

KAYACHIKITSA-CME

6-day CME for Teachers Module

Unit 1: Fundamentals/ Principles of Ayurvedic Treatment Methodology (*Sidhanta*)

Topic: *Ama* and *Agni*

Learning Points:

- Description in Ayurvedic texts including *Bhrughattrai* and *Laghutrai*:
 - Anatomical site, qualitative and quantitative assessments parameters, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Pathological aspects: Diseases caused by the derangement, Complications
- Clinical application of the concept
 - ✓ Diagnostic tools – clinical sign and symptoms, laboratory parameters for all thirteen types of *Agni*, *Ama* at *dosha*, *dhatu* and *mala* level.
 - ✓ Assessment tools for defining severity & prognosis.
 - ✓ Clinical demonstration of healthy & vitiated state of *Jathragni*, *Bhutagni* and *Dhatwagni*.
 - ✓ Treatment protocol (STG) for acute and chronic management of diseases caused by vitiation of *Agni* and involvement of *Ama* including-
 - Principle of treatment
 - Type of treatment according to the diagnostic/ prognostic classifications
 - Specification of treatment (if any)

ii. Activity session (Group discussion)

- Interactive session topics will be distributed to each group by the Resource person.
- Each group will present learning objectives of topics, which will be redefined by the resource person.
- Each group will propose methods of assessment of *Ama* and *Agni* through various examination method which have been described by various Acharya.
- Material for activity: The participants will assess the *Ama* condition and *Agni Pariksha* on the patient and define line of treatment as per *Sama* and *Nirama* stage of the *Dosha* or disease in a clinical setup
- Developing of *Agni* and *Ama* assessment questionnaires or tools
- Defining possible research topics related to *Ama* assessment and *Amaja* Diseases

Unit 2 : *Rasavaha Srotasa*

A. *Srotasa*:

- Description in Ayurvedic texts including *Bhrughattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Rasavaha srotodusti* & *Avarana*, laboratory parameters for assessing *Rasavaha srotasa sanga*, *vimarga-gamana*, *atipravriti* and *siragranthi*.
 - Assessment tools for defining severity & prognosis.
 - Introduction to *Hridya mahakashaya* medicines.
 - Overview of cardiovascular system, cardiac cycle, heart sounds, heart muscles, cardiac output, coronary circulation, hemodynamics, blood pressure.
 - Physical examination of Cardiovascular system including audio demonstration of various heart sounds, pulse examination.

- Pharmacology of anti-arrhythmic, anti-anginal, cardiac glycosides, anti-hypertensive medicines.
- Overview of lymphatic system, thoracic duct anatomy and physiology, lymph glands.
- **Pathological aspects:** Diseases caused by the derangement, Complications
 - ✓ **Jwara:** Definition, *Panchanidana*, pathogenesis, classifications, detailed description of *doshika jwara*, *dvandaja jwara*, sannipatika jwara, *dhatugata jwara*, *vishama jwara*, *punravartaka jwara*, different stages of *Jwara*, differential diagnosis of different types of *jwara*, *jwara pramoksha*, *prashant jwara lakshana*, *upadrava*, etc.
 - ✓ Brief description of malaria, dengue, typhoid, kala azar, chikungunya, rheumatic fever, measles, meningitis, viral fever (GB syndrome), rheumatic fever, etc.
 - ✓ *Emergency management of Trayodasha Sannipataja Jwara, Sama Sannipataja Jwara, Abhishangaja Jwara, Vishajanya Jwara, Asthigata Jwara, Majjagata Jwara, Pitta-Pradhana Vishama Jwara*, etc.
 - ✓ **Amavata:**
 - *Nidanapanchaka*, diagnostic criteria, complications, prognosis, management as per STG.
 - Overview of rheumatoid arthritis, inflammatory arthritis due to enteropathy (reactive arthritis) including ankylosing spondylitis, clinical presentation, differential diagnosis, investigations, complications, prognosis, management as per STG.
 - ✓ **Rajyakshma:**
 - *Nidanapanchaka*, *Anuloma kshaya* and *pratiloma kshaya* diagnostic criteria and D/d
 - Detailed description of 3,6 and 11 sign & symptoms of *Rajyakshma* with clinical relevance in making diagnosis of *Rajyakshma*
 - D/d between *Sahasajanya Rajyakshma*, *Kshatakshina*, *Urahkshata*, *Kshataja Kasa* and *Kshayaja Kasa*
 - Understanding *Kshatakshina* as a complication of *Rajyakshma*.
 - Brief introduction about Revised National Tuberculosis Control Programme and conventional ATT.
 - Reading of CXRs, CT-thorax, relevant laboratory testing tools.
 - **Sosha:** *Nidanapanchaka*, differential diagnosis with *Rajyakshma*, management as per STG.
 - ✓ **Madatyā:** *Nidanapanchaka*, clinical diagnostic tools, assessment tools for evaluating *Sanghya* (consciousness) in different stage of *madatyā*, management as per STG

