) Foot pressure	36-40 kg	31-35 kg	26-30 kg	<20 kg
10) Walking time (for 25 feet)	15–20 sec.	21-30 sec.	31-40 sec.	>40 sec.

II.30 score - Assessed on the basis of the symptoms of Amavata which has been further subdivided as : (14+10+6)

A. 14 score – To cessation of cardinal symptoms like

	Score
a) <i>Sandhishoola</i> (Pain in joints)	
No pain	0
Mild pain	1
Moderate pain, but no difficulty in moving	2
Slight difficulty in moving due to pain	3
Much difficulty in moving the bodily parts	4
b) <i>Sandhishotha</i> (Swelling in joints)	
No swelling	0
Slight swelling	1
Moderate swelling	2
Severe swelling	3
c) <i>Sparshasahyata</i> (Tenderness in joints)	
No tenderness	0
Subjective experience of tenderness	1
Wincing of face on pressure	2
Wincing of face and withdrawal of the affected part on pressure	3
Resist to touch	4
d) <i>Sandhigraha</i> (Stiffness in joints)	
No Stiffness or Stiffness lasting for 5 mins.	0
5 min to 2 hrs	1
2 to 8 hrs	2
More than 8 hrs	3

B. 10 score to – Associated symptoms like

a) *Jwara, Alasya, Gaurava, Asyavairasya, Daurbalya, Akarmanyata, Utsahahani, Angamarda, Daha, Trishna* were scored as mentioned below –

Symptoms observed before treatment	10
Some relief after treatment	05
Complete relief after treatment	00
No improvement after treatment	10

C. 6 score to – Physiological normalcy which was further divided into

- a) *Vata* (i.e. relief in *Anaha, Kukshishoola, Kukshikathinya, Antrakujan*) 2
b) *Mutra* (i.e. relief in *Bahumutrata*) 2
c) *Purisha* (i.e. relief in *Vibandha*) 2

Each of above three can be scored as -

- Symptoms observed before treatment 2
- Some relief after treatment 1
- Complete relief after treatment 0
- No improvement after treatment 2

• **AGNI BALA**

It has been given 20 score out of 100 which has been further divided into (4+8+8).

A. 4 score - To *Ruchihi ahara kale* (Taste and appetite)

B. 8 score to *Abhyavaharanabhilasha* (Revival and improvement in hunger)

C. 8 score to *Ahara Kala Samyagajaranam* (Digestion of ingested food within time) – If proper at the end of digestion will give *Jirna Ahara Lakshana* – they are

- 1) *Utsaha*
- 2) *Laghuta*
- 3) *Udgar Shuddhi*
- 4) *Shutta Trishna Pravriti*
- 5) *Yathochhita Malotsarga*

Scoring according to *Jirna Ahara Lakshana*

Presence of all (five) symptoms after 6 hrs	- 0	} <i>Pravara</i>
Presence of four symptoms after 6 hrs	- 2	
Presence of three symptoms after 6 hrs	- 4	} <i>Madhyama</i>
Presence of two symptoms after 6 hrs	- 6	
Presence of one symptom after 6 hours	- 8	<i>Avara</i>

• **DEHABALA**

Dehabala has been further divided into: (3+3+3)

A. 3 score to – *Swara Varna Yoga* (Revitalization of speech and luster)

B. 3 score to – *Sharira Upachaya* (increase in body mass/weight & gain in muscle wasting)

C. 3 score to – *Balavridhhi* (increase in body strength)

• **CHETASA BALA**

Chetasa bala has been given 12 score which was further divided as : (2+2+3+3)

A. 2 score to – *Nidralabho yathakalam* (Sleep in proper time and cessation in symptom *Nidra-viparyaya*).

- B. 2 score to – *Vaikarika Swapnanama Adarshanam* (No pathological dreams)
- C. 3 score to – *Mana Buddhi Indriya Avyapatti* (Proper and unaltered functioning of mind, intellect and sense organs)
- D. 3 score to – *Sukhen Cha Pratibodhanam* (Feeling of well being)

II. OVERALL ASSESSMENT OF THERAPY

Overall assessment of all the therapies will be done according to calculated score in terms of:

Complete remission	: 0 – 25 score in assessment criteria
Major improvement	: 26 – 50 score in assessment criteria
Minor Improvement	: 51 - 75 score in assessment criteria
Unchanged	: 76-100 score in assessment criteria

EXAMPLE 3: AMLAPITTA

Total 100 score has been divided in following *Rogabala*, *Dehabala*, *Agnibala* and *Chetasbala* as follows -

<i>Rogabala</i>	50
<i>Agnibala</i>	25
<i>Deha + Chetasbala</i>	25

Rogabala (50): *Rogabala* has been given 50 score out of 100, for degree of disease activity and symptoms. This score has been further subdivided as follows –

<i>Daha</i> -6	<i>Amlodgara</i> -6	<i>Shula</i> - 6
<i>Chhardi</i> -5	<i>Adhmana</i> -5	<i>Angasada</i> -5
<i>Gaurava</i> -5	<i>Tama</i> -4	<i>Bhrama</i> - 4 <i>Kampa</i> - 4

Agnibala (25): It has been further divided into as follows.

<i>Aruchi</i> -5	<i>Abhyavaharana Shakti</i> - 7
<i>Avipaka</i> - 7	<i>Purisha Utsarga</i> -6

Dehabala and Chetasbala (25): Looking to the less availability of the symptoms of *Dehabala* and *Chetasabala* both have been grouped in one and 25 score has been further subdivided as follows -

<i>Shrama</i> -5	<i>Chittodvega</i> - 4	<i>Nidra</i> - 5
<i>Klama</i> - 3	<i>Swapna</i> - 3	feeling of well being -5

There was no any gain or loss of weight before and after the treatment for which *Shrama* was only symptoms reported by the patients under the category of *Dehabala*.

Assessment of total effect of therapies: The overall assessment was calculated on the basis of average improvement in the percentage relief of *Rogabala*, *Agnibala*, *Deha* and *Chetasabala* score.

1. Complete remission – 100%
2. Marked improvement – 76% to 99%
3. Improvement – 51% to 75%
4. Mild improvement – 26% to 50%
5. Unchanged – Below 25%

Scoring pattern may be adopted to assess the relief in each symptom as follows-

Rogabala

Daha

- No *Daha* 0
- *Daha* in any one area of *Udara*, *Ura*, *Kukshi*/ occasionally for more than half an hour. 1
- *Daha* in any 2 area/ occurs daily for half hour to one hour 2
- *Daha* occurs daily in more than two area for one hour or more and relieves after digestion of food or vomiting. 3
- *Daha* involving most of the areas patient may not sleep at night and does not relieve by any measure. 4
- Severe degree of *Daha* involving the whole body like hands, feet or *Sarvanga* and does not relieves by any measure. 5

Amlodgara

- No *Amlodgara* at all 0
- Occasionally during day or night for less than half hour after meals. 1
- *Amlodgara* occurs daily for two to three times for ½ - 1 hrs. and relieved by sweets, water and antacids 2
- *Amlodgara* after every intake of meal any food substance for half to one hour, and relieved by digestion of food or vomiting 3
- *Amlodgara* for more than one hour not relieved by any measure 4
- *Amlodgara* disturbing the patient's even small amount of fluid regurgitate to patients mouth (*Dantaharsha*) 5

Shula

- No pain 0
- Mild/ occasional pain which need not any medication 1
- Pain (abdomen) for less than half an hour and relieved after intake of sweets cold drinks food antacid milk etc. 2

- Abdominal pain due to ingestion of food and relieves after digestion of food or by vomiting. 3
- Severe unbearable pain which does not subside by any measure and the patient awake in the night 4
- Unbearable pain associated with frequent vomiting and hematemesis 5

Chhardi/ Hrilla/ Asyapraseka

- No vomiting at all 0
- Frequency of salivation on every day (*Asyapraseka*) 1
- Feels sense of nauseating and vomits occasionally (*Hrilla*) 2
- Frequency of vomiting is two to three times or more per weeks and comes whenever *Daha* or pain is aggravated 3
- Frequency of vomiting is daily 4
- Frequency of vomiting after every meal or even without meals 5

Adhmana

- No *Adhmana* 0
- Occasionally feelings of distension of abdomen 1
- Daily after intake of food up to 1 hour with mild distension of abdomen 2
- Distension of abdomen up to 1 -3 hours after intake of food 3
- Moderate distension of abdomen up to 6 hours after intake of food 4
- Severe distension of abdomen up to more than 6 hrs after intake of food 5

***Tama* □**

- No feeling of *Tama* 0
- Occasional feeling of *Tama* 1
- Feeling of *Tama* < 2-3 times a day 2
- Feeling of *Tama* 3-6 times a day 3
- Many times a day with problem in maintaining posture, tries to sit 4

Bhrama

- No Reeling of head/ *Bhrama* 0
- Sometimes feeling of reeling head/ *Bhrama* 1
- Feeling of reeling head/ *Bhrama* < 3 times a day 2
- Feeling of reeling head/ *Bhrama* > 3 times a day 3
- Frequently feeling of reeling head change of posture causes the severe problem 4

Kampa

- No presence of *Kampa* 0
- Occasionally present 1
- Mildly present one times feeble 2
- Moderately present i.e. visible disturbs holding light weight articles like news paper 3
- Severely present not able to do routine work like buttoning, eating etc. 4

Angasada/Gaurava

- No heaviness 0
- Occasionally feeling of heaviness for sometimes in hands and feet 1
- Feeling of heaviness for sometimes in hands and feet not affecting activities of daily living 2
- Daily feeling of heaviness over body, which leads to *Akarmanyata* 3
- Most part of the body for long duration 4
- All body for most part of the day 5

Klama

- No *Klama* 0
- Occasionally feeling of lassitude without *Shrama* and remains for sometimes and vanishes 1
- Lassitude without *Shrama* daily for sometimes 2
- Lassitude without *Shrama* daily for long duration 3
- Always feels tired and have no enthusiasms 4

Nidra

Paittika

- Even the patient may not sleep in night due to irritation in abdomen 5
- Patient can sleep < 3 hrs with severe irritation in abdomen 4
- Patient can sleep < 3 hrs with moderate irritation in abdomen 3
- Patients can sleep up to 3 – 6 hrs with mild irritation in abdomen 2
- Patient can sleep up to more than 6 hrs without any irritation 1

Kaphaja

- Normal / sound sleep 0
- Patient sleep up to 6 hrs without any disturbance 1
- Sleep deeply up to 8 hrs 2
- Sleeps up to 10 hrs 3
- Sleeps up to > 12 hrs 4
- Even patient may sleep during day time 5

Feeling of well being

- Feeling very well 0
- Occasionally feels discomfort 1
- Feels discomfort mildly and not able to concentrate to his work 2
- Feels discomfort moderately and feels depressed 3
- Feels discomfort severely and remains gloomy most of the time 4
- No feeling of well being at all 5

Agnibala

Avipaka

- No *Avipaka* 0
- Indigestion / prolongation of food digestion period occasionally related to heavy meals 1
- *Avipaka* occurs daily after each meals takes four to six hours for *Udgara shuddhi* etc.
lakshana 2
- Daily after each meals / seldom feels hunger but eats the food 3
- Eats only once in a day and does not have hunger by evening 4
- Never gets hungry always heaviness in abdomen followed by vomiting etc. *Lakshan* 5

Aruchi

- Willing towards all *Bhojya Padarth* 0
- Unwilling towards some specific *Ahara* but less than normal 1
- Unwilling towards some specific *Rasa* i.e. *Katu/ Amla/ Madhura* food 2
- Unwilling for food but could take the meal 3
- Unwilling toward unliking foods but not to the other 4
- Totally unwilling for meal 5

Abhyavaharana Shakti

- Taking of food in good quantity twice/ trice 0
- Taking food in normal quantity twice a day 1
- Taking food in moderate quantity twice a day 2
- Taking food in less quantity twice a day 3
- Person taking food in less quantity one in a day 4
- Person not at all taking food 5

Purisha Utsarga

- Occurs easily in routine times 0
- Sometimes feeling difficulty in defaecation 1

- Difficulty in defaecation but *Mala Pravriti* daily with discomfort in abdomen 2
- Can't pass stool daily and feeling heaviness in abdomen 3
- Passes stool after 2 – 3 days having gaseous distension 4
- Passes stool after 3 -4 days with *Grathita, Sakasta Mala Pravritti* and having gaseous distension with *Udgara Pravritti* 5

DEHABALA & CHETAS BALA

Shrama

- No *Shrama* 0
- 10% feels tired with some amount of work which was tolerable previously 1
- 20% early *Shrama* with some amount of physical activity 2
- Reduction of up to 50% in physical activity tolerance 3
- Patient get exhausted with minimal physical daily routine work 4

Chittodvega

- No 0
- Associated with less psychic involvement 1
- Associated with moderate psychic involvement 2
- Associated with sever psychic involvement 3
- Associated with psychic involvement as well as somatic involvement 4

Swapna

- No 0
- Occasionally not disturbing sleep 1
- Occasionally, disturbing sleep 2
- Regularly dreams not disturbing sleep 3
- Frequent dreams with severe disturbing of sleep 4

AGNI BALA INDEX:

Assessment for Agni:

Agni is assessed based on three factors viz *Jarana Shakti* (Digestion power). *Ruchi* (Appetite) and *Abhyavaharana shakti* (Hunger).

(A)Evaluation of *Jarana shakti* (Digestion power)

If digestion process is proper, then at the end of digestion, it should give rise to *Jeerna Ahara Lakshana* which includes *Utsaha* (enthusiasm), *Laghuta* (lightness in the abdomen & body), *Udgara Suddhi* (clear belching), *Ksudha* (hunger), *Trisha Pravritti* (thirst) and *Yathocita Malotsarga* i.e. proper excretion of excretory material like flatus, urine and feces. According

to Ayurveda a normal diet in persons with normal *Agni* should be digested within 6 hours though it is individual specific. The **Signs of appropriate quantity of food** are no obstruction in heart, no pain in sides(Flanks) no excessive heaviness in abdomen, saturation of sense organs, cessation of hunger and hunger, ease in standing, sitting, lying down, movement & movement, easily digestion of food before next food timings (Morning-evening), promotion and development of strength, complexion and body mass. The scoring may be given to each of above symptom for assessment of *Jarana Shakti*.

A -Scoring according to *Jeerna Ahāra Laksana*

Note: this scoring is applicable for an individual who ingests normal required quantity of food in appropriate timings food intake (*Aharakala*).

	Score	
1. Absence of all the symptoms	0	Avara
2. Presence of one symptom	1)
3. Presence of two symptoms	2	Madhyama
4. Presence of three symptoms	3)
5. Presence of four Symptoms	4	Pravara
6. Presence of All the five symptoms	5)

B) Assessment of *Abhyavaharan Shakti*

1. The person not at all taking food	0	Avara
2. Person taking food in less quantity once in a day	1	
3. Taking food in less quantity twice a day	2	Madhyama
4. Taking <i>food</i> in Moderate quantity twice a day	3	
5. Taking food in normal quantity twice a day	4	Pravara
6. Taking food in excessive quantity twice or thrice	5	

C) Evaluation for *Ruchi*

1. Totally unwilling for meal	0
2. Unwilling for food, but could take the meal	1
3. Willing towards only most liking food, and not to other	2
4. Willing towards only one among <i>Katu/AmlalMadhura</i> food stuffs	3
5. Willing towards some specific <i>Ahāra</i> or <i>Rasa Vishesa</i> .	4
6. Equal willing towards all the <i>Bhojya Padartha</i> .	5

Another method of evaluation of *Jarana Shakti* and *Abhyavaharana Shakti* is rather a vague method of *Avara* (Poor), *Madhyama* (moderate) and *Pravara* (Good).

Kshudha Pravritti – Increase in appetite and an individual feels to take food when *Kshudha* – hunger is there. Each type of diet has its own time for digestion which is called as *Pachana Kala* and when *Agnibala* is increased *Pachana Kala* reduces. Thus *Pachana kala* and quantity of diet play very important role in deciding the *Agnibala*. As *Agnibala* increases, the *Pachana Kala* should decrease, even in the same quantity of diet, otherwise when the quantity is increased, the duration for its digestion should also increase in the same proportion.

This can be tested effectively in a therapeutic procedure called *Snehapana* wherein a specific quantity of medicated or plain Ghee is administered and for *Sneha*, 'Abhyavaharana Index' may be graduated as follows -

$$\text{A.I. (Abhyavaharana Index)} = \frac{\text{Test dose (T.D.)}}{\text{Given dose / day (G.D.)}}$$

So for the first day if 30ml is the dose given then $AI = 30/30 = 1$ i.e. T.D. = G.D.

So If A.I. is more than 1, then it is pointed towards *Agnimandya*; and if A.I. is less than 1, then it shows an improvement of *Abhyavaharana Shakti*.

With the help of this *Abhyavaharana shakti*, one can calculate *Agnibala*. To set *Agnihala*, we have to consider the second factor, i.e. *Kala* - the time required to digest the given dose of *Sneha*. By multiplying the A.I. with time (t) required for digestion, we can get *Agnibala* index (A.B.I.)

$$\text{A.B.I.} = \text{T.D. / G.D. X time (t)} = \text{A.I. X t.}$$

If the A.B.I. remains less than that of the calculation with the time required to digest the test dose and accordingly increase every day, then we can say that *Agnibala* is increased.

Eg. 30 ml is the Test Dose [T.D.] and it is digested in 3 hrs. then $AI = 30/30 = 1$

$$\text{A.B. I.} = 1 \times 3 = 3.$$

If 300 ml. dose is digested in 7 hrs. in same person in a later day then

$$\text{A.B.I.} = 30 / 300 \times 7 = 0.7 \text{ [T.D.} = 30 \text{ ml, G.D} = 300 \text{ ml. t} = 7 \text{ hr.]}$$

The initial A.B.I. was 3, which was reduced to 0.7 in the same person after some days; as per simple mathematical calculation the person should take 30 hrs. to digest 300 ml but as the *Agnibala* is increased, the time taken for digestion reduced to 7 hours.

Thus it is concluded that **Lesser the A.B.I., more will be the Agnivridhi**. So A.B.I. may be taken as a standard scoring pattern for *Ksudhapravritti*, with appropriate quantitative measures, ABI calculation may be taken as a tool for assessment of *Agni*.

Manual part 1: CRF - 1

GENERAL SCREENING PROFORMA – CRF 1

Sl. No.:

Registration No.:

Date:

Name :	Vaya ____ Years ____ Months ____ Days
Address	Sex - Male / Female
Religion : H / M/ S / Ch / J / B / Other	Desha Jangal/ Anoopaa/ Sadharana Jataha Samvridha Vyadhita
Marital Status : UM/ M / D / W	O.P.D. / I.P.D. No. :
Education : UE / E / P / M / HS / G / PG / ____	Ward/ Bed No.:
Occupation :	Date of Registration. :
Socio-eco. Status : BPL / P / M / R/V R	Date of Completion:
Income per annum:	Diagnosis

PRADHAANA VEDANAA (Chief Complaints with duration)

(In chronological order)

CHIEF COMPLAINTS	DURATION
1)	
2)	
3)	
4)	
5)	

VEDANA SAMUCCHRAYA: (History of Present Illness with duration)

(In chronological order)

UPASAYA:

Ahara:

Vihara:

Aushadha:

ANUPASHAYA:

Ahara:

Vihara:

Aushadha:

POORVA VYAADHI VRITTA: (History of Past Illness)

VAIYAKTIKA ITIVRITTA: (Personal History)

BT

AT

1. AAHAARA:

Type of Diet: Vegetarian / Mix/Non- Veg

Dominance of Rasa (taste) in Diet: M / A / L / Kt / T / Ks

- Dominant Guna in Diet:** G / L / St / U / Sn / R
- Dietary habits:** Samasana / Adhyasana / Vishamaasana
Regular / Irregular
- Other Habits:** Tea / Coffee / Cold drinks / others
- Quantity per day:**
2. **VYASANA (Addiction):** Tobacco (Smoking / Chewing) / Alcohol / Drug abuse / Other
Quantity per day:
3. **VIHAARA:**
Danta dhavana: Daily once / twice / after every meal
Datun / Tooth paste / Tooth powder / Danta Manjana Churna
Vyaayaama: Regularly / Irregularly / No / Less / Proper / Excess
Vishraama (Rest): _____ hrs. / day; _____ hrs. / night
Abhyanga: Regularly / Irregularly / No / Less / Proper / Excess
Snaana: Daily / Irregular; Hot Water / Warm water / Tape water
4. **NIDRAA:** Samyaka / Asamyaka; Alpa / Prabhuta / Khandita
_____ hrs. / day _____ hrs. / night
Swapna Darshana: Yes / No; If Yes, Vaikarika / Avaikarika / _____
5. **KOSHTHA - BOWEL:**
Santushta / Asantushta; Saama / Niraama
Kathina / well formed / Drava / Sakashtam / Vivarna / Alpa/Muhurmuhuh
Frequency: _____ time / day **Colour:** **Odour:**
Vatapravrutti: Yes / No; **Durgandha:** Yes / No
Koshtha: Mridu / Madhya / Krura
6. **MOOTRA PRAVRITTI- MICTURITION:**
Mootra Pravritti: Samyaka / Krucchra / Vaivarnya / Daaha / Alpa / Prabhuta
frequency : _____ times / day _____ times / night
7. **ARTAVA PRAVRITTI - MENSTRUAL HISTORY:**
Regular / Irregular; _____ days cycle; **Pain:** Nil / Mild / Moderate / Severe;
Flow details: _____ Pads / day, _____ flow days
Use of contraceptives: Yes / No if yes specify: _____
Menarche Age: _____ Menopause Age: _____
8. **PRASAVA - OBSTRETIC HISTORY:**
No. of Delivery / Abortion / Miscarriage G P A L D
9. **AGNI:** Sama / Vishama / Manda / Ati agni
Ruchi: Yes / No
Jarana shakti:
Abhyavaharana Shakti

AATURABALA (DEHA BALA) PARIKSHAA:

1)Prakriti:

Shaarira: V / P / K / VP / VK / PK / VPK

Maanashika: S / R / T

2)Saara: P / M / A

Dhatu	Assessment BT	Assessment AT

- 3)Samhanana: P / M / A
 4)Pramaana : Height____ Weight_____ kg
 5)Satva: P / M / A
 6)Satva(Emot. make-up): Prakrita /Utsahita/Udrikta/Khinna/Avasadita/Bhavanatmaka
 7)Saatmya: P / M / A
 8)Vyaayaama Shakti: P / M / A

Note:

- Prakriti analysis may be done by using separate proforma attached
- Satva may be evaluated based on tolerance for sufferings (or pain tolerance)
- Vyaayaama Shakti may be evaluated by Tread Mill Test (TMT)

FAMILY HISTORY OF DISEASES HAVING GENETIC PREDISPOSITION:

FAMILY PEDIGREE:

HISTORY OF AUPASARGIKA ROGA:

HETU (NIDANATAH) PARIKSHA:

NIDANA	DOSHA PRAKOPAKA	DOOSHYA / SROTO DUSHTIKARA	AGNI MANDYAKARA	KHA- VAIGUNYAKARA
Ahara				
Vihara				
Manasika				
Vyadhi Vishesha				

History of vegadharana/Vegodeerana:

Vega: Vegadharana since (duration) :

Vega: Vedodheerana since (duration):

Iatrogenic causes (if any):

ADR as cause (if any):

Note: Consider Kaala, Asaatmyendriyaartha Samyoga, Prajnaparadha while taking noting down causative factors of the disease:

ROGA BALA PARIKSHAA:

KAPHAVARGA PARIKSHAA:

KAPHA DOSHA PARIKSHA

PAREEKSHA BHAAVA	VRIDDHI / PRAKOPA	KSHAYA
Darshana	Sweta- Twachaa, Mala- Mootra Sandhi Vishlesa / Swaasa / Kaasa Utsedha / Sneha Upachaya / Lalarava	Rukshyataa / Sandhi Shaithilya
Sparshana	Shaitya / Sthairya /Snigdha / Kleda	
Prashna	Gourava / Avasaada / Tandraa / Aalasya, Agnisaada / Praseka / Sandhivishlesha Kandu / Sthairya / Upalepa / Kleebata / Utsaha	Trushnaa / Nidraa Naasha / Dourbalya / Antardaaha / Hridrava / Bhrama / Aamaashayetara Shlema-aasaya Shunyataa / Shirasasa cha Sunyataa

RASA & RASAVAHA SROTASA PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Krishnaangataa / Rukshata / Sosha	Sveda / Paandutwa / Akale-Vali-Palita	Vaivarnya /Pandu / /Shvetataa
Sparshana	Loss of sensation	Jwara	Shaitya
Prashna	Angamarda / Klaibya / Asyavairasya / Arasajnataa / Angamarda / Hrit- Kampa / Hrit Drava / Hritpidaa / Hritsunyataa / Trishnaa/Hritghattana/ Sabdaasahishnutaa / Hritshoola / Sramah	Tama	Alpa Kandu / Mukha virasataa / Gurutaa / Tandraa Aalasya / Utklesha / Hrillaasa /Aruchi / Praseka / Vamana / Anna Dvesha /Agni Mandya/ Asraddhaa / Aruchi / Hrillaasa /Srotorodha/ Saada/Hridayotkleda
Nadi – Pulse			
Blood Pressure			
Temperature			
Biochemical investigations	Concerned / related biochemical investigations		
Examination of cardiovascular system: Hridaya Dhamani Twak Lasika Granthi Rasa –Rakta Samvahana			
ECG, X- Ray, USG, Doppler studies for circulation status, ECHO studies etc.			