B. Srotomula : Hridya & dhamniya

- ✓ **Hridroga:**
 - Scientific relevance of etiopathogenesis described in Ayurveda and its importance in the prevention of Hridroga.
 - Diagnosis based on Ayurvedic parameters
 - Classification of *Hridroga*
 - Concept of *Avarana* in the pathogenesis of Hridroga.
 - Differential Diagnosis of *Urahshula*, *Parshvashula* & *Hridshula*
 - Defining terms like *hridshunya*, *hridrashosha*, *hriddrava*, *hridmoha*, *hridyodreshtana*, *dhamnipratichaya*, etc. in clinical practice.
 - Management of acute *Hridshula* based on Ayurvedic principles.
 - Diagnosis & Management of *Marmaghata janya hridroga*

- Management of hypertensive emergencies and crises based on Ayurvedic principles.
- STG for the management of *Vatika*, *Pattika*, *Kaphaja* and *Sannipatika Hridroga*.
- Management of Cardiac Emergencies: Approach to Chest Pain, Cardiogenic Shock, Congestive Cardiac Failure, Acute Coronary Syndrome, Syncope and Cardiac Arrhythmias, Cardiac Arrest.
- Overview of reading ECG, ECHO, stress TMT and other relevant laboratory tests.
- Treatment protocol (STG) for acute and chronic management of disease including-
 - Principle of treatment
 - Type of treatment according to the diagnostic/ prognostic classifications
 - Specification of treatment (if any)
 - Herbal and herbominerals medicines including-
 1. Dose & timing
 2. Route of administration
 3. Vehicle
 4. Synergistic/ Antagonistic interaction with modern drug
 5. Safety and Toxicity Profile/ Pharmacovigilance aspect of the drug
 6. Drug- Drug Interaction (if any reported)
 7. Adverse Drug Reaction (if any)
 8. Supportive Clinical Data/ research evidences
 - Panchakarma therapies
 1. Type of therapy
 2. Duration
 3. Method of administration
 4. Indications & Contradictions
 5. Management of complications
 - Non-Pharmacological treatment
 - *Pathya-Apathya*

✓ Concept of Oja & Immunology

- Detailed description of *Oja* as per Ayurvedic classics
- Physiological functions of *Oja*
- Assessment of *Oja* in healthy individual (*Oja* assessment tools)
- Sign & symptoms of *Ojavishrnsa*, *vyapada* and *kshaya*
- Clinical demonstration of *Ojavishrnsa*, *vyapada* and *kshaya* w.s.r to disease state.
- Knowledge of various immune status examination questioners (ISQ)
- Objective qualitative and quantitative assessment tools (blood investigations, immune mediators,) for estimating immune status
- Concept of *Sahaja*, *Kalaja* and *Yutika Bala* in context of acquired and humoral immunity
- Understanding immunotherapy in the reference of *Rasayana chikitsa*.
- Scientific evidence/ research studies depicting effect of various Rasayana medicines on immunity (immunomodulation, immunity booster, etc.)
- **Pathological aspect:** Various autoimmune diseases, AIDS, etc.

ii. Activity session (Group discussion)

- Interactive session topics will be distributed to each group by the Resource person.
- Each group will present learning objectives of topics, which will be redefined by the resource person.e.g.