Maintain before (BT), during (DT) and after treatment (AT) reading chart in all subjective and objective parameters.

Upadhatu Pareeksha:**Stanya:****Stana:****MAMSA & MAMSAVAHA SROTASA PARIKSHAA:**

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Suskataa -(Sphik- Ganda-Ostha-Upastha- Uru- Vaksha –Kakshaa- Pindika- Udara-Grivaa	Putimaamsa / Alaji	Vridhhi – Sphik- Ganda- Ostha- Upastha-Uru- Baahu-Janghaa / Adhimaamsa / Arbuda,Upachaya
Sparshana	Roukshya / Dhamani Shaithilya		

Prashna	Toda /Gaatra / Sadana		Guru Gaatrataa
Khamala			
Kandara and Vasa			
Avayava Pareeksha Snayu, Kandara, Peshi, Twak			
Biochemical investigations	Concerned / related biochemical investigations		
USG, X' ray, MRI etc.			

Upadhatu Pareeksha:

MEDA & MEDOVAHA SROTAS PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Atidirgha / Atihraswa / Atilomaa / Atikrishna	Alomaa, Sveda	Snigdhaangataa / Udara Vridhhi / Paarshwa Vridhhi / Atigoura / Atisthoola / Jatili Bhaavakeseshu / Chhidreshu Upadeham / Gaatre Pippilika Saranam / Mutre Pippilika Saranam
Sparshana	Plihaa Vridhhi		
Prashna	Kara - Paada Suptataa / Anga Suptataa	Dourgandhya / Daaha / Mukhasosha / Taalusosha / Kanthasosha / Pipaashaa / Paridaaha / Vishragandha	Kaasa / Swaasa / Maadhuryamaasye / Aalasya / Malakaaye Mutradosha / Nidraa / Tandraa, Ayasa
Lipid profile BMI / Body Wt.			
Vapavahana, Ganda, Sphika, Kati, Vrikka,			
ECG, X- Ray, USG			
Biochemical investigations	Concerned / related biochemical investigations		

Upadhatu Pareeksha:

MAJJA & MAJAAVAHA SROTAS PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana			Parvasu Sthoola mulaani Arunsi Janma / Netraabhisyaanda
Sparshana	Asthi Soushiryataa		
Prashna	Parvaruk / Alpa Sukrataa / Parva Bheda / Asthi Nistoda / Asthi Sunyataa /	Murchchhaa / Tamodarshana / Bhrama	Sarvaanga Gourava / Netra Gourava

	Asthi Dourvalya / Asthi Laaghava / Pratata Vaata Rogani		
Twak Sneha			
Bone Marrow			
Sandhi, Pleeha			
ECG, X- Ray, USG, MRI			
Biochemical investigations	Concerned / related biochemical investigations		

Upadhatu Pareeksha:

SHUKRA & SUKRAVAHA SROTASA PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Virupam	Puyashukra	Paandutwam / Sukrameha
Sparshna			
Prashna	Klaibya / Aharshanam / Roginam Alpaayu / Dourbalya / Mukhasosha / Sadana / Shrama / Sukra Avisarga		
STANA&STANYA PARIKSHA			
ARTAVA & ARTAVA VAHA SROTO- PARIKSHA			
Semen Examination			
Vrishana / Shephas			
Testicular biopsy			
Biochemical investigations	Concerned / related biochemical investigations		
ECG, X- Ray, USG, MRI			

Upadhatu Pareeksha:

OJAS:

	VATA	PITTA	KAPHA
Ojo Visramsa	Srama / Sandhi Vislesha		Gatra Sadana
Ojo Vyapat	Stabdhata		Guru-Gatrata, Tandra, Nidra
Ojakshaya	Mamsa etc. Dhatuksaya / Moha / Pralapa, Agyna		

Upadhatu Pareeksha:

UDAKAVAHA SROTASA PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Jihwaa-Taalu- Oustha- Kantha- Kloma - Shosha		
Prashna		Ati Trishnaa	
Sparshana			
Talu, Jihva, Netra, Twak			

Upadhatu Pareeksha:**PRAANAVAHA SROTASA PARIKSHAA:**

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Uchchhwaasa-Atisristam, Kupitam, Abhikshnam,		Uchchhwaasam- Alpamalpam,
Sparshana			
Prashna	Sashabdam, Sashoolam		Atibaddham
Shvasa Parikshana			
Stheevana Pariksha			
Respiratory System	Breath Sounds: Normal, Diminished Type: Vesicular, Bronchial, Vesicular with prolonged expiration Extra Sounds		
Pulmonary Function tests			
GYANENDRIYA PARIKSHA Karna- Nasa- Netra- Jihva-			
ECG, X- Ray, USG, MRI			
Biochemical investigations	Concerned / related biochemical investigations		

Upadhatu Pareeksha:**PITTA VARGA PARIKSHAA:****PIITA DOSHA PARIKSHA:**

	VRIDDHI / PRAKOPA	KSHAYA
Darshana	Pitaavabhaasataa / Pita – (Vid-Mutra-Netra- Twak) / Murchchhaa Paaka / Sweda / Kleda / Kotha / Sraava / Raaga / Murchchhaa	Nisprabhataa
Sparshana	Samtaapa Oushnya,	Mandoshmataa

Prashna	Sitakaamitwa / Alpanidrataa / Valahaani / Indriyadourvalya Daaha / Kandu / Vishra Gandha / Sadana / Mada / Katukaasyataa / Amlaasyataa	Mandaagni
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RAKTAVAHA SROTAS PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Raktakshaya / Rukshata / Gulma / Vatashonita / Vaivarnya / Ati-daurbalya / Kampa / Charmadala / Pramilaka / Kampa / Mlaana / Twag Roukshya	Raktapitta / Upakusha / Asyapaka / Raktanetrata / Raktamandal / Mukhapaka /Visarpa / Vidradhi / Raktameha / Vaivarnya / Sweda / Indralupta / Raktaanga	Kotha / Pidaka / Kustha / Kustha / Masaka / Arbuda Pidakaa / Dadru /
Sparshana	Sira-shaithilya / Twak Paarushya	Siraapurnatwam, Santaapa	Sira-Poornatva
Prashna	Amlashishira-prarthana / Swarakshaya, Mada	Raktapitta / Murcchaa / Pootighrana / Asyagandhita / Pradara / Pipasa / Annapanasya Vida / Sweda / Sharira- Daurgandhya / Jvara	Agnimandya / Gurugatrata / Aruchi / Klama / Lavanasyata / Kandu
Haematology T.L.C. D.L.C. T R.B.C. Hb% / E.S.R. BT / CT / PT			
Yakrita, Pleeha, Sira			
USG / MRI /			
LFT			
Biochemical investigations	Concerned / related biochemical investigations		

Upadhatu Pareeksha:

SWEDAVAHA SROTAS PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Aswedana / Swedanaasa / Romachyuti / Twak Sphutana	Atiswedana	
Sparshana	Paarushya / Sparsha Vaigunya		Slakshnangataa
Prashna		Paridaaha / Twak- Dourgandhya	Lomaharsha / Kandu
Twak / Roma			

Upadhatu Pareeksha:

ANNAVAHA SROTASA PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Aadhmaana		
Sparshana			
Prashna	Shooloa / Ati-Udgara	Pipaasaa / Amla-Katu-Udgara	Anannaabhilashanam / Arochakam / Avipaaka / Annadwesa / Chhardi / Madhura Udgara
Ruchi	Arasagyata	Amla/Tikta Asyata	Aruchi/Madhurasyata
Abhyavaharana Shakti	Vishama Kshudha	Atikshudha	Anannabhilasha
Jarana Shakti	Vishama	Vidaha	Ajeerna
Examination of GIT, Gall Bladder			
X-Ray / USG			
Biochemical investigations	Concerned / related biochemical investigations		

Agni Pareeksha: P / M / A

AGNI PAREEKSHA	PRAKRITITAH	VIKRITITAH
Ruchi		
Abhyavaharana Shakti		
Jarana Shakti		

MOOTRA & MOOTRAVAHA SROTAS PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Aadhmaana / Mutravaivarnya		
Sparshana			
Prashna	Alpa Pravritti / Sashula Pravritti / Prakupita / Bastitoda / Alpamutrataa / Mutrakrichchhrata / Pipaasaa	Sadaha - Atisrista Pravritti	Bahala Mutra / Atibaddha Pravritti / Kandu
Mootra Pariksha			
Examination of Urinary Tract			
X Ray, USG,			
RFT			
Biochemical investigations	Concerned / related biochemical investigations		

VAATA VARGA PARIKSHAA:**VATA STHANA PARIKSHA:**

	VRIDDHI / PRAKOPA	KSHAYA
Darshana	Kaarshya / Krishnataa / Gaadha Varchastwam / Anaaha	Alpa Chestataa / Alpa Vaaktwam / Mudha Sajnataa

	Khanja / Pangu / Kubjatwa / Angasosha / Aakshepa	/ Uchchhwaasa-Niswaasa Mandataa
Sparshana	Twak Paarushya / Gaatrasuptataa	
Prashna	Vaakpaarushyam / Gaatrasphurana / Ushna Kaamitaa / Nidraa Naasa / Alpavalatwa / Sakritgraha / Indriya Bhrmsha / Dainya Praalaapa / Gaadha Varchastwam Sankocha / Parvastambha / Asthibheda / Parvabheda / Anidrataa / Naasha-Garbha-Sukra-Raja / Spandanam- Hundana-Sira / (Naasaa-Akshi-Jatru-Grivaa)-Bheda+Toda / Arti / Moha / Aayaasa / Manovyaaharsana / Indriya Upahanana / Bhaya / Shoka / Graha-(Paani, -Pristha-Sira) / Pralaapa / Lomaharsha	Apraharsha / Utsaaha Haani / Manda Pravritti-Sweda-Mutra-Purisha

ASTHI & ASTHIVAHA SROTAS PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Dantabhanga / Nakhabhanga / Roukshya / Patana-(Kesa-Smashru-Loma)	Vivarnataa / Dosha in Kesa-Loma-Nakha-Shmashru	
Sparshana			
Prashna	Asthitoda / Shrama		
Examination of Bones, Nails, Hairs and examination of Parathyroid gland			
X Ray, USG, Bone scan			
Biochemical investigations	Concerned / related biochemical investigations		
S. calcium, Thyroid hormone			

Upadhatu Pareeksha:

PURISHAVAHA SROTAS PARIKSHAA:

PAREEKSHYA BHAAVA	VATA	PITTA	KAPHA
Darshana	Roukshya		
Sparshana			
Prashna	Aatopa / Adhovata Sanga / Adhovata Ati Pravritti / Kukhishoola / Sakrit Vedanaa / Hritpidaa / Paarswapidaa / Sasabda Vaatasya Urdhwagamana / Aadhmaana / Aantrapidana / Kukshinamana / Vaayoh Tiryagurdhya Gamana		Gourava

Stool Examination			
Examination of Large Intestine, Ractum, Anus,			
X Ray, USG, P/R			

SANGYAVAHA, MANOVAHA, CHETANA VAHI SROTASA:

PAREEKSHYA BHAAVA- DARSHANA, SPARSHANA PRASHNA (ANUMANA)	VATA	PITTA	KAPHA
Karmendriya Pariksha			
Manas Karma Pariksha			
Buddhi Pariksha			
Nervous System Examination, CNS, Motor & Sensory			
EEG, MRI, Nerve conduction Test etc.			

SAAMA / NIRAAMA PARIKSHA:

	Vata			Pitta			Kapha	
Sama Dosha Lakshana								
Nirama Dosha Lakshana								
	Rasa	Rakta	Mamsa	Meda	Asthi	Majja	Shukra	
Saama Dushya lakshana								
Niraama Dushya Lakshana								
	Mala	Mutra	Sweda	Other khamala				
Saama Mala Lakshana								
Niraama mala Lakshana								

ROGA PARIKSHA:

1) DOSHA:-

i) Prithaka (with sub types):

VATA	PITTA	KAPHA
PR/ UD/ SM /VN/ AP	PC/ RJ/ BH/ SD/ AL	KL/ AV/ BD/ TR/ SH

ii) **Sansarga:** Vata-Pitta/Vata-Kapha/Pitta-Kapha

iii) **Sannipata :** Vata-Pitta- Kapha

iv) Avarana :

2) DOOSHYA:-

Dhatu:- Rasa / Rakta / Mansa / Meda / Asthi / Majja / Shukra

Upadhatu:- Stanya / Raja / Kandara / Sira / Dhamani / Twacha / Snayu

Mala:- Poorisha / Mootra / Sweda / Kapha nishteevana / Pitta / Khamala / Kesha / Nakha / Akshisneha / Loma / Shmashru

3) SROTASA & SROTODUSHTI TYPE:

4) **AGNI:** Sama / Vishama / Tikshna / Manda

5) **ADHISHTHANA:** Ama / Pakwa.....

6) **VYAKTISTHANA:**

7) **KRIYAKALA:**

8) **ROGAMARGA:** Koshtha / Shakha / Marma

9) **VYADHI SWARUPA:** Chirakaari / Aasukaari

NIDAANA:

POORVARUPA:

ROOPA:

UPASHAYA:

ANUPASHAYA:

SAMPRAAPTI:

VYAVACHCHEDAKA NIDANA –

ROGAVINISCHAYA:

Diagnosis:

SAADHYAASAADHYATAA: Saadhya / Krichchhrasaadhya / Yaapya / Pratyakheya

AYUSHAHA PRAMANA PARIKSHAA

VYADHI AVASTHA:

UPADRAVA:

ARISHTA LAKSHANAS (if any)

MANAGEMENT / INTERVENTION

CHIKITSA SOOTRA (Line of treatment)

- (A) Drug
- (B) Dose and Anupana
- (C) Aushadha sevana kala
- (D) Pathya
- (E) Apathya
- (F) Treatment duration

Chikitsa upakrama

PANCHAKARMA:

A) POORVA KARMA:

- (A) Rukshana
- (B) Deepana / Pachana
- (C) Abhyantara Snehapana (According to Koshta) Sneha Yoga:
1st day / 2nd day / 3rd day
4th day / 5th day / 6th day 7th Day.....
- (D) Swedana (duration) Sweda prakara:

B) PRADHANA KARMA Name of the Karma:

- Drug**
- Dose**
- Schedule:**
- Outcome:**

C) PASCHATA KARMA (SAMSAARJANA KARMA)

Rasa samsarjana _ Peyaadi Krama / Tarpanaadi Krama

Eka-annakala / Dwi-annakala / Tri-annakala

After Pariharakala Shamana Yoga to be applied (for ____ duration).

Dose and Anupana

Assessment of Prakriti

(to be filled by the research personnel)

Date: _____

Sl. No. _____

Personal details:

Name: _____ Marital Status: Married / single

Sex: Male / Female Age: _____ years Date of Birth: ____ / ____ / ____

Education: _____ Blood Group: _____ () ve

Occupation: _____ Monthly Income: (Rs) _____

Address: _____

Height: (in cm): _____ Weight (in Kg) _____

Prakriti findings:

Sr. No.	Subject / Questions	Answers – Please tick wherever appropriate		
		Lean	Medium	Well – built
1	Body build	Lean	Medium	Well – built
2	Skin	Dryness	More moles or freckles	Smooth, moist
3	Hairs	Rough	Scanty, gray, balding	Plenteous, curly
4	Complexion	Dull, darkish	Fair, ruddy	Whitish (Pale)
5	Tendons & Veins	Prominent	Normal	Well covered
6	Body movements	Rapid & unsteady	Normal	Less
7	Gait	Rapid & unsteady	Normal	Steady & firm
8	Physical exertion	Poor endurance	Medium	Good endurance
9	Resistance to disease	Poor	Medium	Good
10	Hunger /a Appetite	Variable	Strong, sharp	Constant, less
11	Quantity of food	Variable	Large	Small
12	Habit of taking food	Fast	Frequent	Slow
13	Thirst	Normal	Abundantly	Less
14	Perspiration	Not specific	Profuse, bad smell	Constant, less
15	Memory	Short-tem	Average	Long term
16	Sleep	Scanty, disrupted	Little but sound	Abundant, heavy
17	Intolerance to	Cold	Hot	Not specific
18	Initiation to start any work	Very quickly	Medium speed	Slowly
19	Receptive power	Very quickly	Average	Slowly
20	Response / becoming excited	Very quickly	Quick	Slowly
21	Speech	Quick, talkative,	Argumentative,	Slow definite, not

		inconsistent	convincing	talkative
22	Competitive capacity	Don't like competitive pressure	Excellent competitor	Handle competitive stress easily
23	Mood	Change quickly	Change slowly	Steady, unchangeable
	Total	V=	P=	K=
	Percentage			
	Prakriti			

ASSESSMENT OF SHARIRIKA PRAKRUTI

FEATURES OF SOMATIC CONSTITUTION (self answering questionnaire)				
	VATA		PITTA	KAPHA
1. Your body constituency is	Lean		Moderate	Slight obese
2. Your complexion is	Dark and brown		Reddish or fair	Fair and bright.
3. Your skin is	Rough and Dry		Oily and hot	Oily and cold
4. Your veins are	More prominent		Less prominent	Not visible
5. Your eyes are	Small, and darkish		Medium and brown	Big, attractive and
6. Your nails are	Thin, Rough		Thin, Soft	Thick, Smooth
7. Your hair is	Rough, dry and less		Soft, oily and Premature graying	Black, thick and strong
8. Your Eye brows are	Thin, irregular		Thin	Thick and regular
9. Your forehead is	Narrow		Medium	Broad
10. Your appetite is	Variable and scanty		Good and excessive	Constant and less
11. Quantity of food	Variable		More	Less
12. Habit of taking food	Fast		Frequent	Slow
13. The food you like	Light, warm, sweet, sour and salt tastes		Cold, sweet, bitter and astringent taste	Hot, pungent, bitter and astringent taste
14. Your thirst is	Variable		Excessive	Scanty
15. You perspire (sweat)	Less		More	Foul smelling
16. Your sleep is	Scanty and		Little but sound	Deep

	Disturbed			
17. Do you get tensed during difficulties	Always	Occasionally	Never	
18. You start the work	Quickly	After thinking	After detailed thinking	
19. Grasping power	Excellent	Moderate	Medium	
20. Your memory	Poor	Excellent	Good	
21. Your anger	For a short span	For more time	Less	
22. You talk to the unknown persons	More	As per need	Less	
23. You dream about	Running, flying, falling.	Shining objects like lightening, fire and violence	River, greenery, swimming.	
24. Physical activity of your body is	Very active	Moderate As per need	Less active	
25. You speak	Fast, talkative	Clear cut	Slow	
26. Your mood	Changes quickly	Changes slowly	Unchangeable	
27. Your resistance to disease	Poor	Average	Good	
28. Competitive capacity	Don't like	Excellent competitor	Handle stress easily	
29. Your financial status is	Poor, spends money quickly	Moderate, spends on luxuries	Rich, money saver, spends on food	
30. Do you feel discomfort while working	In rainy season	In summer season	In winter season	
TOTAL				

PRAKRITI: Vata: _____ Pitta: _____ Kapha: _____

Dominant Dosha: Vata / Pitta/ Kapha

Recessive Dosha: Vata / Pitta / Kapha

Prakriti: Vata Pitta / Vata Kapha / Pitta Kapha / Tridoshaja / Eka doshaja [Vata / Pitta / Kapha]

MANUAL PART 2

GRADATION OF SYMPTOMS: PRANAVAHA SROTAS

Scoring of important symptoms of Tamaka Shwaasa:

Scoring has been made by the consideration of following points:

- Intensity of the symptom
- Frequency of the symptom
- Duration
- Effect (life quality)
- Reliving factors.

Shwaas Vega: (Frequency of breathing difficulty attacks)

1	No Attack.	0
2	2-3 Times in 3 Week.	1
3	2-3 Times in 2 Week.	2
4	2-3 Times in 1 Week.	3
5	Persistent	4

Shwaas Vega: (breathing difficulty attacks - effecting the life quality)

1	Normal life / Good quality / can enjoy every thing	0
2	Dyspnoea after exertion only / can't enjoy Shita / can't go in Raja, Dhuma Pravaata.	1
3	Dyspnoea without exertion but can do routine work	2
4	Needs rest or medication for routine work due to dyspnoea	3
5	Needs total rest and cant do routine work for dyspnoea.	4

Shwaas Vega: (breathing difficulty attacks - relieving factor)

1	Dyspnoea relives autometrically	0
2	Dyspnoea relives with rest	1
3	Dyspnoea needs oral medications for reliving	2
4	Dyspnoea needs pump for reliving.	3
5	Dyspnoea needs injectable medication for reliving.	4

Sashabda Shwaasa: (Wheeze / additional sounds in breathing)

1	Normal breathing sounds heard	0
2	Wheezing heard only on localized part of chest with stethoscope at time of attacks.	1
3	Wheezing heard on localized part of lung with stethoscope without attacks.	2
4	Wheezing heard on whole lungs with stethoscope.	3
5	Wheezing heard even without stethoscope	4

Kaasa in Shwasa: (Intensity of cough in breathing difficulty attacks)

1	Coughing	0
2	Persistent cough with expectoration, relieving with expectoration	1
3	Persistent cough with occasional repetition with sputum expectoration	2
4	Persistent cough with fainting (darkness)	3

Nishthivana: (Sputum in breathing difficulty attacks)

1	No Nishthivan during Kaasa or Shwaasa	0
2	Tanu Svachchha Nirgandha Nishthivan (Thin colourless sputum without any Smell)	1
3	Bahala Pittaabha Durgandhi Nishthivana. (Thick yellowish sputum with foul Smell)	2
4	Sarakta Nishthivana. (Haemoptysis)	3
5	Bahala Harita Puyasaha Putigandhi Nishthivana. (Thick, green sputum with Pus and foul smell)	4

Note: *Nishthivana* i.e. Sputum with *Vata dosha* predominancy will have watery in nature, *Pitta dosha* dominance will have yellowish discoloration, and amount will be more and thick in case of *Kapha dosha* predominancy.

Ronchi:

1	No ronchi even upon forced expiration	0
2	Ronchi present upon forced expiration but not audible upon deep breathing	1
3	A few scattered ronchi audible upon normal deep breathing	2
4	Innumerable low pitched ronchi audible upon normal breathing	3
5	Innumerable high pitched ronchi audible upon normal breathing	4

Crepitations:

1	No crepts upon normal forced expiration	0
2	Crepts audible upon forced expiration but not upon deep breathing	1
3	Few scattered crepts audible upon normal deep breathing	2
4	Innumerable low intensity crepts audible upon normal breathing	3
5	Innumerable high intensity crepts audible upon normal breathing	4

Peak Expiratory Flow Rate (PEFR) – Numerical / quantitative data, grading as per reading Table on diagnostic criteria: guidelines NAEPP or GINA guidelines may be adopted here.

Spirometry reading - Numerical / quantitative data, grading as per reading.

Breathe holding time (BHT) - Numerical / quantitative data, grading as per reading

Shwasa Roga - Duration of one breathing difficulty attack

1	No episode of attack	0
2	Attack lasting for duration of 10 min.	1

3	Attack lasting for duration of 20 min.	2
4	Attack lasting for duration of 30 min.	3

Intensity of attack (severity of Bronchial Asthma)

1	Asymptomatic and normal lung function between exacerbations.	0
2	Intermittent symptoms < 1 time a week. Brief exacerbation (from a few hours to few days), night time symptoms < 2 times a month.	1
3	Symptoms > 1 time a week but < 1 time per day, exacerbation affect activity & sleep, night time asthma symptoms > 2 times a month.	2
4	Symptoms daily exacerbations affecting activity and sleep, night time asthma symptoms > 1 times a week.	3
5	Continuous symptoms, frequent exacerbations, frequent night time asthma symptoms& physical activity limited by asthma symptoms.	4

Intensity of attack (severity of Bronchial Asthma affecting routine activities)

1	Asymptomatic and normal lung function	0
2	Attack of Shwasa disturbing normal sleep at early morning hours	1
3	Attack of Shwasa, disturbing normal sleep any time	2
4	Attack of Shwasa disturbing daily routine activity	3
5	Attack of Shwasa is continuous, physical activity gets disturbed	4

Need of emergency medicines / week.

1	No need.	0
2	2-3 doses occasionally in a Week.	1
3	2-3 doses occasionally in Alternate days.	2
4	2-3 doses regularly.	3

Intensity of Srotodushti

Presence of Pranavaha Srotodusti Lakshana (Dyspnoea / Freq. Exp./ Very restricted Exp. / Prolonged Exp./ With Loud sound painful / Difficulty in speaking / Sweating)

1	Absent.	0
2	Any 1 or 2	1
3	Any 2 or 3	2
4	More than 4.	3

Asino Labhate Saukhyam - Get relief with sitting posture

1	Dyspnoea on recumbent position	0
2	Con continue recumbent position but feels better on sitting	1
3	Not able to continue recumbency for long time	2
4	Canot assume recumbancy / can't sleep	3
5	Dyspnoea in recumbent position / relief on sitting	4

Shvasakrichhrata – labored breathing

1	No sign of Shvasakrichhrata.	0
2	Mild intercostal retraction, Nasal alae flurring & can speak complete sentences during dyspnoea (labored breathing)	1
3	Intercostal retraction, sternocleidomastoid muscle use & speaks in phrases or partial sentences during dyspnoea.	2
4	Tracheosternal retraction, Intercostal retraction, sternocleidomastoid use & speak in single words during dyspnoea.	3
5	Nasal alae flurring & cannot able to speak during dyspnoea.	4
6	All accessory muscles are working & cannot able to speak, express by body language only.	5

Kasatah sannirudhyata - feeling of unconsciousness in effort to expel out the sputum

1	Absent.	0
2	Present during Attacks	1

Shleshma vimokshane sukhum - Get relief after expel out the sputum

1	Feeling comfortable after expulsion of sputum.	0
2	Not Feeling comfortable even after expulsion of sputum.	1

Peenasa - Coryza

1	Absent	0
2	Present	1

Parshvasula - Pain in thoracic region producing functional disturbance*

1	No shula	0
2	Along with Kasa - Cough	1
3	Very often without attack, relived by snehana / swedana	2
4	Very often even without attack, not relived by snehana / swedana	3
5	Always.	4

*Visual Analogue Scale may also be used here to assess the severity of pain

Kanthodhvansanam - Throat irritation

1	Absent	0
2	Present	1

Usnabhinandati - Liking for hot food & drinks

1	No such feeling.	0
2	Generally avoid Cold thinks.	1
3	Prefer hot drinks.	2
4	Always take hot food & drinks.	3

GRADATION OF SYMPTOMS: UDAKAVAHA SROTAS

Shosha – dryness of Jihva Talu Oshtha Kantha Kloma

1	Absence of Shosha	0
2	Shosha – one organ	1
3	Shosha two organs	2
4	Shosha in three organs	3
5	Shosha in all organs involved.	4

Mukha Shosha – dryness of mouth and oral cavity (in general)

1	Absent	0
2	Present	1

Note: Use Visual Analogue Scale to assess the severity of the complaint.

GRADATION OF SYMPTOMS: ANNAVAHA SROTAS

Gradation for Chhardi:

According or gradation of any symptom following criteria should be considered.

1. Frequency
2. Chronicity (Duration)
3. Intensity (on the basis of Dosha dominancy)
4. Progressiveness (Dhatu gatatva)

On the basis of frequency:

1	No vomiting	0
2	Getting comfort after single vomiting	1
3	1-3 vomiting per day	2
4	3 – 6 vomiting per day	3
5	> 6 vomiting per day	4

On the basis of duration: chronicity

1	Occasional	1
2	Vomiting since 12 hrs.	2
3	Vomiting for 12 – 24 hrs.	3
4	Vomiting duration is of 1 day to 1 week	4
5	Vomiting duration is of more than a week	5

According to contents expelled out with vomiting:

1	Unprocessed food in vomitus	1
2	Kapha expelled out with vomits	2
3	Pitta expelled out with vomits	3
4	Rakta expelled out with vomits	4
5	Purisha expelled out with vomits	5

On the basis of progressiveness (Dhatugata avastha)

1	Chhardi without involvement of any Dhatukshaya laxana	1
2	Chhardi with Rasa kshaya laxana	2
3	Chhardi with Rakta kshaya laxana	3
4	Chhardi followed by Sanjna nasha	4

Presence of Rasakshaya Lakshana (xxxxxxx)

1	Absent.	0
2	Any	1
3	Any 2	2
4	Any 3	3
5	More than 3 lakshana	4

Grading of Amlapitta symptoms:**Daha: (Burning sensation heart burn)**

1	No daha	0
2	Daha in any one area of udara, ura, kukshi/ occasionally for more than half an hour.	1
3	Daha in any 2 area/ occurs daily for half hour to one hour	2
4	Daha occurs daily in more than two area for one hour or more and relieves after digestion of food or vomiting.	3
5	Daha involving most of the areas patient may not sleep at night and does not relieve by any measure.	4
6	Severe degree of daha involving the whole body like hands, feet or sarvanga and does not relieves by any measure.	5

Amlodgara (acid irructions)

1.	No Amlodgara at all	0
2.	Occasionally during day or night for less than half hour after meals.	1
3.	Amlodgara occurs daily for two to three times for ½ - 1 hrs. and relieved by sweets, water and antacids	2
4.	Amlodgara after every intake of meal any food substance for half to one hour, and relieved by digestion of food or vomiting	3
5.	Amlodgara for more than one hour not relieved by any measure	4
6.	Amlodgara disturbing the patients even small amount of fluid regurgitate to patients mouth (danta harsha)	5

Shula (Pain)

1.	No pain	0
2.	Mild/ occasional pain which need not any medication	1
3.	Pain (abdomen) for less than half an hour and relieved after intake of sweets cold drinks food antacid milk etc.	2
4.	Abdominal pain due to ingestion of food and relieves after digestion of food or by vomiting.	3
5.	Severe unbearable pain which does not subside by any measure and the patient awake in the night	4
6.	Unbearable pain associated with frequent vomiting and hamatemesis	5

Note: Visual Analogue Scale may be used to assess the severity

Chhardi/ Hrillasa/ Asyapraseka (vomiting /Water brush)

1.	No vomiting at all	0
2.	Frequency of salivation on every day (asyapraseka)	1
3.	Feels sense of nauseating and vomits occasionally (Hrillas)	2
4.	Frequency of vomiting is two to three times or more per weeks and comes whenever Daha or pain in aggravated.	3
5.	Frequency of vomiting is daily	4
6.	Frequency of vomiting after every meal or even without meals.	5

Adhmana (distention of abdomen)

1	No <i>Adhmana</i>	0
2	Occasionally feelings of distension of abdomen	1
3	Daily after intake of food upto 1 hour with mild distension of abdomen	2
4	Distension of abdomen up to 1 -3 hours after intake of food	3
5	Moderate distension of abdomen up to 6 hours after intake of food	4
6	Severe distension of abdomen upto more than 6 hrs after intake of food	5

Tama:

1	No feeling of Tama	0
2	Occasional feeling of Tama	1
3	Feeling of Tama < 2-3 times a day	2
4	Feeling of Tama 3-6 times a day	3
5	Many times a day with problem in maintaining posture, tries to sit	4

Bhrama

1	No Reeling of head/ Bhrama	0
2	Sometimes feeling of reeling head/ Bhrama	1
3	Feeling of reeling head/ Bhrama < 3 times a day	2
4	Feeling of reeling head/ Bhrama > 3 times a day	3
5	Frequently feeling of reeling head change of posture causes the severe problem	4

Kampa

1	No presence of Kampa	0
2	Occasionally present	1
3	Mildly present one times feeble	2
4	Moderately present i.e. visible disturbs holding light weight articles like news paper	3
5	Severely present not able to do routine work like buttoning, eating etc.	4

Angasada/Gaurava

1	No heaviness	0
2	Occasionally feeling of heaviness for sometimes in hands and feet	1
3	Feeling of heaviness for sometimes in hands and feet not affecting activities of daily living	2
4	Daily feeling of heaviness over body, which leads to Akarmanyata	3
5	Most part of the body for long duration	4
6	All body for most part of the day	5

Klama

1	No klama	0
2	Occasionally feeling of lassitude without Shrama and remains for sometimes and vanishes	1
3	Lassitude without Shrama daily for sometimes	2
4	Lassitude without Shrama daily for long duration	3
5	Always feels tired and have no enthusiasms	4

Nidra**Paittika**

1	Even the patient may not sleep in night due to irritation in abdomen	5
2	Patient can sleep < 3 hrs with severe irritation in abdomen	4

3	Patient can sleep < 3 hrs with moderate irritation in abdomen	3
4	Patients can sleep upto 3 – 6 hrs with mild irritation in abdomen	2
5	Patient can sleep upto more than 6 hrs without any irritation	1
Kaphaja		
	Normal / sound sleep	0
	Patient sleep upto 6 hrs without any disturbance	1
	Sleep deeply upto 8 hrs	2
	Sleeps upto 10 hrs	3
	Sleeps upto > 12 hrs	4
	Even patient may sleep during day time	5

Feeling of well being

1	Feeling very well	0
2	Occasionally feels discomfort	1
3	Feels discomfort mildly and not able to concentrate to his work	2
4	Feels discomfort moderately and feels depressed	3
5	Feels discomfort severely and remains gloomy most of the time	4
6	No feeling of well being at all	5

Gradation of Hrilasa etc.

1	Absent.	0
2	Anannabilasha	1
3	Aasyapraseka	2
4	Hrillasa	3
5	Chhardi	4

Gradation based on *Dosha* expelled in *Chardi*

1	<i>Prabhoota matra</i>	Kapha
2	<i>Varnayukta</i>	Pitta
3	<i>Alpa matra</i>	Vata

Note: Nausea profile may be added here [Ref: Muth ER, Stern RM, et al. Assessment of psychosomatic research 1999].

On the basis of above criteria final gradation of Chhardi can be made as given below:

GRADE - 1

- Getting comfort after single vomiting - 1
- Vomiting since 12 hrs. - 1
- Kapha expelled out with vomits - 1
- Chhardi associated with kapha laxana - 1
- Chhardi without involvement of Dhatukshaya laxana - 1

GRADE – 2

- 1-3 vomiting per day - 2
- Vomiting for 12 – 24 hrs. - 2
- Pitta expelled out with vomits - 2
- Chhardi associated with Pitta laxana - 2
- Chhardi with Rasa kshaya laxana - 2

GRADE – 3

- 3 – 6 vomiting per day - 3
- Vomiting duration is of 1 day to 1 week - 3
- Rakta expelled out with vomits - 3
- Chhardi associated with Vaayu laxana - 3
- Chhardi with Rakta kshaya laxana - 3

GRADE – 4

- > 6 vomiting per day - 4
- Vomiting duration is of more than a week - 4
- Purisha expelled out with vomits - 4
- Chhardi associated with Rakta / other disease laxana- 4
- Chhardi followed by Sanjna nasha - 4

NOTE: any two or more characteristics found, the same grade should be considered

GRADATION OF SYMPTOMS: RASAVAHA SROTAS

Sirā śaithilya (Loss of the usual prominence of the SIRĀ)

1.	Present	0
2.	Absent	1

AMLA ŚĒETA PRĀRTHANĀ (Desire for sour and cold substance):

1.	Absent	0
2.	Present - Occasional	1
3.	Present – always	2

ŚIRNĀLOMATA (HAIR FALL):

1	Absent	0
2	Present	1

TAMAHA-DARŚANA (FAINTING): black outs

1	Nil	0
2	Rare Tamaha Darśana for short duration	1
3	Rare Tamaha Darśana for short duration leads to Bhrama	2
4	Frequent Tamaha Darśana for short duration leads to Bhrama	3
5	Constant Tamah Darshan	4

HRIDAYA SPANDANĀDHIKYA (PALPITATION):

1	Absent	0
2	Present only during heavy exercise that subsides itself on rest	1
3	Present during the normal routine activities, but does not disturb normal activities, subsides by rest	2
4	Present during the normal routine activities but doesn't subside on rest	3
5	Present in routine activities, distressful condition, present even in resting condition	4

SHUNAKSHIKUTA SHOTHA – periorbital oedema – puffiness of eye socket

1	Absent	0
2	Present – eye socket only	1
3	Present – dependent parts	2
4	Present – all over body	3
5	Present, always and disturbing routine activities	4

PINDIKODWESHTANAM – cramps on legs

1	Absent	0
2	Present Occasional	1
3	Present frequent attacks	2
4	Present regular	3

KARNAKSHWEDA

1	Absent	0
2	Occasional & Tolerable	1
3	Occasional & Non Tolerable	2
4	Constant & Non Tolerable	3

GATRASHULA: visual Analogue Scale may be adopted here.

GRADATION OF SYMPTOMS: RAKTAVAHA SROTAS:**Twak rookshata – Dryness of skin**

1	No line on scrubbing with nail	0
2	Faint line on scrubbing by nail	1
3	Linging & even words can be written by anil	2
4	Excessive rukshata leading to kandu	3
5	Rukshata leading to crack formation	4

Bahalatva – thickening of skin

1	No Bahalatva	0
2	Mild thickening	1
3	Moderate thickening	2
4	Very thick	3
5	Very thick with induration	4

Rakta Mandala – Erythema

1	Normal skin	0
2	Faint or near to normal	1
3	Blanching + red colour	2
4	No blanching + red colour	3
5	Red colour + subcutaneous	4

Ratavarna / Arunavarna – (Erythema)

1	No erythema	0
2	Faint	1
3	Light red	2
4	Moderate red	3
5	Bright red	4

Unnati - Elevation

1	No elevation	0
2	Elevation can not palpable	1
3	Elevation can be palpable	2
4	Apparently palpable (Approx. about mm)	3
5	Apparently palpable (Approx. more than 1 mm)	4

Aswedana – Anhydrosis

1	Sweating induced on walking	0
2	Sweating induced on brisk walking	1
3	Sweating induced on running	2
4	Sweating induced on walking up steps	3

SADAMGA INVOLVEMENT AND BODY SURFACE AREA [PASI]

Sl No.	Anga- Body region		Code	Percent body surface
	Sanskrit	English		
1	Shiras	Head	H	10 %
2	Antaradhi	Trunk	T	20 %
3	Urdhwashakha	Upper limbs	U	30 %
4	Adhahshakha	Lower limbs	L	40 %

SADAMGA INVOLVEMENT AND EXTENT INDICATOR

Portion of body region affected	Extent indicator
0 – 5 %	0
5 – 25 %	1
25 – 45 %	2
45 – 55 %	3
55 – 75 %	4
75 – 95 %	5
95 – 100 %	6

Symptom		Code	Extent
Sanskrit	English		

Raktavarna	Erythema	E	0 - 4
Utsedha	Infiltratin	I	0 - 4
Matsyashakalopama	Desquamation	D	0 - 4
Aswedanam	Anhydrosis	A	0 - 4
Kandu (Kapha)	Pruritus	P	0 - 4

Dosa bala (Severity index)

= SUM ((Sadanga involvement and Body surface area - percent BSA in body region) x [(extent Uñü uÉhÉi / AÂhÉ uÉhÉi - erythema in region) + (extent EixÉâkÉ -infiltration in region) + (extent qÉixrÉvÉMüsÉÉâmÉqÉÉ desquamation in region) + (Extent of AxuÉâS anhydrosis) + (Extent of MühQÒû pruritus)) x (extent of body region affected)] =

Dosa bala (Severity index)

= ((0.1 * ((erythema head) + (infiltration head) + (desquamation head) (anhydrosis head) (pruritus head)) x (extent of head affected)) + ((0.2 x ((erythema trunk) + (infiltration trunk) + (desquamation trunk) (anhydrosis trunk)(pruritus trunk)) x (extent of trunk affected)) + ((0.3 x ((erythema upper extremities) + (infiltration upper extremities) + (desquamation upper extremities) (anhydrosis upper extremities)(pruritus upper extremities)) x (extent of upper extremities affected)) + ((0.4 x ((erythema lower extremities) + (infiltration lower extremities) + (desquamation lower extremities)(anhydrosis lower extremities)(pruritus lower extremities)) x (extent of lower extremities affected))

Interpretation: • minimum score = 0 • maximum score = 120

[References: (1) Fredriksson T, Pettersson U. Severe psoriasis: Oral therapy with a new retinoid. Dermatologica. 1978; 157: 238-244. (2) Marks R, Barton SP, et al. Assessment of disease progress in psoriasis. Arch Dermatol.1989; 125: 235-240]

Guidelines for Research in Ekkushtha (Psoriasis) are as follows-

- 1) Psoriasis Area And Severity Index (PASI)
- 2) Scoring Pattern Of Some Symptoms Given By National Psoriasis Foundation
- 3) Scoring Pattern Made Specially ForThe Present Study which includes Deha, Agni Chetasabala and Dehabala Pariksha.
- 4) Dermatology Life Quality Index
- 5) Psoriasis Disability Index
- 6) Photographs of Patients Taken Before and After Treatment.