- Case discussion of various types of immune system disorders (an autoimmune disorders, immunodeficiency disorders and allergic reaction)
- Tests and various methods for assessing immunity
- Prescription writing for various specific conditions of autoimmune diseases.
- Defining possible research topics related to immunology and immunopathology as per Ayurveda

Unit 3 Topic: *Raktavaha Srotasa*

Saidhantika (Fundamentals)

A. *Srotasa*:

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Physiology of erythropoiesis and reticuloendothelial system.
 - Diagnostic tools – clinical sign and symptoms of *Raktavaha srotodusti* & *Avarana*, laboratory parameters for assessing *Raktavaha srotasa sanga*, *vimarga-gamana*, *atipravriti* and *siragranthi*.
 - Assessment tools for defining severity & prognosis
- **Pathological aspects:** Diseases caused by the derangement, Complications
 1. ***Raktapitta*:**
 - *Nidanapanchaka*,
 - *D/D with Urdhva Raktapitta, Urahkshata, Kshayaja Kasa*
 - *D/D with Adhoraktapitta, Raktaja Pravahika, Raktaja Atisara, Raktaja Prameha & Kshata-kshina*
 - *Classification*
 - *Sadhya-asadhya*
 - Bleeding disorders; UGI bleeding, Lower GI bleeding, causes of haemoptysis, hematemesis, ITP, Hemophilia A&B, Von Willebrand disease, blood coagulation factors deficiency diseases.
 2. ***Kustha***
 - *Nidanapanchaka*, diagnostic criteria for differentiating *Kustha, Kshudra-Kustha* and *Kshudra roga*
 - *Assessment of Krimi & Kleda in Kustha* (laboratory parameters)
 - Characteristic features of all types of *Mahakustha* and *Kshudra kustha*
 - Clinical characterization of *Shvitra*(based on *dhatu*), *Sheetapitta, Udarda & Kotha*
 - Management of *Kustha, Kshudra-kusth, Kshudra roga* as per *STG*.
 - Brief introduction of Leprosy, classification, prognosis, clinical progression, investigations, management as per *STG*.
 - Overview of psoriasis, pathogenesis, management as per *STG*.
 3. ***Visarpa***
 - *Nidanapanchaka*
 - Clinical presentation (pictorial demonstration) of different types of *Visarpa* as observed in practice
 - Complications and prognosis assessment criteria
 - Diagnostic criteria of *Abhyantar Visharpa* (eg. *Hridayagata Visarpa, Shirogata visarpa*, etc.) subjective as well as objective.
 - *Shakhagata Visarpa*: sign and symptoms, management.
 - *Upadrava, Sadhya-asadhya* (complications & prognosis)

- D/D with *Raktagata Vata & Raktavritta Vata*
 - Treatment protocol as per STG
 - Brief review of cellulitis, gangrenes, panniculitis, **lupus**, etc.
4. **Shirahshula:**
- *Nidanapanchaka*, diagnostic tools for *Ardhambhedaka*, *Suryabarta*, *Sankhaka*, etc., management as per STG.
 - Brief introduction of headache, pathogenesis, classification and investigations.
5. **Vatarakta:**
- *Nidanapanchaka*
 - Clinical demonstration of *Brahya*, *abhyantra Vatarakta & Ubhayashrita-vatarakta*
 - D/D of *Brahya vatarakta & kustha*
 - Diagnostic criteria of *Vatika*, *Raktaja*, *Pittaja* and *Kaphaja Vatarakta* (subjective & objective)
 - Complications & prognosis
 - Demonstration of various types of *Raktamokshana* techniques, *ayoga*, *atiyoga* and *samyaka yoga lakshana*,
 - “Chikitsitamidam kuryaduhapohavikalapvit” (Ca.chi.29:155) Clinical demonstration of *Amshamsha Kalpana* of *doshas* and *sthana* in management of *Vatarakta* as per the *sloka*.
 - Treatment as per STG
 - Brief description of SLE, DVT, Gouty arthritis, Avascular necrosis, erythema nodosum, erythema multiforme, erythema marginatum, scleroderma, etc.
6. **Kostrushirsha** : *Nidanapanchaka*, diagnostic criteria, useful physical examination tools, investigations, haemophilic joint disorders.
- **Emergency treatment** of *Raktapitta*, *Raktagata Vata*, *Visarpa*, *Ubhaya-ashrita Vatarakta*, *Madatyay*, *Kumbhakamala*, *Kardama Visarpa*, *Abhyantara Visharpa*, *Pittaja Visarpa*, *Shirah-sotha*, *Shankhaka*, *Charmadala*, *Visphota*, *Tamapravesha*.