GRADATION OF SYMTOMS OF EKA KUSTHA – PSORIASIS

Matsyashaklopamam (Scaling):

1	No scaling	0
2	Mild scaling by rubbing/by itching (scaling from some lesionis)	1
3	Moderate scaling by rubbing/by itching (from all lesions)	2
4	Severe scaling by rubbing / by itching (from all lesions)	3
5	Scaling without rubbing / by itching (from all lesions)	4

Scaling – other scoring method

1	No scaling	0
2	Scaling off between 15 – 28 days	1

3	Scaling off between 7 – 15 days	2
4	Scaling off between 4 – 7 days	3
5	Scaling off between 1 – 4 days	4

Aswedanam (Anhydrosis):

1	Normal	0
2	Improvement	1
3	Present in few lesions	2
4	Present in all lesions	3
5	Aswedanam in lesion and uninvolved skin	4

Mahavastu (Extent of lesion)

1	No lesions on Mahasthanam	0
2	Lesion on partial part of hand, leg, neck, scalp, hand, back.	1
3	Lesions on most part of hand, leg, neck, scalp, trunk, back.	2
4	Lesions on whole part of Mahasthanam (Vast area)	3
5	Lesions on whole body	4

Deep black reddish discoloration

1	Normal coloration	0
2	Near to normal which looks like normal color to distant observer	1
3	Reddish coloration	2
4	Slight black reddish discoloration	3
5	Krsna arunavarna	4

Mandala (Circular skin lesion):

1	No Mandala	0
2	Few mandala and smaller than coin	1
3	Few mandala and big (larger) than coin	2
4	More mandala and smaller than coin	3
5	More mandala and bigger than coin	4

Another gradation for Mandala (Erythma) :

1	Normal skin	0
2	Faint or near to normal	1
3	Blanching + red colour	2
4	No blanching + red colour	3
5	Red colour + subcutaneous	4

Nakhdusti (Deformity of nails):

1	No Nail involvement	0
2	1-5 nail's involvement of any extremities	1
3	5-10 nail's involvement of any extremities	2
4	10-15 nail's involvement of extremities	3
5	15-20 nail's involvement	4

Another grade for Nakha dushti. Pitting in nail:

1	No Pitting	0
2	Pitting in 1 finger only	1
3	Pitting in few fingers	2
4	Uncountable pitting	3
5	Uncountable Pitting with nail pathology	4

Bahaltva: (thickening in skin lesion)

1	No bahaltva	0
2	0- Mild thickening	1
3	1- Moderate thickening	2
4	Very thick	3
5	2- Very thick with induration	4

Unnati : (Elevation in skin lesion)

1	No elevation	0
2	Slight elevation that cannot be felt	1
3	Elevation can be felt but depressed in middle	2
4	Elevation in all lesions but soft	3
5	Elevation in all lesions and hard	4

Scaling: The score was decided depending upon the duration of shedding of scales.

1	No Scaling	0
2	Scaling off between 15 – 28 days	1
3	Scaling off between 7 – 15 days	2
4	Scaling off between 4 – 7 days	3
5	Scaling off between 1 – 4 days	4

Joint involvement:

1	No arthritis	0
2	Slight pain	1
3	Pain present but do not hinder activity	2
4	Pain with deformity	3
	Pain with deformity affecting activity & sleep	4

Candle grease sign:

1	Absent	0
2	Improvement	1
3	Present	2

Auspitz sign:

1	Absent	0
2	Improvement	1
3	Present	2

Koebner phenomena:

1	Absent	0
2	Improvement	1
3	Present	2

Criteria for assessment of involvement of body surface area**Scale Percentage**

Posterior surface and anterior surface of head and neck 9

Anterior and posterior surface of forearms 18+18 =36

Anterior and posterior and surface of trunk 18

Anterior and posterior and surface of feet, legs and buttocks 18+18 =36

Perineum including anus and uro genital 1

Criteria for the assessment of overall effect of the therapies:

1) Complete remission (R): 100% relief in the all signs and symptoms.

2) Marked improvement (MI): <100% to > 60% relief in the signs and symptoms

3) Moderate improvement (MOI): < 60% to > 20% relief in the signs and symptoms.

4) Unchanged: <20% relief in the signs and symptoms.

5) **Deterioration:** Increase in the progress of the disease with the appearance of new lesions and severity of existing lesions was considered as deterioration.

GRADATION OF SYMPTOMS: MAMSAVAHA_SROTAS**GALASHUNDIKA**

Grading of symptoms:

Dirgha shopha (dhmatahstiprakasha – swelling resembling blown up bladder)

1	No Inflammation	0
2	Negligible inflammation visible redness of the area	1
3	Marked inflammation and redness noticeable in the area	2
4	Profuse inflammation and redness in surrounding area also	3

Measurement of muscle bulk

- By measuring the circumference, a numerical / quantitative data, grading may be done accordingly.

Muscle hypotonia: 4 point grading may be adopted

1	Normal	0
2	Mild	1
3	Moderate	2
4	Severe	3

Muscle power grading:

1	No contraction	0
2	Flicker or trace of contraction	1
3	Active movement with gravity eliminated	2
4	Active movement against gravity	3
5	Active movement against gravity and moderate resistance	4
6	Active movement against gravity and full resistance (normal power)	5

Overall assessment of mobility of the patient:

1	Walk independently	0
2	Walk with limping	1
3	Walk only with support	2
4	Can't stand without support	3
5	Totally on bed	4

Mamsapradoshaja Vyadhi:

1	Absent	0
2	Present	1

GRADATION OF SYMPTOMS: MEDOVAHA SROTAS**CRITERIA FOR ASSESSEMENT OF RESULTS FOR MADHUMEHA****Avila Mutrata (Turbidity): News Paper Test 10 points**

1.	Crystal clear fluid	0
2.	Faintly cloudy, smoky or hazy with slight turbidity.	1
3.	Turbidity clearly visible but newsprint easily read through test tube-	2
4.	Newsprint not easily read through test tube	3
5.	Newsprint can not be seen through test tube	4

Mutramadhurya (Glycosuria):

1.	Absence of Glucose in urine	0
2.	Traces of Glucose in urine	1
3.	+ Glucose in urine	2
4.	++ Glucose in urine	3
5.	+++ Glucose in urine	4
6.	++++ Glucose in urine	5

Pipasa-Adhikya (Increased Thirst):

1.	Feeling of thirst (7 – 9 times/24 hours) & relieved by drinking water	0
2.	Feeling of moderate thirst (>9 - 11 times/24 hours) & relieved by drinking water	1
3.	Feeling of excess thirst (>11 – 13 times/24 hours) not relieved by drinking water	2
4.	Feeling of sever thirst (>13 times) not relieved by drinking water	3

Kshudha-Adhikya (Increased Appetite): (1 meal = about 350gm diet)

1.	As usual / routine	0
2.	Slightly increased (1 meal extra with routine diet)	1
3.	Moderately increased (2 meals extra with routine diet)	2
4.	Markedly increased (3 meals extra with routine diet)	3

Swedadhikya (Perspiration):

1.	Sweating after heavy work and fast movement or in hot weather	0
2.	Profuse sweating after moderate work and movement	1
3.	Sweating after little work and movement (stepping ladder etc.)	2
4.	Profuse sweating after little work and movement	3
5.	Sweating even at rest or in cold weather	4

Angagandha (Bad odour):

1.	No odour	0
2.	Bad odour but not offensive	1
3.	Strong odour but can be lessened by use of deodorants or perfumes	2
4.	Very strong odour even after using fragrances (use of deodorants or perfumes)	3

Nidradhikya (Increased Sleep):

1.	Normal & sound sleep for 6 – 8 hrs. /24 hrs. with feeling of lightness and relaxation in the body & mind	0
2.	Sleep >8 -9 hrs. /24 hrs. with slight heaviness in the body.	1
3.	Sleep >9 - 10 hrs. /24 hrs. with heaviness in the body associated with Jrimbha.	2
4.	Sleep >10 hrs. /24 hrs. with heaviness in the body associated with Jrimbha & Tandra	3

Hasta-Pada-Tala Daha:

1.	No Daha	0
2.	Hasta -Pada-Tala Daha found occasionally, mild, bearable	1
3.	Hasta -Pada-Tala Daha continuous but bearable & not severe	2
4.	Hasta -Pada-Tala-Daha continuous and severe & unbearable	3

Kara-Pada Suptata:

1.	No suptata	0
2.	Kara-Pada Suptata incontinuous	1
3.	Kara-Pada Suptata continuous but bearable & not severe	2
4.	Kara-Pada Suptata continuous and severe & Unbearable	3

Note: The Diabetic Neuropathy scale may also be used here

Prabhuta Mutrata (Polyuria)**A. Quantity of urine:**

1.	1.5 to 2.00 liters / 24 hours	0
2.	> 2.00 to 2.50 liters / 24 hours	1
3.	> 2.50 to 3.00 liters / 24 hours	2
4.	> 3.00 liters / 24 hours	3

Prabhuta Mutrata (Polyuria)

A. Frequency of Urine: A numerical / quantitative data

1.	3 – 5 times per day, no rarely at night	0
2.	6 – 8 times per day, 1 – 2 times per night	1
3.	9 – 11 times per day, 3 – 4 times per night	2
4.	> 11 times per day, > 4 times per night	3

OTHER CRITERIA FOR ASSESSMENT OF MADHUMEHA

After the completion of the treatment, the results were assessed by adopting the following criteria :

- Improvement in signs and symptoms of disease on the basis of the symptoms score.
- F.B.S. and P.P.B.S. levels
- Serum Cholesterol
- Urine sugar

The patients to be examined weekly and the changes observed in the signs and symptoms to be assessed by adopting suitable scoring method and the objective signs by using appropriate clinical tools. The detail assessment of clinical signs & symptoms are discussed below:

Prabhuta Mutrata (Polyuria) Quantity of urine in liter A numerical / quantitative data

1	1.50 to 2.00	0
2	2.00 to 2.50	1
3	2.50 to 3.00	2
4	3.00 and onwards	3

Prabhuta Mutrata – Frequency of urine: A numerical / quantitative data

1	3 – 6 times per day, rarely at night	0
2	6 – 9 times per day, 0 – 2 times per night	1
3	9 – 12 times per day, 2 – 4 times per night	2
4	More than 12 times per day, more than 4 times per night	3

Pipasa (Polydypsia): A numerical / quantitative data

1	Feeling of thirst 7 – 9 times/24 hours, either/or Intake of water 5 – 7 times/24 hours with quantity 1.5 – 2.0 liter/24 hours	0
2	Feeling of thirst 9 - 11 times/24 hours, either/or Intake of water 7 - 9 times/24 hours with quantity 2.0 - 2.50 liter/24 hours	1
3	Feeling of thirst 11 – 13 times/24 hours, either/or Intake of water 9 – 11 times/24 hours with quantity 2.50 -3.00 liter/24 hours	2
4	Feeling of thirst >13 times/24 hours, either/or Intake of water >11 times/24 hours with quantity >3.00 liter/24 hours	3

Kshudha (Appetite)

1	Regular usual	0
2	Slightly increased (1 – 2 meals)	1
3	Moderately increased (3 – 4 meals)	2
4	Markedly increased (5 – 6 meals)	3

Abhyavaharana Shakti (Hunger):

1	Person taking food in excessive quantity twice in a day	0
2	Person taking food in normal quantity twice in a day	1
3	Person taking food in moderate quantity twice in a day	2
4	Person taking food in less quantity twice in a day	3
5	Person taking food in less quantity once in a day	4
6	Person not at all taking food	5

Kara-Pada-Tala-Daha/Supti (Neuropathy)

1	No Daha	0
2	Kara-pada-tala-daha/Supti incontinuous	1
3	Kara-pada-tala-daha/Supti continuous but not severe	2
4	Kara-pada-tala-daha/Supti continuous and severe	3

Avila Mutrata (Turbidity):

1	Crystal clear fluid	0
2	Faintly cloudy or smoky (turbidity barely visible)	1
3	Turbidity clearly present but newsprint easily read through test tube	2
4	Newsprint not easily read through test tube	3
	Newsprint cannot be seen through test tube	4

Urine turbidity test as mentioned in Mutravaha srotas may also be adapted here.

Mutramadhurya (Glycosuria): A numerical / quantitative data

1	Absence of Glucose in urine	0
2	<0.5% Glucose in urine	1
3	0.05 - 1.0% of Glucose in urine	2
4	1.0 – 2.0% of Glucose in urine	3
5	>2.0% Glucose in urine	4

Swedadhikya (Perspiration)

1	Sweating after heavy work and fast movement or in hot weather	0
2	Profuse sweating after moderate work and movement	1
3	Sweating after little work and movement (stepping ladder etc.)	2
4	Profuse sweating after little work and movement	3
5	Sweating even at rest or in cold weather	4

Shrama Swasa (Dyspnoea)

1	Dyspnoea after heavy work and walking	0
2	Dyspnoea after moderate work and walking	1
3	Dyspnoea after mild work	2
4	Dyspnoea even at resting condition	3

Nidradhikya (Sleep)

1	Normal sleep, 6 – 8 hours/24 hours	0
2	Sleep up to 8 hours/24 hours with Angagaurava	1
3	Sleep up to 8 hours/24 hours with Angagaurava and Jrimbha	2
4	Sleep up to 10 hours/24 hours with Tandra	3
5	Sleep up to >10 hours/24 hours with Tandra & Klama	4

Jarana Shakti (Digestion) - According to presence of Jirna Ahara Lakshana :
Udgarashuddhi, Utsaha, Yathochitta, Malotsarga, Laghuta, Kshudha, Trishna

1	Presence of all symptoms within 4 hours	0
2	Presence of all symptoms within after 4 hours	1
3	Presence of four or more symptoms after 4 hours	2
4	Presence of three or more symptoms after 5 hours	3
5	Presence of two or more symptoms after 6 hours	4
6	Anyone symptom presence after 6 hours	5

Purishabaddhata (Constipation)

1	Stool passes as per normal schedule	0
2	Passes stool with strain, sometimes takes purgative	1
3	Passes stool after more than 24 hours, frequently takes purgative	2
4	Passes stool after gap of one day, normal purgatives does not work	3

Pindiko-udveshatan (Cramps)

1	No cramps	0
2	Cramps after walking more than 1 km.	1
3	Cramps after walking	2
4	Cramps after walking ½ km	3
5	Inability in walking even ½ km	4

Tanu madhuryata: Glycosuria – a numerical / quantitative data based on FBS / PPBS / RBS readings , so grading may be done as on readings.

CRITERIA FOR ASSESSEMENT OF STHAULYA:**Cala Sphik - Udara - Stana:**

1.	Absence of Calatva	0
2.	Little visible movement (in above areas) after rapid movement	1
3.	Little visible movement (in above areas) after moderate movement	2
4.	Movement (in the areas) after mild movement	3
5.	Movement (in the areas) even after changing posture	4

Krichha Vyavayta (Loss of Libido): [Refer Shukravaha srotas also]

1.	Normal performance without external stimulation	0
2.	Decreased frequency with normal performance	1
3.	Decrease frequency with insufficiency	2
4.	Normal performance with external stimulation	3
5.	No sexual stimulation at all	4

Angagandha (Bad Odour):

1.	No odour	0
2.	Bad odour but not offensive	1
3.	Strong odour but can be lessened by use of deodorants or perfumes	2
4.	Very strong odour even after using fragrances (use of deodorants or perfumes)	3

Swedadhikya (Perspiration):

1.	Sweating after heavy work and fast movement or in hot weather	0
2.	Profuse sweating after moderate work and movement	1
3.	Sweating after little work and movement (stepping ladder etc.)	2
4.	Profuse sweating after little work and movement	3
5.	Sweating even at rest or in cold weather	4

Kshudha-Adhikya (Increased Appetite): (1 meal = about 350gm diet)

1.	As usual / routine	0
2.	Slightly increased (1 meal extra with routine diet)	1
3.	Moderately increased (2 meals extra with routine diet)	2
4.	Markedly increased (3 meals extra with routine diet)	3

Pipasa-Adhikya (Increased Thirst):

1.	Feeling of thirst (7 – 9 times/24 hours) & relieved by drinking water	0
2.	Feeling of moderate thirst (>9 - 11 times/24 hours) & relieved by drinking water	1
3.	Feeling of excess thirst (>11 – 13 times/24 hours) not relieved by drinking water	2
4.	Feeling of sever thirst (>13 times) not relieved by drinking water	3

Kshudra Shwasa (Exertional Dyspnoea):

1.	No Dyspnoea even after heavy work	0
2.	Dyspnoea after moderate work but relieved later and tolerable; dyspnoea by climbing upstairs of 10 steps & time taken will be more than 15 sec.	1
3.	Dyspnoea after little work but relieved later and tolerable; dyspnoea by climbing upstairs of 10 steps & time taken will be more than 25 sec.	2
4.	Dyspnoea after little work but relieved later and not tolerable; dyspnoea by climbing upstairs of 10 steps & time taken will be more than 35 sec.	3
5.	Dyspnoea in resting condition	4

Nidradhikya (Increased Sleep):

1.	Normal & sound sleep for 6 – 8 hrs./24 hrs. with feeling of lightness and relaxation in the body & mind	0
2.	Sleep >8 -9 hrs./24 hrs. with slight heaviness in the body.	1
3.	Sleep >9- 10 hrs./24 hrs. with heaviness in the body associated with Jrimbha	2
4.	Sleep >10 hrs./24 hrs. with heaviness in the body associated with Jrimbha & Tandra	3

GRADATION OF SYMPTOMS: ASTHIVAHA SROTAS**Adhidanta - supernumerary tooth**

1	Absnet	0
2	Present	1

Adhidanta - supernumerary tooth

1	No adhidanta	0
2	Only one supernumerary tooth	1
3	Two supernumerary tooth	2
4	Three supernumerary tooth	3
5	More than three supernumerary tooth with facial deformity	4

Dantashoola/Dantabheda-

1	No pain	0
2	Mild pain with no associated complaints.	1
3	Discomforting pain aggravated during mastication.	2
4	Distressing pain associated with fever, edema etc.	3
5	Horrible pain.	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

Danta vikara/pata (Dental deformity/fall):

1	Absnet	0
2	Present	1

Danta vikara/pata (Dental deformity/fall):

1	No dental deformity	0
2	Occasional dental pain with dental caries or loosening of at least one tooth.	1
3	Dental pain that don't responds to analgesics along with caries/loosening / loss of 2-4 teeth.	2
4	Loosening / loss of 4-8 teeth.	3
5	Loosening / loss of more than 8 teeth.	4

Asthi shula/bheda (Pain in bones)

1	No piercing pain in bones.	0
2	Mild piercing pain in bones not affecting daily activities.	1
3	Occasional moderate piercing pain in bones not affecting daily activities. Pain can be relieved by rest no need of medication.	2
4	Frequently severe piercing pain in bones affecting daily activities. Patient needs medication.	3
5	Continuous severe piercing pain in bones with restricted movements not relieved even by simple medications.	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

Vivarnata: Discolouration

1	Absent	0
2	Present	1

Kesha vikara (Palitya):

1	No greying of hair	0
2	Very few grey hair	1
3	Partial greying of hair	2
4	Significant greying of hair	3
5	Generalized greying of hair	4

Kesha pata (Hair fall):

1	No hair fall	0
2	Hairs fall once in the morning while washing / combing.	1
3	Hairs fall on every time of combing.	2
4	Hairfall even without combing and raised hairline in frontal region (mild baldness).	3
5	Visible or significant baldness in frontal or vertex region.	4

Other classification that can be adapted to assess hairfall in male and females:

Norwood class of assessing hair fall - Male

Ludwig scale for female pattern baldness – Female

Asthi kshaya lakshana:**Shrama (Tiredness):**

1	No shrama (Tiredness).	0
2	Tiredness with excessive exertion.	1
3	Tiredness with moderate exertion.	2
4	Tiredness with mild exertion.	3
5	Tiredness with no exertion.	4

Sandhi Shaithilya: (Looseness/Weakness of Joints)

1	No feeling of looseness/weakness in joints	0
2	Mild feeling of looseness/weakness in joints. Patient can stand/walk independently without difficulty.	1
3	Moderate feeling of looseness/weakness in joints. Patient can stand/walk independently with difficulty.	2
4	Severe feeling of looseness/weakness. Patient can stand/walk only with support (Crutches, cane or walkers).	3
5	Severe feeling of looseness/weakness. Patient unable to stand/walk even with support (Crutches, cane or walkers).	4

Nakha Vikara- Nail deformity

1	No Nail deformity	0
2	Mild loss of natural texture & maliability of nails.	1
3	Moderate loss of texture & maliability of nails.	2
4	Visible brittleness of nails (which breaks easily).	3

Rukshata (Dryness)

1	No dryness.	0
2	Occasional dryness without winter season	1
3	Visible dryness, mild dull white streaks after scratching on the skin which disappears after sometime.	2
4	Dryness/roughness, bright white streaks on the skin remaining for a considerable time.	3
5	Dryness/roughness and criss-cross visible cracking of skin.	4

Mamsabhilasha (Desire of eating meat)

1	Absnet	0
2	Present, occasional	1
3	Present, intense	2

Asthi Sndhi baddhata (Stiffness in bones & Joints)

1	No stiffness.	0
2	Stiffness for few minutes relieved by mild movements.	1
3	Stiffness lasting for 1 to 2 hours but, routine works are not disturbed.	2
4	Stiffness lasting for more than 2 hours mildly affecting the daily routine.	3
5	Episodes of stiffness lasting for 2-6 hours. Daily routines are hampered	4

Scoring pattern for Osteoporosis

Subjective criteria: Results of the treatment can be assessed on the basis of relief in *Asthikshayatmaka lakshana* with the help of specific scoring pattern as below:

ASTHIVEDANA – pain in bones

1	None	0
2	Only on movement	1
3	Without movement at rest	2
4	Pain even at night	3

Note: Visual Analogue Scale may be used to assess the severity of pain.

KATISHOOLA – back ache

1	No backache	0
2	Occasionally	1
3	Relieves by medicine	2
4	Dependent on painkiller	3

Note: Visual Analogue Scale may be used to assess the severity of pain.

SANDHISHOOLA – pain in joints

1	No pain	0
2	Mild pain + no difficulty in walking	1
3	Slight difficulty in walking	2
4	Much difficulty in walking	3

Note: Visual Analogue Scale may be used to assess the severity of pain.

KESHA PATAN: Hair fall

1	Absent	0
2	Hair fall on washing	1
3	Hair fall on combing	2
4	Hair fall on simple stretching	3

GRADATION OF SYMPTOMS: MAJJAVAHA SROTAS**Netra gaurava (Heaviness in the eye)**

1	No feeling of heaviness in eye.	0
2	Occasional feeling of heaviness in eye	1
3	Frequent feeling of heaviness in the eye associated with headache.	2
4	Feeling of heaviness in the eye throughout the day along with headache and disturbed vision.	3

Pain in small joints (interphalangeal joints)

1	No pain	0
2	Mild pain involving only one joints	1
3	Discomforting pain in 2 joints.	2
4	Distressing pain in > 2 joints and hampering day to day activities.	3
5	Horrible pain.	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

Murchha- (Fainting):

1	No murchha	0
2	Murchha only after exertion, lasting for few seconds	1
3	Murchha on exertion lasting for few minutes.	2
4	Murchha without any exertion lasting for few minutes. The patient can stand or walk slowly.	3
5	Murchha without any exertion. The patient cannot stand, walk or even can't sit on the bed due to the fear of fainting. He/she has to lie down.	4

Timir-darshanam

1	No tama	0
2	Occasional tama darshana for short duration	1
3	Occasional tama darshana for small duration leads to bhrama.	2
4	Frequent tama darshan for small duration leads to bhrama	3
5	Frequently tama-darshana for longer duration.	4

Arumshika

1	No Arumshika	0
2	Occasional abscess on the scalp with less pain.	1
3	Few abscesses on the scalp.	2
4	Many abscesses on the scalp associated with severe pain, discharge, reduced hair density.	3
5	Generalized scalp abscesses on the scalp with severe pain, discharge, reduced hair density associated with systemic symptoms like fever etc.	4

Asthi shunyata / Asthi saushirya- Osteoporosis: Singh's Index

1	All the normal trabecular groups are visible and the upper end of the femur seems to be completely occupied by cancellous bone.	6
2	The structure of principal tensile and compressive trabeculae are accentuated. Ward's triangle appears prominent.	5
3	Principal tensile trabeculae are markedly reduced but can still be traced from the lateral cortex to the upper part of the femoral neck.	4
4	There is a break in the continuity of the principal tensile trabeculae opposite the greater trochanter. This grade indicates definite osteoporosis.	3
5	Only the principal compressive trabeculae stand out prominently; the others have been more or less completely resorbed.	2
6	Even the principal compressive trabeculae are markedly reduced in number and are no longer prominent.	1

(Singh.M; Nagrath.A.R. and Maini P.S. Changes in the trabecular pattern of the upper end of the femur as an index to osteoporosis; Journal of bone and joint surgery, 52A,457-467, 1970)

Bone Mineral Density (B.M.D).**t-score (WHO criteria for assessing osteoporosis.)**

1	Normal - t score > -1	0
2	Osteopenia - t score between -1 to -2.5.	1
3	Osteoporosis - t score < or = -2.5.	2
4	Severe osteoporosis - t score < -2.5 with one or more fragility fractures.	3

(Pauline M. Chamaco, Paul D. Miller, *Osteoporosis – A guide for clinicians*, Walters Kluwer (India) Pvt. Ltd., New Delhi, World Health Organization criteria for assessing osteoporosis severity, Page.5)

Alpa shukrata – Oligospermia [Refer Shukravaha Srotas also]

1	Normal count (> 20 million) and motility of the sperms is also normal (> 60%).	0
2	Sperm count is normal (> 20 million) but the motility is reduced (< 60%).	1
3	Both sperm count and motility are reduced.	2
4	No Sperm is alive i.e. the count and motility is zero.	3

Parva bheda – Pain in finger joints

1	No pain in the phalanges	0
2	Mild pain in the phalanges	1
3	Discomforting pain in the phalanges	2
4	Distressing pain in the phalanges	3
5	Horrible pain in the phalanges	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

GRADATION OF SYMPTOMS: SHUKRAVAHA SROTAS**Aharshanam: Lack of Desire:**

1	Normal desire	0
2	Lack of desire	1
3	Desire only on demand of partner	2
4	No desire at all	3
5	Stridvesha	4

Dhvajanucchraya: Lack of penile erection:

1	Erection whenever desired	0
2	Erection in 75% of the encounters	1
3	Erection in 50% of the encounters	2
4	Erection in 25% of the encounters	3
5	Only erection after severe manipulation	4
6	No erection at all	5

Lingashaithilya: Lack of Penile rigidity:

1	Proper stiffness to maintain erection and to continue the sexual intercourse till last	0
2	Some loss of stiffness but can maintain the erection and continue the act till last	1
3	Some loss of stiffness, able to maintain erection, but unable to continue act till last	2
4	Loss of stiffness, can initiate sexual act but unable to maintain erection till last	3
5	Total loss of stiffness and unable to initiate the sexual intercourse	4

Kshipram munchati shukram / Shighra shukra skhalanam: Premature ejaculation:

1	Ejaculation during sexual intercourse > 60 sec with at least 10 or >10 pelvic thrusts	0
2	Ejaculation during sexual intercourse < 60 sec with at least 5 – 10 pelvic thrusts	1
3	Ejaculation during sexual intercourse < 30 sec with at least 1 - 5 pelvic thrusts	2
4	Ejaculation before penetration	3
5	Ejaculation during foreplay	4
6	Ejaculation on mere thoughts / sight	5

Shighravisarga / chirat praseka / badhnati shukram: Delayed / retarded ejaculation:

1	Timely ejaculation in 100% of sexual encounters	0
2	Delayed ejaculation in 75% of sexual encounters	1
3	Delayed ejaculation in 50% of sexual encounters	2
4	Delayed ejaculation in 25% of sexual encounters	3
5	No ejaculation	4

Apraharsha: Lack of orgasm:

1	Enjoyment in every sexual intercourse by ejaculating the semen	0
2	Enjoyment in 75% of the encounters by ejaculating the semen	1
3	Enjoyment in 50% of the encounters by ejaculating the semen	2
4	Enjoyment in 25% of the encounters by ejaculating the semen	3
5	Lack of enjoyment in most occasions	4
6	No enjoyment at all	5

Maithunottar Shrama: Post - act exhaustion:

1	No exhaustion at all	0
2	Slight exhaustion occasionally	1
3	Exhaustion in 25 % of the encounters	2
4	Exhaustion in 50 % of the encounters	3
5	Exhaustion in 75 % of the encounters	4
6	Exhaustion after every sexual act	5

Maithunaavrutti: frequency of coitus per week

1	3 or > 3 coitus per week	0
2	2 coitus per week	1
3	1 or no coitus per week	2

Maithune Svasakrucchrata: Difficulty in breathing during / after sexual act

1	No Svasakrucchrata	0
2	Mild Svasakrucchrata which does not disturb the act	1
3	Moderate Svasakrucchrata sometimes disturb the act	2
4	Severe Svasakrucchrata most of times disturb the act	3
5	Severe Svasakrucchrata which hamper every act	4

Maithune Prasvedanam: Perspiration during / after sexual act

1	No perspiration	0
2	Mild perspiration	1
3	Moderate perspiration	2
4	Severe perspiration	3
5	Severe perspiration which disturbs the sexual act	4

GRADATION OF SYMPTOMS: MUTRAVAHA SROTAS**GRADATION FOR SYMPTOMS OF ASHMARI****General Symptoms Score:**

1	Complete absence of the signs and symptoms	0
2	Mild degree of the signs and symptoms	1
3	Moderate degree of the signs and symptoms	2
4	Severe degree of the signs and symptoms	3
5	Acute condition of signs and symptoms	4

Pain:

1	No pain	0
2	Occasional pain did not require treatment	1
3	Occasional pain but, required treatment	2
4	Constant dull ache pain, required treatment	3
5	Severe constant pain, but did not show relief even after treatment	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

Burning Micturition:

1	No burning micturition	0
2	Occasional burning micturition	1
3	Occasional burning micturition, required treatment	2
4	Constant burning micturition required treatment	3
5	Constant severe burning micturition but did not show relief even after treatment	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

Dysuria: Krichchrata

1	No dysuria	0
2	Occasional dysuria	1
3	Occasional dysuria which require treatment	2
4	Constant dysuria which require treatment	3
5	Constant severe dysuria but did not show relief even after treatment	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

Tenderness in Renal Angle:

1	No tenderness	0
2	Mild tenderness	1
3	Moderate tenderness	2
4	Severe tenderness	3
5	Acute tenderness	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

Hematuria: On the basis of microscopic urine analysis

1	No RBC/Hpf	0
2	0 – 5 RBC/Hpf	1
3	6 – 10 RBC/Hpf	2
4	11 – 15 RBC/Hpf	3
5	>16 RBC/Hpf	4

This is a Numerical / Qualitative data, so grading as per reading to be adopted.

Pus Cells: On the basis of microscopic urine analysis

1	No pus cells/Hpf	0
2	0 – 5 pus cells/Hpf	1
3	6 – 10 pus cells/Hpf	2
4	11 – 15 pus cells/Hpf	3
5	>16 pus cells/Hpf	4

This is a Numerical / Qualitative data, so grading as per reading to be adopted.

GRADATION OF SYMPTOMS: PURISHAVAHA SROTAS**Mala pravritti – consistency of stools**

1.	Samhata pureesha (well formed – solid), doesn't change the shape on the closet basin, includes Sandra	0
2.	Asamhatam / shithilam / Shlatham (improperly formed – semsolid), changes shape but do not spread on the closet basin, includes Apichilam, Snigdham	1
3.	Srusta pureesham, Sramsas, Bhinna, Bhramsha (Semi liquid), takes the shape of the closet, adequate feces present, includes Kaphadhikam, Phenilam, Picchanugatam, Tantumat,	2

4.	Dravam / Tanu (liquid stool), watery spills throughout the closet basin, includes, Jalopamam, Payabham, Ambutulyam, Udakaiva, Apureesham, Vitvarjitham	3
5	Tilapistnibham, Dadhyabham, Vesavarabham, Vitjalam, Vasabham, Medodakasannibham, Tailabham	4

Note: BRISTOL'S STOLL CHART may be used to assess the consistency of stool mass

Dravamala Pravritti: consistency of stool

1.	Samhata pureesha (well formed – solid), doesn't change the shape on the closet basin, includes Sandra	0
2.	Asamhatam / shithilam / Shlatham (improperly formed – semisolid), changes shape but do not spread on the closet basin, includes Apichilam, Snigdham	1
3.	Srusta pureesham, Sramsa, Bhinna, Bhramsha (Semi liquid), takes the shape of the closet, adequate feces present, includes Kaphadhikam, Phenilam, Picchanugatam, Tantumat,	2
4.	Dravam / Tanu (liquid stool), watery spills throughout the closet basin, includes, Jalopamam, Payabham, Ambutulyam, Udakaiva, Apureesham, Vitvarjitham	3
5	Tilapistnibham, Dadhyabham, Vesavarabham, Vitjalam, Vasabham, Medodakasannibham, Tailabham	4

Kriccha Pravritti – chirat pravritti - difficulty in defecation

1.	0 to 5 min time spent for defecation	0
2.	5 to 10 min time spent for defecation	1
3.	10 to 15 min time spent for defecation	2
4.	15 to 20 min time spent for defecation	3
5	Above 20 min time spent for defecation	4

Kricchra Pravritti - Krichhrena pravritti – straining during defecation

1.	0 to 5 min time spent for defecation without pain or strain	0
2.	> 5 min time spent for defecation with shoola, shabda or with strain	1
3.	> 10 to 15 min with shoola, Shabda, strain during defecation	2
4.	15 to 20 min time spent for defecation with shoola, shabda, strain during and after defecation	3
5	Above 20 min time spent for defecation with shoola, shabda and strain associated upadrava of Vyadhi.	4

Muhurmuhu pravritti – increased frequency:

1.	1 to 2 times / day	0
2.	3 to 6 times / day	1
3.	7 to 9 times / day	2
4.	10 to 15 times / day	3
5	More than 15 times / day	4

Ati Grathitam – hard stool

1.	Samhatam / Sandram – normal	0
2.	Kharam / Parusham – dry but defecated with pain and difficulty	1
3.	Kathinam / Gadham / Grathitam – <i>dry, hard</i> and passes segmented stool	2
4.	Atigrathitam / Vigrathitam – Pellet like, stoneyhard and even forms fecoliths	3

Mala pariksha:**- 1. Habits:**

1.	Regular	0
2.	Irregular	1

- 2. Number of motions:

1.	1 time / day	0
2.	2-3 time / day	1
3.	4-5 times / day	2
4.	6 –7 times / day	3
5.	> 10 times / day	4

-3. Akriti – appearance of stool mass

1.	Cylindrical	0
2.	Not define	1

-4. Samhatatva: consistency of stool

1.	Semisolid	0
2.	Hard or Liquid	1

-5. Colour of stool

1.	Dark brown (due to Malaranjaka Pitta)	0
2.	Another colour	1

-6. Gadha – smell:

1.	Avishesha	0
2.	Bhrisha Durgandhi	1

-7. Jala nimajjana pariksha:

1.	Floats in water	0
2.	Sinks in water	1

Evaluation of Atisara:

1.	Bowel evacuation 3 – 5 times per day Atisarana < 12 hours chronicity Pitta expelled out with purisha Atisarana associated with pitta lakshanas Atisarana without any dhatu lakshanas	1
2.	Bowel evacuation 6 – 8 times per day	2

	Atisara chronicity 12 – 24 hours Pitta expelled out with atisara Atisarana associated with kapha lakshanas Atisarana with rasa dhatu Kshaya lakshanas	
3	> 9 time bowel evacuation / day Atisarana chronicity 1 day to 1 week Rakta expelled out with atisara Atisarana associated with vata lakshanas Atisarana with rakta dhatu Kshaya lakshanas	3
4	>9 time bowel evacuation / day Chronicity > 1 week Purisha expelled out with mucus or kapha Atisarana associated with Rakta / Anya vyadhi Atisarana followed by Sangyanasha.	4

GRADATION OF SYMPTOMS: SWEDAVAHA SROTAS

Grade – Atisvedanama

1	Normal pattern of Sweating	0
2	Occasional excessive sweating with no features of Atisvedana or Svedavridhhi	1
3	Features of Sveda Vriddhi/Atisveda or localized sweating <100 cm ² during normal room temperature/short burst of profuse sweating not affecting daily routine activities	2
4	Features of Sveda Vriddhi /Atisveda with either Daurgandhya or Kandu or Moderate generalized sweating affecting daily routine activity/Episodic sweating eg. Night sweating	3
5	Maximum features of Sveda Vriddhi (Kandu, Daurgandhya, Atisveda, Murccha, Trishna, Daha, PittaPrakopa, Sharira Sadana, Jvara, Bhrama, Shyavaraktamandala Darshana, Pittasra Kopa, Svarasadana, Sandhipida?)/Excessive sweating >100cm ² during normal room temperature or normal psychological condition/sustained sweating	4

Note: Objective Parameters may be used for hyperhidrosis such as:

Gravimetric Sweat test (Quantification Test)

Minor's iodine Starch Test

Mapping out areas of excess sweating

Using Blotting Paper to assess the amount of Sweat

Grade - Asvedanama

1	Normal Sweating pattern	0
2	No feature of Sveda Kshaya/ No sweating even after exposure to heat or stress condition but developing uncomfortable sense of warmth	1
3	Any 1 feature of Sveda Kshaya/ Slight sweating exposure to heat or stress condition but developing malaise, easy fatigability, headache/<100 ⁰ F	2

4	Any two features of Sveda Kshaya/ No sweating after exposure to heat or stress condition but developing generalized features like nausea, dizziness, tachycardia, palpitation, but to rule out compensatory mechanism or heat acclimatization/100 -102 ⁰ F/heat tolerance	3
5	All the features of Sveda Kshaya (Romachyuti, Stabhdaromata, Sphutanam Tvacha)/ After exposure to heat or stress condition, No sweating but developing generalized features (Hyperthermia>103 ⁰ F), drowsiness, Hyperapnoea) but ruling out compensatory mechanism or heat acclimatization/heat tolerance	4

Grade – Ati Shlakshnata

1	Absense of Ati Shlakshana Lakshana	0
2	Presense of Glossy Skin	1
3	Presense of Glossy and less Hairy Skin	2
4	Presense of Glossy, less hairy, Shiny Skin	3

Grade -Lomaharsha/horripilation

1	No Horripilation	0
2	Occasional Horripilation in presence of external or internal stimuli	1
3	Mild Horripilation in environmental or psychological status	2
4	Moderate Horripilation in presence of external or internal stimuli	3
5	Generalized Horripilation in absence of external or internal stimuli	4

Another Gradation For Lomaharsha

- ✓ Presence of Lomaharsha –Grade 1
- ✓ Absence of Lomaharsha - Grade 0

GRADATION OF SYMPTOMS: ARTAVAVAHA SROTAS

Assessment of amount of blood loss: No. of fully soaked pads*/day

1	Up to 3 fully soaked pads / day	0
2	4 – 5 fully soaked pads / day	1
3	6 – 7 fully soaked pads / day	2
4	>7 fully soaked pads / day	3

A numerical / quantitative data, so reading itself may be taken as grade.

Amount* of blood loss: Total Blood loss

Grade

1	61 to 80 gm	0
2	81 to 100 gm	1
3	101 to 120 gm	2
4	>120gm	3

A numerical / quantitative data, so reading itself may be taken as grade.

*A standard vaginal pads (Stayfree Secure-Regular) weighing 10.25gms each was advised during the menstrual period, starting from the first day of menstrual cycle, till its cessation. Weight of soaked pads were measured on an electrical balance. Thus the total weights of all the pads used in the period were measured. The difference of weight between dry and wet pads was calculated.

**The mean score of this calculation gives us rough idea about the quantity of menstrual blood loss.

***A simple visual assessment technique to discriminate between menorrhagia and normal menstrual blood loss can also be adopted.

Frequency of passing of clots/ cycle		Grade
1	No clots/ small clots/ up to 3 clots along with blood	0
2	4 – 5 clots along with blood	1
3	7 – 9 clots along with blood	2
4	>9 clots along with blood	3

A numerical / quantitative data, so reading itself may be taken as grade.

Duration of menstrual bleeding:

1	<5 days of menstrual bleeding	0
2	6 to 7 days of menstrual bleeding	1
3	8 to 9 days of menstrual bleeding	2
4	>9 days of menstrual bleeding	3

A numerical / quantitative data, so reading itself may be taken as grade.

Assessment of Inter Menstrual Period:

1	25 to 35 days interval	0
2	20 to 24 days interval	1
3	15 to 19 days interval	2
4	< 15 days/irregular interval	3

A numerical / quantitative data, so reading itself may be taken as grade.

Angamarda (Bodyache):

1	No pain	0
2	Generalized pain of and on during the day	1
3	Generalized pain/ache during most part of the day not affecting any work	2
4	Generalized pain pain/ache throughout the day but person is able to do normal routine	3
5	Generalized (sarvanga) bodyache/pain enough to affect routine work for all the day	4

Note: Visual Analogue Scale may be used to assess the severity of pain.

Vedana (Lower Abdominal Pain during Menstrual period):

1	Menstruation is not painful	0
2	Menstruation painful but daily activity is not affected,	1

	no need of analgesic	
3	Daily activity affected, needs to take analgesic	2
4	Daily activity inhibited, pain continue after administration of analgesic	3

Note: Visual Analogue Scale and “**Verbal multidimensional scoring system**” may be used to assess the severity of pain.

MANASA PARIKSHA BHAVA (MENTAL FACTOR EXAMINATION):

Ayurvedic classics have explained mental factor examination deliberately and the means to assess all mental factors by inference are described in Charaka Samhita. Utilizing these means, a specialized rating scale for mental factor examination is prepared by giving scores to various presentations of mental state. This scale may be used in the research works for clinical evaluation and analysis and is given below:

Manasa- Arthesu Avyabhichranena

1	No deviations	0
2	Getting deviated very rarely	1
3	Deviation often and knowledge perception impairs	2
4	Deviation and perception frequently disturbed	3

Vignyanam vyavasayena

1	Normal functioning in routine	0
2	Gradual hampered performance in functioning	1
3	Impaired motivation towards functioning often	2
4	Loss of pace and motivation in functioning	3

Rajah-Sangena i.e. “Naryadisangena tatkaranam rajoanumiyate” (Chakrapani) **(Affection to opposite)**

1	Normal affection	0
2	Gradual decreased affection	1
3	Loss of affection occasionally	2
4	Frequently and totally loss of affection	3

Moha – Avijnanena

1	Normal functioning capacity	0
2	Gradual affliction towards objects	1
3	Increased affliction, oftenly towards objects	2
4	Totally involvement and affliction with objects	3

Krodha – Abhidrohena i.e. “Parapidartha Pravrittih” (Chakrapani)

1	No violent tendencies	0
2	Violent thoughts very rarely	1
3	Violent, Sadistic functions oftenly	2
4	Frequent thoughts and functions of violence and sadistic	3

Shoka Dainyena i.e. “Rodanadi” (Chakrapani)

1	No feeling of Sorrowness	0
2	Feels inferiority and sorrow at occasion	1
3	Inferiority complexes and greedy oftenly	2
4	Weeps and feels inferior very frequently	3

Harsha – Amodena i.e. “Nritya gita vaditradutsavakaranama” (Chakrapani)

1.	Totally cheerful on all occasion	0
2.	Cheerful and initiative with good circumstances	1
3.	Cheerful and active in that, only at occasion	2
4.	No feeling of cheerfulness	3

Priti – Tosena i.e. Mukhanayanprasadadih” (Chakrapani)

1	Always happy and pleased	0
2	Happy and pleased occasionally	1
3	Express happy mood oftenly	2
4	No feeling of happiness at all	3

Bhayam – Vishadena

1	No fear	0
2	Fearful only at reasonable cause	1
3	Fearful even in reasonable cause	2
4	Always fearful emotion	3

Dhairyam-Avishadena i.e. Manaso Adainyam” (Chakrapani)

1	No fear or sorrow at any cause	0
2	Fearful only at reasonable at any cause	1
3	Fearful occasionally	2
4	Always in fearful and depressed emotions	3

Viryam – Utthanena i.e. “Kriyarambhena” (Chakrapani)

1	Starts and works very quickly	0
2	Works with less interest	1
3	Delayed and decreased in working capacity	2
4	Not able to start any work	3

Avasthan - Avibhramena i.e. “Sthiramativam” (Chakrapani)

1	Always confident and stable in perception	0
2	Often stable in knowledge perception	1
3	Rarely confident and stable in perception	2
4	Not stability or confidence in perception	3

Shraddha – Abhiprayena i.e. “Abhyarthanena” (Chakrapani)

1	Always very good in attitude and interest	0
2	Occasionally good in attitude and interest	1

3	Impaired attitude and interest	2
4	Totally loss of attitude and interest	3

Medha – Grahanena i.e. “Granthadidharanena” (Chakrapani)

1	Always grasps the events at an instance	0
2	Grasps the event but confused	1
3	Delayed in grasping the events with confusion	2
4	Unable to grasp or understand	3

Sandhya namagrahanena

1	Completely attentive in all occasions	0
2	Attentive occasionally	1
3	Attentive rarely	2
4	Absolutely no attentiveness	3

Smriti smaranena

1	Very good in recalling and remembering	0
2	Recalls and remembers with difficulty	1
3	Delayed recall and remembers with difficulty	2
4	Delayed recall and remembers with confusion	3

Hriya apatrapanena

1	Shyness intact always completely	0
2	Feeling of shyness in unknown atmosphere	1
3	Feeling of shyness only in front of some unknown persons	2
4	No shyness at all	3

Shila anushilanena

1	Very good conduct at all instances	0
2	Impaired conduct only at occasions	1
3	Impaired conduct recurrently	2
4	Totally abnormal conduct	3

Dvesha – Pratishedhena i.e. “Vyavrutya” (Chakrapani)

1	No revenging tendency at all	0
2	Thoughts of revenge only at few events	1
3	Thoughts and acts of revenge oftenly	2
4	Always thoughts and acts of revenge	3

Upadhi- Anubandhanena i.e. “Uttar Kalinaphalena” (Chakrapani)

1	Normally short impact that can be solved by the person himself	0
2	Prolonged, disturbing impact but able to solve by self efforts	1
3	Impact can only be solved by the perseverance effort and counseling by others	2
4	Even other can not help in resolving the impact of concerned problem	3

Dhriti- Alaulyena

1	Not greedy for anything (Good controlling power)	0
2	Greedy and willing for few objects (Mild)	1
3	Greedy but not strongly willing (Moderate)	2
4	Greedy for all objects (Can not control)	3

MANASA VIBHRAMA PARIKSHA:

Charaka has described eight specific characteristic perversions in context of Unmada. On which Chakrapani commented deliberately to explain its applications. An eight fold Manas Vibhrama Pariksha (mental perversion examination) scale is formulated accordingly to test its applications as well as to assess efficacy of drug on it. The explanatory definitions of terms are given below:

1) **Mano vibhrama** (perversion of mind):

Mano vibhramat Chintyan arthan na chitayate, Achintyanshch chitayate I

Means due to perversion of mind, the patient does not think the things which are worth thinking; on the other hand he thinks of the things not to be thought of.

2) **Buddhi vibhrama** (perversion of intellect):

Buddhi vibhramat tu nityam anityam iti, priyam cha apriyam iti pashyati I

Due to perversion of intellect, he understands eternal things as ephemeral and useful things as harmful.

Depersonalization and de-realization:

0 Absent

1 Mild Such as:

2 Moderate Feeling of unreality

3 Severe Nihilistic ideas

4 Incapacitating

3) **Sangnya vibhrama** (perversion of consciousness):

Sandnya dnyanam, tad vibhramat Agnyadi daham na buddhyate; kimva sandnya namollekhena dnyanam I

Due to perversion of consciousness, the patient is unable to have perception of burns caused by fire etc.

4) **Smriti vibhrama** (perversion of memory):

Smriti vibhramat Na smarati ; Ayathavad va smarati I

The patient either does not remember anything or remember things incorrectly due to perversion of memory.

5) **Bhakti vibhrama** (perversion of desire or interest):

Bhaktihi ichcha, tat vibhramat yatrechcha purvam aasit, tatra anichcha bhavati I

Due to perversion of desire, disinclination develops for things desired previously.

6) **Shila vibhrama** (perversion of manners):

Shila vibhramat akrodhanah krodhano bhavati I

Due to perversion of manners, the patient, who is otherwise normal, gets enraged.

7) **Cheshta vibhrama** (perversion of behavior):

Cheshta vibhramat Anuchita cheshto bhavati I

Due to perversion of behavior, the patient indulges in undesirable activities.

8) **Aachara vibhrama** (perversion of conduct):

Aacharah shastra shiksha krita vyavahara; tad vibhramat ashouchyadi aacharati I

Due to perversion of Conduct, the patient resorts to such activities as are against the rules prescribed in religious works.

Patients were interrogated for having such experiences and scored depending upon the frequency of these experiences as follow:

- Not present - 0
- Occasional (once in a month) – 1
- Often (once in a week) – 2
- Always (daily) – 3

The standard modern scales to evaluate the anxiety and depression may be used as supplementary to the above scoring / grading pattern like -

- HAMILTON ANXIETY RATING SCALE (HAM-A):
- HAMILTON'S DEPRESSION RATING SCALE (HAM-D):
- BRIEF PSYCHIATRY RATING SCALE (BPRS):

SOME GENERAL SYMPTOMS:

JWARA- FEVER

1.	No	0
2.	Occasional	1
3.	Daily once	2
4.	Constant	3

Another grading for Jvara : fever

1	No fever	0
2	Occasional fever subsides by itself	1
3	Occasional fever subsides by drug	2
4	Remittent fever	3
5	Continuous fever	4

GAURAVA - heavyness

1.	Absent	0
2.	Occassional gaurava	1
3.	Frequently	2
4.	Regular	3

BHRAMA (VERTIGO): ability to balance

1.	No Bhrama	0
2.	Vertigo, able to maintain balance without support	1
3.	Vertigo, not able to maintain balance but can maintain balance with support	2
4.	Severe vertigo, not able to maintain balance even with support	3

Other grading for Bhrama – (vertigo)

1	No bhrama	0
2	Fairly bhrama for some moment during change of posture.	1
3	Often bhrama for some moment during change of posture.	2

4	Often bhrama for each moment in lying condition also.	3
5	Patient unable to hold himself with any support.	4

BHRAMA :- dizziness, giddiness

1.	Absent	0
2.	Occasional giddiness	1
3.	Frequently attacks of giddiness	2
4.	Regular attacks of giddiness	3

Pipasa – thirst

1	No excessive thirst	0
2	Upto 1.5 times the normal thirst	1
3	Upto 2 times the normal thirst	2
4	Upto 2.5 times the normal thirst	3
5	Upto 3 times the normal thirst	4

Note: It is a numerical quantitative data and so should be based on quantity of liquid consumed per day

Twak rookshata – Dryness of skin

1	No line on scrubbing with nail	0
2	Faint line on scrubbing by nail	1
3	Linging & even words can be written by anil	2
4	Excessive rukshata leading to kandu	3
5	Rukshata leading to crack formation	4

Another grading for Rukshata (Dryness)

1	No dryness.	0
2	Occasional dryness without winter season	1
3	Visible dryness, mild dull white streaks after scratching on the skin which disappears after sometime.	2
4	Dryness/roughness, bright white streaks on the skin remaining for a considerable time.	3
5	Dryness/roughness and criss-cross visible cracking of skin.	4

Kandu – Pruritis

1	Never	0
2	Rarely	1
3	Sometimes	2
4	Often	3
5	All the times	4

Sweda – sweating

1	Normal sweating (Sweating)	0
2	Mild sweating	1
3	Mild sweating after exercise	2
4	No sweating – even after exercise	3

Srava – discharge (exudation)

1	No Srava	0
2	Mild srava after itching	1
3	Moderate srava without itching	2
4	Severe srava without itching	3

Another grade for Srava:

1	No Srava	0
2	Mild Srava	1
3	Moderate Srava	2

Vedana – Pain

1	No vedana	0
2	Mild vedana	1
3	Moderate vedana	2
4	Severe vedana	3

Note: Visual Analogue Scale may be used here.

Kandu – Itching

1	No itching	0
2	Mild / occasional itching	1
3	Moderate frequent itching	2
4	Severe frequent itching	3
5	Very severe itching, which disturb sleep and other routine activities.	4

Rukshata - Dryness

1	No line on scrubbing with nail	0
2	Faint line on scrubbing by nail	1
3	Linings and even words can be written on scrubbing by nail	2
4	Excessive Ruksata leading to itching	3
5	Ruksata leading to crack formulation and Bleeding	4

Daha – Burning sensation

1	No Daha	0
2	Mild Daha	1
3	Moderate Daha	2
4	Severe Daha	3

Nidra - Sleep

1	Sound Sleep	0
2	Sleep sound when interrupted can sleep again	1
3	Sleep sound when interrupted can't again	2
4	Disturbed sleep but can sleep for few hrs	3

Kasa – cough

1	Absent	0
2	Few times, does not need medication	1
3	Frequent coughing, can be controlled by medication	2
4	Very frequent coughing not even controlled by medication	3

Shwasa: Difficulty in breathing

1	Absent	0
2	Slightly difficulty in breathing, due to exertion or activity, does not need medication	1
3	Difficulty in breathing, without exertion or activity, requires medication	2
4	Difficulty in breathing, with or without exertion or activity, not easily controlled by medical intervention	3

Daurbalya (Weakness):

1.	Can do routine exercise/work	0
2.	Can do moderate exercise with hesitancy	1
3.	Can do mild exercise only, with difficulty	2
4.	Can not do mild exercise too	3

Another grading for Daurbalya (General Debility)

1	No daurbalya	0
2	Not able to perform strenuous activity.	1
3	Not able to perform moderate activity.	2
4	Cannot perform moderate activity but can perform mild activity without any difficulty.	3
5	Even mild activities cannot be performed.	4

Daurbalya (General Debility):

1	No daurbalya	0
2	Not able to perform strenuous activity.	1
3	Not able to perform moderate activity.	2
4	Cannot perform moderate activity but can perform mild activity without any difficulty.	3
5	Even mild activities cannot be performed	4

NOTE: For assessment of Daurbalya – TM Test may be adopted

Alasya/Utsahahani (laziness / absence of enthusiasm)

1	No Alasya (doing satisfactory work with proper vigor & in time)	0
2	Doing satisfactory work/late initiation, like to stand in comparison to walk	1
3	Doing unsatisfactory work/late initiation, like to sit in comparison to stand	2
4	Doing little work very slow, like to lie down in comparison to sit.	3
5	Don't want to do work/no initiation, like to sleep in comparison to lie down	4

Other method of scoring:

1	Gaurava – heaviness in the body	1
2	Aalasya – laziness to do any work	2
3	Shrama – tiredness in doing works	3

Shula (Joint Pain):

1	No pain	0
2	Pain in joint, routine movements normal	1
3	Pain in joint, slight limitations of movements	2
4	Pain in joint, limitations of movements with very reduced activity.	3

NOTE: Pain may be assessed with visual analogue scale or other appropriate pain measurement scales.

Ruchi - taste feeling in food

1.	Equal willing towards all the foods	0
2.	Willing towards some specific foods or Rasavishesha	1
3.	Willing towards only one among Katu, Amla, Madhura food stuffs	2
4.	Willing towards only most liking foods and not to the other	3
5.	Unwilling for any food, could take meal	4
6.	Unwilling for any food, also could not take meal	5

Aruchi – Tastelessness in food

1.	Normal instinct of taking food	0
2.	Person even dislikes the touch or smell of food	1
3.	Though the person is hungry he had dislike for food	2
4.	Due to fear, anger etc	3
5.	Person doesn't like to take food due to Sharira/Manas doshas	4

Another grading for Aruchi:

1.	Normal taste in food, feeling to eat food in time	0
2.	Aruchi – feeling to take food but not having taste	1
3.	Anannabhilasha – not feeling to take food even if hungry	2
4.	Bhktadvesha – aversion to food	3
5.	Abhaktachanda -	4

Agnimāndya (diminution of the agni):

1.	Feels good hunger and proper digestion regularly	0
2.	Feels good hunger but irregular digestion	1
3.	Feels less hunger and irregular digestion	2
4.	Feels very less hunger and the very less digestion	3

1.	Matravat Ahara, feels comfortable, proper digestion	0
2.	Matravat Ahara, discomfort, proper digestion	1
3.	Less than matravat ahara, more discomfort	2
4.	Not able to digest even little food feels more discomfort	3

Utsaha hani : Aalasya

1.	No Alasya (doing work satisfactory with) proper vigor in time	0
2.	Doing work with desire with initiation but late in time	1
3.	Does work without desire with lot of mental pressure and late in time	2
4.	Does not initiate work, does little work very slowly	3
5.	Doesn't take initiative to work neither want to work even after pressure	4

Angagauravata (Sluggishness of Activities):

1.	No heaviness in body	0
2.	Feels heaviness in body but it does not hamper routine work	1
3.	Feels heaviness in body, which hampers daily routine work	2
4.	Feels heaviness in body, which hampers movement of the body	3
5.	Feels heaviness, flabbiness all over body, which causes stress	4

Sarvanga gaurava (Heaviness of the body)

1	No feeling of heaviness.	0
2	Occasional feeling of heaviness not affecting the daily routine	1
3	Frequent feeling of heaviness mildly affecting the daily routines.	2
4	Feeling of heaviness throughout the day moderately affecting the daily routines.	3
5	Feeling of heaviness throughout the day. Daily routines are totally hampered.	4

SHRAMA - fatigue

1	No fatigue	0
2	Fatigue occasionally on doing heavy work	1
3	In carrying out routine work	2
4	Even without doing work	3

Vibandham – constipation

1.	1 time / day	0
2.	1 time / 2 days	1
3.	1 time / 3 days	2
4.	1 time / 4 days	3
5.	1 time / 5 days	4
6.	1 time / 6 days	5
7.	1 time in more than 7 days	6

Parushya - dryness

1	No dryness	0
2	Visible dryness of skin with no roughness, mild (fade) dull white streak after scratching on to skin, disappearing after sometime	1 (Ruksha)
3	Dryness with roughness, bright white streak on scratching on to the skin remaining for a considerable time	2 (Khara)
4	Dryness, roughness, slight thickening of the skin with visible criss-cross marking with no cracking of the skin	3
5	Dryness, roughness, slight thickening of the skin with visible criss-cross marking with cracking of the skin	4 (Daruna)

Paridaha - burning sensation

1	No Burning Sensation	0
2	Occasional Localised Burning Sensation	1
3	Localised mild Burning sensation in a particular hr.of day	2
4	Burning sensation throughout the day but tolerable and relieved after cold medications e.g.Mahatikta Ghrita for Ext.or Int. application,Dhanyaka hima for Int.application	3
5	Intolerable(Affecting daily routine activity) generalized burning sensation throughout the day which can't be relieved by any cold medications e.g.Mahatikta Ghrita for Ext.or Int. application,Dhanyaka hima for Int.application	4

Twak Pārusya / Twak Rukshata/ Twak Kathinata (dryness of skin):

1.	0 dryness	0
2.	Dryness felt by the patient	1
3.	Dryness felt by the examiner	2
4.	Dryness felt by all	3

Śwāsa kaṣṭa (Dyspnoea):-

1.	Dyspnoea after heavy work but relieved soon and up to tolerance	0
2.	Dyspnoea after moderate work but relieved later and up to tolerance	1
3.	Dyspnoea after little work but relieved later and up to tolerance	2
4.	Dyspnoea after little work but relieved later and beyond tolerance	3
5.	Even in resting condition.	4

Pāndutā (Pallor): In - Twaka, Nakha, Netravartma, Karna Pali, Jihva, Hastapadatala

1.	Absent	0
2.	Present in one site	1
3.	Present in 2 – 3 sites	2
4.	Present in all sites	3

PANDUTA – pallor : - Twaka, Nakha, Netravartma, Karna Pali, Jihva, Hastapadatala

1.	Not Visible, pink all over	0
2.	Visible	1
3.	Visible with yellow discolouration	2

Panduta: colour of body parts;

1.	Red	0
2.	Pink	1
3.	Whitish / pale	2
4.	Yellowish	3

Signs & Symptoms produced by Ama in General (Due to the circulation of Sama Rasa Dhatu)

Srotorodha (obstruction to the channels cell pores)	- Present / Absent
Bala Bhramsa (loss of strength)	- Present / Absent
Gaurava (feeling of heaviness of the body)	- Present / Absent
Anilmudhata (inactivity of Vaata)	- Present / Absent
Alasya (Lassitud)	- Present / Absent
Apakti (Indigestion)	- Present / Absent
Nishthiva (Expectoration of Sputum)	- Present / Absent
Malasanga (Accumulation of waste materials in the body)	- Present / Absent
Aruchi (loss of taste / appetite)	- Present / Absent
Kiama (exhaustion)	- Present / Absent

VAATA

SAMA LAKSHANA

Vibandha (constipation)	- Present / Absent
Agnisada (poor digestive activity)	- Present / Absent
Antrakujan (Intestinal gorgulings)	- Present / Absent
Angashula (pain in the body parts)	- Present / Absent
Sotha (Odema or Swelling)	- Present / Absent
Nistoda (pain moving simultaneously to different parts causing distress & catching) – Y / N	
Pain incresing by anointing oils, exposure to sunlight, on cloudy days & during nights. Y/ N	

PITTA

SAMA LAKSHANA

Amlika(sour belching)	- Present / Absent
Kanthahrippada (burning sensation in the throat and region of the heart)	- Present / Absent
Elimination of foul smell	- Present / Absent
Greenish blue, sour, thick and heavy Pitta comes out of the body (either in vomit or purgation)	- Present / Absent

KAPHA

SAMA LAKSHANA

Avila (dirty) Phlegm	- Present / Absent
Tantula (thready) phlegm	- Present / Absent
Styana (thick, solid) phlegm	- Present / Absent
Durgandha (foul smelling) phlegm	- Present / Absent
Phlegm accumulates in the throat	- Present / Absent
Phlegm obstructon to belching	- Present / Absent
Loss of hunger	- Present / Absent

AGNIBALA

Jaranashakti

Scoring according to Jeerna Aahara lakshana present after 4-6 hrs after taking food. They are Utsah, Laghuta, Udgarshuddhi, Kshut, Trishna pravritti Yathochit malotsarga.

Presence of five symptoms	0
Presence of four symptoms	1
Presence of three symptoms	2
Presence of two symptoms	3
Presence of one symptom	4
Absence of all the symptoms	5

Abhyavaharan Shakti

Taking food in good quantity twice / thrice	0
Taking food in normal quantity twice a day	1
Taking food in moderate quantity twice a day	2
Taking food in less quantity twice a day	3
Person taking food in less quantity once in a day	4
Person not at all taking food.	5

Ruchi

Equally willing towards all the Bhojya padartha.	0
Willing towards some specific Aahara / Rasavishesha	1
Willing toward only one among Katu/Amla/Madhura food stuffs.	2
Willing towards only most liking foods not to the other.	3
Unwilling for food but could take the meal	4
Totally unwilling for meal.	5

Vaata Mutra Purisha Retasam Mukti

Occurs easily in normal routine times	1
Difficulty in defecation but Malappravritti daily with discomfort in abdomen	2
Can't pass stool daily & feeling heaviness in abdomen.	3
Passes stool after 2-3 days having gaseous distension	4
Passes stool after 3-4 days with Grathita, Sakasta Malappravritti & having gaseous distention with Udgarpravritti.	5

DEHA BALA

Balavridhi

No weakness	0
Slight weakness	1
Feeling of weakness but ability to work unaffected	2
Ability to work affected	3
Can't do any type of work	4

Swara Varna Yoga (Texture, Lusture & voice)

Patients look cheerful	0
Lethargic & tired	1
Patient look gloomy	2

Sharira Upachaya – body built (height, weight etc.)

As recorded before and after treatment

SATVABALA**Nidra Labho Yathakalam (adequate sleep at night)**

Sound sleep	0
Sleep gets disturbed in the early morning	1
Sleeps with disturbed interval & remains unsatisfied with sleep	2
Disturbed sleep in night tries to compensate in day	3
No sleep in night	4
Sleep neither at night nor at night hours	5

Sukhena - Cha – Pratibodhanam

Total relief & feeling of well being at physical & mental level	0
Discomfort at mental level	1
Discomfort at physical level	2
Discomfort at both mental & physical level	3
Not feeling well still can pursue work or study	4
Not feeling well & not interested in any activity at all (Avarasatva)	5

Glossary of Ayurvedic words

<i>Aachara</i>	- Conduct
<i>Abhyavaharana Shakti</i>	- Power of assimilation of ingested food
<i>Adhidanta</i>	- Supernumerary tooth
<i>Adhmana</i>	- Distention
<i>Agni</i>	- Digestive power
<i>Agnimandya</i>	- Diminution of the <i>Agni</i>
<i>Agnisada</i>	- Poor digestive activity
<i>Aharshanam</i>	- Lack of Desire
<i>Alasya</i>	- Lassitude
<i>Alasya/Utsahahani</i>	- Laziness / Absence of enthusiasm
<i>Alpa shukrata</i>	- Oligospermia
<i>Amla Śeeta Prārthanā</i>	- Desire for sour, cold stuff
<i>Amlika / Amlodgara</i>	- Sour belching
<i>Angagandha</i>	- Bad bodily odour
<i>Angagauravata/ Angasada/Gaurava</i>	- Sluggishness of Activities
<i>Angamarda/ Angashula</i>	- Body ache
<i>Anilamudhata</i>	- inactivity of <i>Vata</i>
<i>Annavaha Srotas</i>	- Channel of Digestion/ Digestive system
<i>Antrakujana</i>	- Intestinal gurgling
<i>Apakti</i>	- Indigestion
<i>Apraharsha</i>	- Lack of orgasm
<i>Artavavaha Srotas</i>	- Reproductive system in females
<i>Aruchi</i>	- Loss of taste / Appetite
<i>Arumshika</i>	- Abscess
<i>Ashmari</i>	- Calculus particularly urinary calculus
<i>Asino Labhate Saukhyam</i>	- Relieved from symptoms on sitting
<i>Asthi kshaya lakshana</i>	- Signs and symptoms of depletion of <i>Asthi dhatu</i>
<i>Asthi Sandhi baddhata</i>	- Stiffness in bones & Joints
<i>Asthi shula/bheda</i>	- Pain in bones
<i>Asthi shunyata / Asthi saushirya</i>	- Hollowness on bones viz. Osteoporosis
<i>Asthivaha Srotas</i>	- Skeletal system/ concerned with bone metabolism
<i>Asthivedana</i>	- pain in bones
<i>Asvedana</i>	- Anhidrosis/hypohidrosis
<i>Asyapraseka</i>	- Excessive Salivation
<i>Ati Grathitam</i>	- hard
<i>Atisara</i>	- Diarrhea
<i>Atishlakshna</i>	- Excessive Smoothness /Glossiness
<i>Atisvedana</i>	- Hyperhidrosis
<i>Avastha</i>	- Stage
<i>Avila</i>	- Dirty / cloudy
<i>Bala Bhramsa</i>	- Loss of strength
<i>Balavridhi</i>	- Increase in Strength

<i>Bhakti</i>	- Desire or interest
<i>Bhaya</i>	- Fear
<i>Bhrama</i>	- Dizziness/ giddiness/Vertigo
<i>Buddhi</i>	- Intellect
<i>Cheshta vibhrama</i>	- Behavior
<i>Chhardi</i>	- Vomiting
<i>Daha</i>	- Burning sensation
<i>Danta vikara/pata</i>	- Dental deformity/fall
<i>Dantabheda</i>	- Fracture tooth
<i>Dantashoola</i>	- Toothache
<i>Daruna</i>	- Hardness
<i>Daurbalya</i>	- General Debility/ Weakness
<i>Deha Bala</i>	- Physical strength
<i>Dhmatabhstiprakasha</i>	- Like a bloated leather bag
<i>Dhvajanucchraya</i>	- Lack of penile erection
<i>Dirgha shopha</i>	- Large Swelling
<i>Durgandha</i>	- Foul smelling
<i>Gatrashula</i>	- Pain in body parts
<i>Gaurava</i>	- Feeling of heaviness of the body
<i>Hridaya Spandanādhikya</i>	- Palpitation
<i>Hrillasa</i>	- Nausea
<i>Jarana Shakti</i>	- Capacity of digestion
<i>Jwara</i>	- Fever
<i>Kampa</i>	- Tremors
<i>Kandu</i>	- Pruritis
<i>Kanthahriddaha</i>	- Burning sensation in throat and heartburn
<i>Karnakshweda</i>	- tinnitus particularly loud pitched sounds
<i>Kasa</i>	- Cough
<i>Kathinya</i>	- Stiffness/Firmness
<i>Katishoola</i>	- Back ache
<i>Kesha Patana</i>	- Hair fall
<i>Khara</i>	- Hardness/Roughness/Broken
<i>Klama</i>	- Exhaustion
<i>Krichchrata</i>	- Difficulty
<i>Krichhra Vyavayta</i>	- Loss of Libido
<i>Kshipram munchati shukram / Shighra shukra skhalana-</i>	Premature ejaculation
<i>Kshudha</i>	- Hunger
<i>Kshudha adhikya</i>	- Increased Appetite
<i>Kshudra Shwasa</i>	- Dyspnoea due to exertion
<i>Laghuta</i>	- Lightness
<i>Lingashaitilya</i>	- Lack of Penile rigidity
<i>Lomaharsha</i>	- Horripilation
<i>Mahavastu</i>	- Large area
<i>Maithunaavrutti</i>	- Frequency of coitus per week
<i>Majjavaha Srotas</i>	- Related to Bone marrow

<i>Malasanga</i>	- Accumulation of waste materials in the body
<i>Mamsabhilasha</i>	- Desire of eating meat
<i>Mamsavaha Srotas</i>	- Related to Muscles
<i>Manas Vibhrama</i>	- Mental perversion
<i>Mandala</i>	- Circular
<i>Matsyashaklopama</i>	- Like Fish scales
<i>Medovaha Srotas</i>	- Related with Lipid metabolism
<i>Muhurmuhu pravritti</i>	- Increased frequency
<i>Mukha Shosha</i>	- Dryness in mouth
<i>Murchha</i>	- Fainting
<i>Mutravaha Srotas</i>	- Urinary system
<i>Nakha Vikara/ Nakhdusti</i>	- Nail deformity
<i>Netra gaurava</i>	- Heaviness in the eye
<i>Nidra Labho Yathakalam</i>	- Adequate sleep at night
<i>Nidra</i>	- Sleep
<i>Nidradhikya</i>	- Increased Sleep
<i>Nishthiva</i>	- Expectoration
<i>Nistoda</i>	- Pain moving simultaneously to different parts causing distress and catching, usually in bone or skeletal system
<i>Panduta</i>	- Pallor, due to anemia
<i>Pandu Twak</i>	- Pallor of skin
<i>Pandu Nakha</i>	- Pallor in nail bed
<i>Pandu netravartma</i>	- Pallor of eye lids and conjunctiva
<i>Pandu Karna Pali</i>	- Pallor in external ear i.e. pinna
<i>Pandu Jihva</i>	- Pallor of tongue
<i>Pandu Hastapadatala</i>	- Pallor of palm and soles
<i>Paridaha</i>	- Burning sensation/ conflagration
<i>Parshvasula</i>	- Pain in Flanks
<i>Parushya</i>	- Hardness/ Roughness/ lichenification
<i>Peenasa</i>	- Running nose
<i>Pindikodweshtanam</i>	- Pain in calves especially cramp-like
<i>Pipasa adhikya</i>	- Increased Thirst
<i>Prabhuta Mutrata</i>	- Polyurea
<i>Pranavaha Srotas</i>	- Related with Respiration and Circulation
<i>Purishabaddhata</i>	- see <i>Vibandha</i>
<i>Purishavaha Srotas</i>	- Related with defecation; especially colon
<i>Rakta Mandala</i>	- Erythematous patch
<i>Raktavaha Srotas</i>	- Related with <i>Raktadhatu</i>
<i>Roga</i>	- Disease/ Infirmity/ Illness
<i>Ruchi</i>	- Appreciation of taste in food
<i>Ruksha</i>	- Dryness/Arid
<i>Sadana</i>	- Tiredness/Fatigue
<i>Sandhi Shaithilya</i>	- Looseness/Weakness of Joints
<i>Sandhishoola</i>	- Pain in joints
<i>Sangnya vibhrama</i>	- Consciousness

<i>Sarvanga gaurava</i>	- Heaviness of the body
<i>Sashabda Shwaasa</i>	- Added sounds in respiration
<i>Satvabala</i>	- Mental strength
<i>Shighravisarga / Chirat praseka / Badhnati shukram-</i>	Delayed / retarded ejaculation
<i>Shila vibhrama</i>	- Manners
<i>Shosha</i>	- Dryness/ Loss
<i>Shrama</i>	- Fatigue
<i>Shrama Swasa</i>	- Dyspnoea due to exertion
<i>Shukra Kshaya</i>	- Depletion of semen
<i>Shukravaha Srotas</i>	- Reproductive system especially in males
<i>Shula</i>	- Pain
<i>Shwasa/ Shvasakrichhrata</i>	- Difficulty in breathing
<i>Smriti vibhrama</i>	- Memory
<i>Sotha</i>	- Odema/ Swelling
<i>Srava</i>	- Exudation
<i>Srotorodha</i>	- Obstruction to the channels cell pores
<i>Sthaulya</i>	- Obesity
<i>Styana</i>	- Thick, solid
<i>Suptata</i>	- Numbness
<i>Swara Varna Yoga</i>	- Texture, Luster & voice
<i>Sweda</i>	- Sweating
<i>Swedavaha Srotas</i>	- Related with sweating
<i>Tama</i>	- Darkness
<i>Tantula</i>	- Thread like
<i>Trishna</i>	- Thirst
<i>Twak Pārusya / Twak Rukshata/ Twak Kathinata</i>	- Dryness of skin
<i>Udakavaha Srotas</i>	- Channels related with water balance
<i>Udgarashuddhi</i>	- Clarity of Belching
<i>Unnati</i>	- Elevation
<i>Utsaha</i>	- Enthusiasm
<i>Vedana</i>	- Pain
<i>Vega</i>	- Urge
<i>Vibandha</i>	- Constipation
<i>Vibhrama</i>	- Perversion
<i>Vivarnata/ Vaivarnya</i>	- Discolouration

INSTITUTE FOR POST GRADUATE TEACHING & RESEARCH IN AYURVEDA, JAMNAGAR.

Experts meet on “Developing Guidelines for Clinical Research methodology in Ayurveda”

5th & 6th March, 2011

Brief Report of the Expert meet:

Experts meet on “Developing Guidelines for Clinical Research methodology in Ayurveda” was held on dates 5th & 6th March, 2011 at the Committee room of IPGT&RA, Gujarat Ayurved University, Jamnagar. It was the part of project sponsored by WHO Country Office India, under DFC Scheme [Direct Finance Cooperation (DFC) Regn. No. 2010/99074-1, Purchase Order No. 200271516-1 – Developing guidelines for Clinical Research methodology in Ayurveda, 16 Oct 2010 to 30 March 2011: WHO reference 2010/99074-1, Purchase order 200271516-1.]. The following persons were present in the meeting;

1. Prof. Gurdip Singh, Hassan
2. Prof. G Shrinivasa Acharya, Udupi
3. Dr. Rammanohar, Coimbatore
4. Prof. CP Shukla, Jamnagar
5. Dr. SH Acharya, Jamnagar
6. Prof. PK Prajapati, Jamnagar
7. Dr. Anup B Thakar, Jamnagar

Prof. KS Dhiman, Prof. Nishteshwar, Prof. VD Shukla, Dr. KS Patel, Dr. SK Gupta, Dr. Mahesh Vyas, Dr. LP Dei, and Dr. AD Dave as heads of various departments were present in the program and Prof. MS Baghel, Director of the Institute and Chief Investigator in the project and Dr. Rajagopala S, Investigator were also present. Apart from the above members, few nominated Ph.D. scholars of various departments too took active participation in the meeting by giving technical support and other necessary supports.

The meeting started with a formal inauguration at 09.30 AM on 5th march 2011 and the venue was the committee room of IPG&RA, Jamnagar. Prof. CP Shukla, a renowned Ayurvedic physician and local expert member of the meeting inaugurated the program by lighting the lamp.

Prof. MS Baghel, Director of IPGT&RA welcomed the gathering and introduced the theme of the meeting, he also stressed on the need of a separate research methodology and guidelines for pure Ayurvedic clinical research. Till date what so ever research works have been carried out have contributed to the modern medicine at large, not to Ayurveda specific. There are ample of disparity among the gradation of symptoms adopted at different centers and this has lead to disparity in results as well as reproducibility of the data and methodology. With these in mind a workshop was conducted in November 2009, and the outcome of the workshop is presented before the expert group he added.

Prof. CP Shukla in his inaugural address highlighted the importance of clinical examination and evaluation of a clinical study as per Ayurvedic methods which are being supported by the classical texts like Charaka Samhita. There are three methods of treatment now a day adopted by many i.e. Ayurvedic diagnosis – Ayurvedic treatment; Modern diagnosis – modern treatment and Modern diagnosis – Ayurvedic treatment. And the third modality is adopted by him, which is suitable for the present day he said. The established techniques of diagnosis of a disease are to be adopted and efforts to be made to interpret it with Ayurvedic fundamentals, and he quoted many examples for the same. He also shared some of his clinical experiences with the gathering.

Prof. Gurdip Singh, an external expert member commented his opinion and said it is the need of the hour to have this type of efforts, this will help in producing uniformity in clinical research and there will be chances of reproducibility of the data too. He emphasized more on the uniformity in approach, gradation, outcome and also in presentation for international acceptance.

Dr. Rammanohar opined that the effort is good, and CRF 1 circulated should be treated as initial screening proforma and it may be put for field trial first for validation and corrections needed if any. The symptoms should be first classified into subjective and objective and each symptom needs specific definition as it is given in Ayurveda specific to the context.

Dr. G Shrinivas Acharya opined that biological variations are not given due importance in the modern clinical research, but it is different in Ayurveda, biological variations are many and play a vital role in Ayurveda therapeutics.

Prof. VD Shukla : Vyadhipratyatma lakshana should be taken into consideration for gradation. Roga prakriti, vyadhi prakriti, rogi prakriti, roga bala, rogi bala etc. are to be considered beforehand.

The expert group after the inauguration and introduction of the program, started to look into the materials in detail, as per the program schedule, and on the second day the following points were discussed during the closing ceremony:

Prof. Gurdip Singh: Drug trials and therapeutic trials are different particularly with reference to Ayurveda, which has multiple drug approach as well as multiple therapeutic procedures are involved in treatment of one disease. Approach of Ayurveda to a patient is different from that of modern medicine and so is the research approach too. Till date more than 80 medicinal plants have been added to Indian Pharmacopoeia of modern medicine, but no substantial contribution has been made to Ayurveda by the existing research protocol and methodology. Biological variations are not given importance in modern research but in Ayurveda biological variations play a very vital role.

Prof. G Shrinivas Acharya: Variables are many, data is less, data generation is needed. No one protocol is fit to all patients of same disease, Drug trial is different for Ayurveda trial

Dr. Rammanohar: Variable to be defined first, one variable only to be kept in question in the clinical trials, all other variables should be constant in the inclusion criteria, to avoid the bias. Base proforma should have maximum variables in it. Specified proforma should have minimum variable in it. Stratified sampling is better in variable selection, Principles and practice of Ayurveda: principles remained static and practice went on changing,

Prof. CP Shukla: Dosha hara V/s Vyadhihara drugs are to be assessed for their efficacy and Diagnosis and Samprapti of Ayurveda should be given more stress in Ayurvedic clinical research.

At the end of the program Prof. MS Baghel, Chief Investigator in the project gave the concluding remarks, all the suggestions made by the experts in the meeting will be incorporated in the corrected version of the document and will be submitted to the sponsoring agency i.e. WHO, he added.

The meeting ended with thanks to all experts and participants by Dr. Rajagopala S, the investigator of the project.

Refreshments, High tea, and working lunch etc. were provided to all participants during the meeting hours of 2 days.

Expert meet: 5th & 6th March, 2011, IPGT&RA, Jamnagar.

Name & address of Experts attended the Expert Meet:

Sl. No.	Name & Address
1.	Prof. Gurdip Singh Director, PG Studies, SDM College of Ayurveda, HASSAN. Karnataka
2.	Prof. Srinivas Acharya Professor & Head, Dept. of Kayachikitsa, SDM College of Ayurveda, Kuthpady, UDUPI, Karnataka
3.	Dr. Rammanohar Director, AVATAR, Ayurveda Trust Campus, Coimbatore – 45. Tamilnadu
4.	Prof. CP Shukla Ex Dean, Patel Colony, JAMNAGAR
5.	Dr. S. H. Acharya Reader & Head, Dept. of Panchakarma, SGA Mahavidyalaya, Guj. Ayurved University, JAMNAGAR
6.	Prof. PK Prajapati 3 rd floor, Satkar, near Sri Guru Dattatreya mandir, JAMNAGAR
7.	Dr. AB Thakar 4 th Floor, Satkar, near Sri Guru Dattatreya mandir, JAMNAGAR.
8.	Prof. HM Chandola Professor & Head, Dept. of Kayachikitsa, IPGT&RA, Jamnagar
9.	Prof. VD Shukla Professor & Head, Dept. of Panchakarma, IPGT&RA, Jamnagar.
10.	Prof. KS Dhiman Professor & Head, Dept. of Shalakya Tantra, IPGT&RA, Jamnagar.
11	Prof. Nishteshwar Professor & Head, Dept. of Shalakya Tantra, IPGT&RA, Jamnagar.
12	Dr. SK Gupta, Reader & Head, Dept. of Shalya Tantra, IPGT&RA, Jamnagar.
13	Dr. KS Patel, Associate Professor & Head, Dept. of Kaumarabhritya, IPGT&RA, Jamnagar.
14	Dr. LP Dei, Associate Professor & Head, Dept. of Striroga & Prasuti Tantra, IPGT&RA, Jamnagar.
15	Dr. MK Vyas, Reader, Dept. of Basic Principles, IPGT&RA, Jamnagar

Institute for Post Graduate Teaching & Research in Ayurveda
GUJARAT AYURVED UNIVERSITY, JAMNAGAR
National Workshop on developing Guidelines for
Clinical Research Methodology in Ayurveda
28th to 30th November 2009

Brief Technical Report and Proceedings of the Workshop:

Introduction:

A national workshop on developing guidelines for clinical research in Ayurveda was conducted from 28th November 2009 to 30th November 2009 at IPGT&&RA, Gujarat Ayurved University, Jamnagar.

This program was financially sponsored by WHO Country Office India, New Delhi, vide sticker No. SE/09/104507, a sum of Rs. 05, 41, 000/- was sanctioned by WHO for conduction of the workshop.

A total of 30 persons were invited from outside Jamnagar city as resource persons for this workshop and 13 teaching faculty members of IPGT&RA were nominated as resource persons. All the resource persons were accommodated in the guest house of the institute. High tea was served for all the participants during the workshop days. All the participants were given with TA and DA as per WHO DFC norms.

All the teachers and scholars of PG and Ph.D. actively participated in the workshop, the official machinery [IPGT&RA office, Accounts Dept.] too were in action for all these three days. The brief details of the 3 days workshop is as under:

Day 1: 28.11.2009; Saturday

Registration: 09.00 AM to 10.00 AM

30 resource persons from outside Jamnagar, 13 teaching faculty from Institute for Post Graduate Teaching & Research in Ayurveda registered in the workshop. All registered resource persons were distributed with a Kit Bag containing writing pad, pen, photocopy materials and a CD containing technical materials. 23 faculty members and 129 PG and Ph.D. scholars of Institute also got registered in the workshop. The list of participants is enclosed.

Inauguration: 10.00 AM to 12.00 Noon

The inaugural ceremony was chaired by Hon'ble Vice Chancellor and Director of the Institute **Prof. M. S. Baghel**. **Dr. Nandini Kumar** Ex Dy. DG from ICMR, **Dr. Manoj Nesari** from Dept. of AYUAH, **Prof. R. H. Singh**, Professor Emeritus, BHU, **Prof. Gurdip Singh** Director (PG Studies) SDMCA, Hassan were on the dais as guests of honour, and **Prof. H. M. Chandola**, Dean of the institute was also on the dais.

The program started with lighting the lamp by dignitaries and prayer to Lord Dhanwantari.

Prof. H. M Chandola, Dean and Head of department of Kayachikitsa offered the welcome address followed by floral welcome.

Prof. Gurdip Singh in his opening remark highlighted the importance of Ayurvedic pathogenesis and how it is different from modern approach, accordingly the research

approach in clinical medicine too varies he added, and the present workshop has come in right time and he wished for the success of the workshop.

Dr. Manoj Nesari in his opening address highlighted the different issues present before the Ministry and AYUSH department pertaining to Ayurveda and its global acceptance. He touched the different areas like ICD 11 classification for diseases in Ayurveda, GMP & GCP norms, the different guidelines available for Traditional Medicines, and he too felt the need of a separate guideline for Ayurveda in particular without hurting its holistic approach.

This was followed by 1st scientific presentation along with guest address by **Prof. R. H. Singh**.

Prof. Singh in his presentation on the topic “**Development of Research Methodology in Ayurveda - Creating Clinical Protocols**”, briefed why research is required for Ayurveda which is a time tested system of medicine, and the early attempts for the same by national agencies such as RRL Jammu, CDRI Lucknow, CCRAS, AYUSH, GTP project etc. there is a 2 fold research requirement in Ayurveda i.e. first one for the science of Ayurveda and the second one is for therapeutics in Ayurveda he added. The emerging issues in research, the sectorial knowledge base issues were also touched by him in the address. Trust, Truth and Team are the basic requirements for any research activity he added. He also suggested some strategies for the action in this regard and highlighted the priority areas. His conclusions were:

- Thus there is a need of new strategy & new methodology of research in Ayurved. The ongoing research using conventional methodology may bring some minor benefits to conventional Modern medicine without any major break through. The major inputs to Ayurveda are still more remote.
- Hence Ayurved has to be studied and investigated as it is, critically adapting an Ayurvedic approach in tune with its basic principles. This needs new protocols.
- However the technical tools will have to be borrowed from modern basic and biosciences critically developed through an intense interface between Ayurved and counterpart sciences.

The second scientific presentation was presented by **Dr. Nandini K. Kumar**, in her presentation she highlighted WHO TRM protocol, IMCR ethical guidelines, ICH guidelines etc. along with GCP norms. The areas where Ayurveda can contribute effectively was also highlighted along with problems for modern world to accept ayurvedic researches. Safety of herbals in modern times are matters of concern because of - Mistaken use of wrong species, Adulteration, Innate toxicity, Incorrect dosing, Drug-herb interaction and Misuse as OTC products. Traditional medical ethics - *Rules for a good physician as told by Charaka* was also highlighted in her speech. For traditional medicines used traditionally for number of years, no efficacy tests required, but validation for evidence-based medicine are required – reverse pharmacology and here the scientific validation is to be done through trial design incorporating appropriate GCP guidelines, she opined. Essential – To be done only when a competent Ayurvedic, Siddha or Unani physician is one of the investigators or collaborators in such a clinical trial. Under ethical consideration points she opined that based on

references in ancient literature of Traditional System of Medicine, no Modern Medicine expert can carry out clinical evaluation of the plant; and the necessity of the joint evaluation clinical trial with associate specialist from these systems. While framing a Scientific Protocol Design the following are to be kept in mind - Justification of research topic, Preparation of formulation , Enrollment - Informed consent, Conduct of trial, Monitoring, and Statistical evaluation - usefulness sometimes difficult to explain. The Problems of Research Design are Complex interventions, Holistic, Individualized , Focus on Symptoms, rather than Disease, Intra & inter variation in response. Problems of RCT are Broad exclusion criteria/ highly selective patient recruitment, Patient's preference for particular treatment, easy access to marketed products may confound results in control group, Finding appropriate control drug is difficult many times, Double blinding not fool proof, Multiple similar studies in same ward detrimental. the Challenges in Clinical Trials on TRM as highlighted by her are - Use of placebo, Use of standard therapy in the control arm, Informed Consent process & patient information sheet, Compensation/Insurance coverage, Access to products after Trial, Post trial responsibilities , Loss of basic concepts, Choice of drugs - use of placebo/ standard therapy in the control arm ?, Informed Consent process & patient information sheet, Recruitment for self limited disease in rigorously investigated study difficult, and Migratory population/ drop outs in follow-up studies. She concluded with the following - Classification of traditional medicine in India is unique, Ethical and regulatory requirement are same as for synthetic drugs except in case of reverse pharmacology, Multidisciplinary approach is needed in traditional medicine research, conduct of research as per ICMR and GCP guidelines (ASU in future) should be made mandatory, national and International collaborative research works should be planned and the impact of traditional medicine on national health economy is potentially great.

Prof. R. R. Dwivedi delivered the 3rd technical presentation of the inaugural session, he highlighted the areas of research wherein scholars often face problems particularly in evaluation. The concept of research and research methodologies are well explained in ancient texts as Pratijna – Problem, Sthapana – Hypothesis, Hetu – Reasoning - Aims & Objectives, Udadarana - practical, experimentation, collection of data, Upanaya – interpretation & Discussion and Nigmana – Conclusion, and it is similar to the modern concept in research too he added. Tantra-Yukti, Tatchilya, Vyakhya, Arthashraya, Kalpana etc. for Literary Research, there are reference on Pharmacological Research [Ca.Su.26], Pharmacognostic Research, [Ca.Vi.8], Pharmaceutical Research [Ca.Ka.1] in the classical texts. Āyurvedic Science believes in treating man as a whole & using drug as a whole; the holistic approach of Ayurveda in context of the different kinds of the Researches like Drug & Dietetic Research, Diagnostic Research, Clinical Research etc. were also highlighted by him. The 'Pramanas' could become the parameters of research for the enhancement of Good Clinical Practice (GCP) he added. Difficulties in selection of problem in regarding their priorities as well as concern to their discipline, problem in regarding the formulation of hypothesis, Vague selection of the Aims & Objectives, Non availability of standard parameters for material and in designing the different method for a specific plan, doubts in regarding use and interpretations of modern tools and controversies in techniques of

advanced medical sciences, Lesser number of data material, not well valuable discussion at par in relation to the hypothesis, discipline and as per the aims and objectives etc. are the problems faced by research scholars of today.

Prof. M. S. Baghel in his presidential address and presentation highlighted the need of uniformity in research which is the need of the day. He overviewed the present status of Ayurvedic Clinical Research and sectarian interest of the science is not preserved properly he added. The 12 point examination explained by Charaka is the most suited examination required to be adopted in Clinical research and the general principles as laid by ICMR ethical code are to be followed he added. Assessment criteria as per Ayurveda and karya of end point should be Dhatu Saamyam (Equilibrium of Dhatus) and roga bala, rogibala or quality of life parameters are explained in Ayurveda under the heading of Agni bala, dehabala, and chetasa bala. A Research Proforma based on Conceptualization of Samprapti Process viz. Dosha, Dooshya, Srotasa , Rogi – Roga Pariksha (Ekvidha, dwividha, trividha, chaturvidha, Panchavidha, Shad Vidha, Ashtavidha, Dashavidha, Dwadashvidha Pariksha) is needed and following the same guidelines, he presented a general CRF for evaluation of patients without much repetitions and covering all points of Ayurvedic Clinical evaluation i.e. Roga Bala, Rogi Bala, Agni Bala and Chetasa Bala. He concluded his presentation with a warm wish for the successful completion of the workshop.

The program was compared and the vote of thanks was given by Dr. Rajagopala S.

With this a short break was given for the session.

1st scientific deliberation: 12.15 PM to 01.30 PM

The first scientific deliberation started after the short break and this session was chaired by **Prof. H. M. Chandola**, Co-chaired by **Dr. A. R. Dave** and **Dr. Mandeep Kaur** acted as moderator. There were 2 scientific presentations in this session. The brief details of presentations are given below:

The first presentation in this session was by **Dr. Rammanohar**, on the topic “Suggestions on clinical research suitable for traditional medicines”. In his lucid presentation he highlighted the lacunae in traditional medicine and suggested suitable modifications to fill this lacunae. The presentation was well received by the hall.

The second presentation was delivered by **Prof. Gurdip Singh**, and his topic of deliberation was “Problems of preparing ayurvedic research format”; he highlighted the common research format generally followed by research scholars in majority of the institutions. He also discussed various points of the format like dashavidha pariksha, srotas pariksha etc. and highlighted the areas of problem in filling and maintaining this format, the subject was open for discussion.

The house dispersed for lunch after this deliberation.

Post lunch sessions:

The house reassembled at 3.00 PM after the lunch break and the theme of this session was “Preparation of general clinical research protocol for ayurvedic clinical research”. The session was chaired by **Dr. Nandini Kumar** and Co-chaired by **Prof. K. S. Dhiman** and moderator was **Dr. Ravinarayana Acharya**.

In the first scientific deliberation of this session **Dr. Dilip Gadgil** presented a talk on topic “Problems in grading ayurvedic symptomatology”. Ayurvedic terms for symptoms are to be identified in particular context, the adjectives of these symptoms are to be thoroughly studied for gradation of them, the visual analogue for subjective symptoms like pain may be used wherever necessary and logical consideration of particular symptoms are necessary for gradation of these subjective symptoms he concluded.

The next presentation was delivered by **Dr. Sulochana Bhat** and she spoke on “Application of good clinical practice (GCP) in Ayurvedic clinical trials - difficulties and possible solutions”. In her presentation she focused on topics - The two main recommendations of GCP are – it should be scientific, authenticity of biomedical should be there with data be generated, ethically sound, and the protection of the rights of human subjects should be well preserved. The objectives of Ayurvedic clinical trials should aim at creating the evidence that is understandable and acceptable by the Biomedical Researchers, Doctors, Academicians, Policy makers, Industry as well as by the Consumers. So the contemporary guidelines framed should be integral in nature. The problem areas in Ayurveda are - system specific, lack of standardization, non-availability of Preclinical Safety/ toxicity/ efficacy data, Non chemical entities- *veerya, vipaka, prabhava* or relying on principles like *doshaghnata, Panchabhautikatwa* etc. and diagnosis as per Ayurvedic principles is poorly understood. For e.g. differentiation between tamaka shwasa & mahashwasa is clinically not clear. The selection of outcome parameters, multiple interventions- medicines, procedures, life style, diet etc. which are individualistic and are difficult to monitor for the compliance, conclude which intervention has what role and try to adopt gold standards. The present requirements are motivation and orientation of research scholars, the AYUSH specific Guidelines for Methodology of research, Interdisciplinary integration and Dissemination i.e. Publication of the research outcome. It is essential to register in Clinical trial registry before the starting of the work and once the work is over, clinical trial reporting is essential. She concluded with remarks - Identify the suitable guideline for reference- WHO, ICMR, CDSCO; Prepare a frame work for general protocol; Identify priority areas and specific diseases according to ICD 10....; Prepare a list of general parameters as per Ayurveda to be applied in all the trials for all the subjects; and Prepare the list of outcome parameters and the criteria for the assessment of the results of all the identified priority diseases.

These two presentations were followed by open house discussion and an active discussion took place in the house. At the end Dr. Nandini Kumar gave her chairperson’s remarks.

The second session of the afternoon was chaired by **Prof. R. H. Singh** and Co-chaired by **Dr. T. N. Pandya** and **Dr. Anup Thakar** acted as moderator.

In this session one technical presentation was delivered by **Prof. Tanuja Nesari** on the topic of “Guideline for Clinical Research in Ayurveda”. She highlighted the need for a specific guideline considering the holistic approach and fundamental principles of Ayurveda and suggested that ICH – GCP guidelines are suitable for Ayurveda. She also highlighted the

assessment of mental status as per Ayurveda. The subject of case documentation was also touched in her speech.

This presentation was followed by open house discussion and an active in house discussion took place for about one hour.

The working groups were formed at the end of the session and 11 different working groups were made and were assigned with specific task. They were asked to assemble at 09.00 AM on the second day at designated venue. 11 different venues were also made ready for the purpose.

The house dispersed with thanks to the chair.

Day 2: 29.11.2009; Sunday

Working Group meetings

The 11 different working groups met at designated venues and started working from 09.00 AM, with a short lunch break at 01.00 PM the group reassembled and continued their work till 04.00 PM. These working groups were having experts and coordinator among the teachers of the institute. PG and Ph.D. scholars provided help in discussions.

From 04.00 PM onwards the pre-final presentation by each group took place in the main seminar hall of the institute. After presentation by each group, the subject was open for discussion. The session was chaired by **Prof. Gurdip Singh** and Co-chaired by **Prof. C. B. Bhuyan, Dr. Anup Thakar** acted as the moderator of the session. 5 working groups could complete their presentation by 07.00 PM, and then the house was dispersed with thanks to chair and a note of reassembling at 09.00 AM on the third day.

Day 3: 30.11.2009; Monday

As per the scheduled plan, the different working groups met again at their designated venue for 2 hours and made corrections in their work as per the suggestions given by the house. The house reassembled in the seminar hall at 11.00 AM. The session was chaired by **Prof. R. R. Dwivedi**, and Co-chaired by **Prof. P. K. Prajapati**, the session moderator was **Dr. Darshana Pandya**. 5 working groups could complete their presentation by 01.30 PM, and then the house was dispersed for lunch after thanks to chair and a note of reassembling at 03.30 PM for continuation of presentation and discussion followed by valedictory session.

The post lunch session was chaired by **Dr. Dilip Gadgil** and Co-chaired by **Dr. K. S. Patel, Dr. Galib** was the moderator in this session. The general protocol developing group presented the summary of their discussions in this session, Dr. Galib, coordinator of the working group presented the gist of their discussions.

The subject opened for discussion by the chair and a healthy discussion took place with some suggestions too. The session concluded with chairpersons remarks and thanks to the chair.

The valedictory session started at 4.30 PM and Hon'ble Vice Chancellor and Director of the Institute **Prof. M. S. Baghel** chaired the session. **Dr. Nandini Kumar, Dr. Tanuja Nesari, Dr. P. S. Shrivastav, Dr. A. R. Trivedi, Dr. M. M. Padhi** and **Dr. H. M. Chandola** were on the dais. All the dignitaries on the dais shared their views of this 3 days workshop and suggested fruitful suggestions for successful completion of the task of developing guideline

for clinical research in Ayurveda. From the participant's side, **Dr. Rama Jayasundar, Dr. Bhavana Parashar, Dr. Anukul Chandra Kar, Dr. Gopakumar, Dr. Vasanth Patil, Dr. V. D. Shukla** presented their views on the workshop.

Chairman of the session, **Prof. M. S. Baghel** in his presidential address presented a common research format developed by his team, which was placed before the General Protocol development working group and as per decision of the group it will serve as CRF 1 which will be common for all clinical trials, the disease specific CRF 2 should be developed in due course of time he added. More than 100 symptoms have been graded in the working group meetings and it will be summarized and sent to all participants in due course of time for consensus and he also appealed before the august gathering to give suggestions on this CRF 1, it will be circulated among all institutions and research bodies for suggestions and in the next phase of the work, the suggestions received will be reviewed by experts and necessary modification will be made before final copy, he added. He thanked all the august resource persons who have come from different parts of the country for the good cause of Ayurveda and mankind.

The recommendations made by the general protocol working group which are to be taken as final decisions of the workshop he added.

The recommendations made by the general protocol development working group are:

- There is one paper on research methodology in M.D. (Ayu) curriculum contents of which should be elaborated including basic research guidelines formed by WHO, ICMR & other relevant good practices of Ayurveda (GMP etc.).
- Man power of Traditional Systems of Medicine (TSM) / Ayurveda should be strengthened and trained in research methodology of concerned fields. Govt. of India Dept. of AYUSH may initiate the intensive CME on Research Methodology for PG Teachers, at least 3 CME in three years to all the teachers for recognition as PG Teachers.
- Need of registering Ayurvedic clinical trials in CTRI (Clinical Trial Registry of India): initially the clinical trials should be enrolled in the existing registry.
- The institutions and research organizations of India may be requested to enroll their clinical trials under CTRI and inform regarding the output of the studies.
- AYUSH may create separate forum for registry of clinical trials as soon as possible.
- Recommendation on including parameters mentioned under QOL in every CRF with due elaboration towards consideration on relevant modern parameters. While including parameters of QOL physical, physiological, psychological and spiritual parameters should be considered and well focused.
- Parameters for safety should be added in all CRFs respectively and parameters for Dhatvagni and Jatharagni are to be exercised.
- The generic protocol which is finalized is to be circulated among the respective technical people for providing inputs which will be incorporated into the final format. This will be communicated to the selected institutions and research organizations in turn.

- Basic clinical research format should have clearly two portions dealing with Rogi Pariksha and Roga Pariksha.
- Besides the generic protocol, a specific protocol for each disease will be prepared. In addition, a manual will be prepared based on these protocols for proper execution of the project. It was also decided to form a working group of experts who will monitor the progress of the work and refining of the prepared CRFs and also will do interim analysis after pilot testing of the protocols, which is mandatory.
- After finalizing the standard formats and manuals, training sessions / training of the trainers programmes can be initiated with due permission of the concerned authority.
- It was also recommended to include a Bio statistician in future discussions on protocol formation.

Future action plan:

1. Circulation of CRF 1 and gradation of symptoms prepared during the workshop among all leading institutes and inviting their comments.
2. Conduction of a workshop for finalization of CRF 1 and preparation of CRF 2 and finalization of the grading and assessment criteria and preparation of User's manual.
3. Circulation of Final Draft of CRF 1 and CRF 2 at least for 15 diseases to all Ayurvedic teaching and research institutes.
4. Organizing a national workshop of 10 selected external experts for evaluation of comments, finalization of symptom grading and final draft of CRF 1 & CRF 2, preparation of user's manual.
5. Conducting pre implementation evaluation of CRFs and gradings at least at 10 institutes.
6. Submitting the draft report to sponsoring body, authorities of AYUSH, circulating among leading research institutions for adopting the same.
7. Training program for Trainers for proper implementation of the Clinical research protocols developed.

Dr. Rajagopala S, organizing secretary of the workshop conducted the session and presented the Vote of Thanks.

All the invited participants were distributed with participation certificate.

The session ended at 06.00 PM, followed by a tea.

All the faculty members of IPGT&RA, postgraduate and Ph.D. scholars of the institute participated actively in all the 3 days of the workshop.

List of Participants attended the National Workshop on developing Guidelines for Clinical Research Methodology in Ayurveda 28th to 30th November 2009

Resource persons – Outside

Sl. No.	Name & Address of Resource persons
11.	Prof. R. H. Singh Professor Emeritus, IMS, BHU, Varanasi.
12.	Prof. Gurdip Singh Director (PG Studies), SDM College of Ayurveda, Hassan.
13.	Dr. Rammanohar Director, AVATAR, Ayurveda Trust Campus, Coimbatore - 45
14.	Dr. Gopakumar Asst. Professor, Dept. of Roga Nidana, Govt. Ayurveda College, Trivandurm.
15.	Dr. Anukul Chandrakar Asso. Professor, Dept. of Roga Nidana, Faculty of Ayurveda, IMS, Varanasi.
16.	Dr. Bhavna Palan Scientist Fellow, Planning & Performance Division, CSIR, Anusandhan Bhawan, 2, Rafi Marg, NEW DELHI - 110001
17.	Prof. Srinivas Acharya Professor, Dept. of Kayachikitsa, SDM College of Ayurveda, Udupi.
18.	Dr. Manoj AK Asso. Professor, Dept. of Kayachikitsa, VPSV Ayurveda College, Kottakkal.
19.	Dr. Dilip Gadgil Consultant Physician, Pune.
20.	Dr. Rama Jayasundaram Asso. Professor, Dept. of Nuclear Medicine, AIIMS, Ansari Road, New Delhi
21.	Prof. B. L. Mehra Professor, Dept. of Kayachikitsa, RGGPG Ayurveda College, Paprola. HP
22.	Dr. P. K. Panda Reader, Dept. of Roga Nidana, Govt. Ayurveda College, Bolangir, Orissa
23.	Dr. Nandini Kumar Consultant, Division of Basic Medical Sciences, ICMR, Ansari Nagar, NEW DELHI - 110029.
24.	Dr. Supriya Bhalerao Dept. of Clinical Pharmacology, Nair Hospital, MUMBAI
25.	Dr. Rama Chandra Bharadwaj Head, Clinical Research Division, FRLHT, Bangalore
26.	Dr. Sulochana Bhat Asst. Director, CCRAS Head Quarters, Janakpuri, New Delhi.
27.	Dr. PS Shrivastav Professor & Head, Dept. of Kayachikitsa, State Ayurveda College, Lucknow.

28.	Dr. Bhimsen Behra Tech. Officer, Terminology Commission, Ministry of HR & D, New Delhi.
29.	Dr. M. M. Padhi Joint Directro (Tech), CCRAS Head Quarters, Janakpuri, New Delhi.
30.	Dr. Sonika Verma Basic Medical Sciences Division, ICMR Head Quarters, New Delhi
31.	Dr. R. N. Tripathi Professor & Head, Dept. of Kayachikitsa, Govt. Ayurveda College, Raipur.
32.	Dr. Haridra Dave Professor & Head, Dept. of Shalaky, Govt. Akhandanada Ayurveda College, Bhadra, Ahmedabad.
33.	Dr. Vasanth Patil Research Officer, SMRI (Ayurveda), Santhigiri Research Foundation, Santhigiri Ashram P.O. TRIVANDRUM – 695 589
34.	Dr. Tanuja Nesari Professor, Dept. of Dravyaguna, Tilak Ayurveda Mahavidyalaya, Pune.
35.	Dr. M. Shrinivasulu Professor & Head, Dept. of Kayachikitsa, BRKR Govt. Ayurveda College, Hyderabad.
36.	Dr. Pradeep Dua Research Officer, RRI, Gandhi Bhavan, Mandi. HP
37.	Dr. Umesh Shukla Professor & Head, Dept. of Kayachikitsa, Pt. KL Sharma Govt. Ayu College, Bhopal
38.	Dr. Manoj Nesri Joint Adviser – Ayurveda, Dept. of AYUSH, Ministry of Health & FW, New Delhi
39.	Dr. Gaurav Sharma Research Officer, Dept. of AYUSH, Ministry of Health & FW, New Delhi
40.	Dr. S. H. Acharya, Reader & Head, Dept. of Panchakarma, SGA Mahavidyalaya, Guj. Ayurved University, Jamnagar.
41.	Dr. Girish Tillu, CDAC, Pune.

Resource persons - Internal

Sl. No.	Name & Address of Resource persons
42.	Prof. R. R. Dwivedi Professor & Head, Dept. of Basic Principles, IPGT&RA, Jamnagar.
43.	Prof. H M. Chandola Dean, Professor & Head, Dept. of Kayachikitsa, IPGT&RA, Jamnagar.

44.	Prof. V. D. Shukla Professor & Head, Dept. of Panchakarma, IPGT&RA, Jamnagar.
45.	Prof. C. B. Bhuyan Professor & Head, Dept. of Shalya tantra, IPGT&RA, Jamnagar.
46.	Prof. P. K. Prajapati Professor & Head, Dept. of Rasashastra, IPGT&RA, Jamnagar.
47.	Prof. K. S. Dhman Professor & Head, Dept. of Shalakya tantra, IPGT&RA, Jamnagar.
48.	Dr. T. N. Pandya Reader & Head, Dept. of Dravyaguna, IPGT&RA, Jamnagar.
49.	Dr. K.S. Patel. Reader & Head, Dept. of Kaumarabhritya, IPGT&RA, Jamnagar.
50.	Dr. L.P. Dei Reader & Head, Dept. of Striroga & PT, IPGT&RA, Jamnagar.
51.	Dr. Manjusha R Reader, Dept. of Shalakya tantra, IPGT&RA, Jamnagar.
52.	Dr. Anup B. Thakar Reader & Dept. of Panchakarma, IPGT&RA, Jamnagar.
53.	Dr. A. R. Dave Reader, Dept. of Kayachikitsa, IPGT&RA, Jamnagar.
54.	Dr. S. K. Gupta Reader, Dept. of Shalya tantra, IPGT&RA, Jamnagar.

List of Teachers participated in the workshop: IPGT&RA

Sl. No.	Name
1	Dr. Mahesh Vyas, Reader, Dept. of Basic Principles, IPGT&RA, Jamnagar.
2	Dr. A. S. Baghel, Reader, Dept. of Basic Principles, IPGT&RA, Jamnagar.
3	Dr. R. N. Acharya, Reader, Dept. of Dravyaguna, IPGT&RA, Jamnagar.
4	Dr. B. J. Pattagiri, Reader, Dept. of Rasashastra & BK, IPGT&RA, Jamnagar.
5	Dr. Galib , Asst. Professor, Dept. of Rasashastra & BK, IPGT&RA, Jamnagar.
6	Dr. H. A. Vyas, Asst. Professor, Dept. of Basic Principles, IPGT&RA, Jamnagar.
7	Dr. Shubhangi Kamble, Asst. Professor, Dept. of Basic Principles, IPGT&RA, Jamnagar.
8	Dr. V. K. Kori, Asst. Professor, Dept. of Kaumarabhritya, IPGT&RA, Jamnagar.
9	Dr. Shilpa Donga, Asst. Professor, Dept. of Striroga & PT, IPGT&RA, Jamnagar.
10	Dr. Mandeep Kaur, Asst. Professor, Dept. of Kayachikitsa, IPGT&RA, Jamnagar.
11	Dr. Darshana Pandya, Asst. Professor, Dept. of Kayachikitsa, IPGT&RA, Jamnagar.
12	Dr. Rajagopala S, Asst. Professor, Dept. of Kaumarabhritya, IPGT&RA, Jamnagar.
13	Dr. D. S. Vaghela, Asst. Professor, Dept. of Shalakya tantra, IPGT&RA, Jamnagar.
14	Dr. Bhupesh Patel, Asst. Professor, Dept. of Dravyaguna, IPGT&RA, Jamnagar.
15	Dr. TS Dhudhmal, Asst. Professor, Dept. of Shalya tantra, IPGT&RA, Jamnagar.
16	Dr. Santosh Bhattad, Asst. Professor, Dept. of Panchakarma, IPGT&RA, Jamnagar.
17	Dr. Nilesh Bhatt, Panchakarma Asst, Dept. of Panchakarma, IPGT&RA, Jamnagar.
18	Dr. B. Ravishankar, Head, Pharmacology Laboratory, IPGT&RA, Jamnagar.