B. Srotomula: Yakrit & Pliha

- **Kamala, Khumbha-kamala, Halimaka**
 - Diagnostic tools (subjective & objective) for *Sakha-ashrita* and *Kosthashrita kamala*,
 - Assessment tools based on *Arishta lakshana* for deciding prognosis in *koshtha-sakhashrita kamala* and *kumbhakamala*.
 - D/d *Dushyodara*, *Jalodara* and *Kumbhakamala*
 - *Halimaka* diagnostic tools (sign & symptoms), objective parameters (Ca markers, inflammatory markers, etc.)
 - Proper abdominal examination including systemic examination (CNS examination)
 - Clinical demonstration of “*Shleshmada rudhamarga tat Pittam Kaphaharaijayeta*” by depicting medicines as well as diet to increase *Pitta*.
 - Brief overview of Hepatic encephalopathy, Hepatitis, Jaundice, Liver carcinoma and GB cancer.
- **Yakridaluodara, Plihodara:** *Nidana*, *Samprapti*, sign & symptoms, management through Ayurveda (STG), D/D with *Gulma*, hepatomegaly causes, pathogenesis and sign and symptoms.

- ***Yakridvidhradhi***: Etiopathogenesis, clinical sign and symptoms, management through Ayurveda (STG)
 - Liver abscess: causes, pathogenesis, sign and symptoms, treatment.

Updhatu: ***Kandra & Sira***

- ***Siragata Vata***: Clinical sign & symptoms, laboratory parameters for diagnosis, clinical demonstration (pictorial/ bedside), D/D btw *Siragranthi*, *Vatika Vatarakta*, management as per STG , brief description of varicose veins, venous diseases, vasculitis.

Concept of ***Dushi Visha***

- Clinical presentation of *Dushi-visha* (sign and symptoms)
- Diagnostic parameters (laboratory tests)
- Concept of drug intolerance, tachyphylaxis, drug-drug interaction, factors deciding dose of medicines, etc.
- Concept of allergy, types of allergic reaction, allergic diseases and their diagnostic tools (relevant investigations)
- *Agada chikitsa* for the management of *Dushi-visha*.

Unite: 4 ***Mamshavaha Srotasa***

A. ***Srotasa***

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Tools for assessing healthy state of *Mamsa Dhatu* in human, Determinants of variation (*Prakriti*, *Kulaja*, etc.), importance of *Samhanan Pariksha* in depicting state of health.
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Mamsavaha srotodusti & Avarana*, laboratory parameters for assessing *Mamsavaha srotasa sanga*, *vimarga-gamana*, *atipravriti* and *siragranthi*.
 - Assessment tools for defining severity & prognosis
 - Modern diagnostic tools like EMG, radiological investigations, blood investigations.

Pathological aspect:

1. ***Arbuda***:

- A. Definition, *Nidanapanchaka*, classification, diagnostic tools (various C_A markers), management as per STG,
- B. etiopathogenesis of cancer, types of cancer, different stages of metastasis, head & neck cancer, lung cancer, anorectal cancers, liver and biliary duct cancer, etc., management as per STG.

2. ***Galganda***:

- A. *Nidanapanchaka*, diagnostic tools , assessment tools for severity & prognosis, demonstration of clinical presentation (pictorial/ bedside), management as per STG,
- B. Brief introduction about goitre, thyroiditis, Graves disease, Hashimotos disease, thyroid nodules, thyroid cancer, modern diagnostic tools (radiological & blood investigations), management as per STG.

3. **Gandamala:**

- A. *Nidanapanchaka*, diagnostic tools , assessment tools for severity & prognosis, demonstration of clinical presentation (pictorial/ bedside), management as per STG,
- B. Overview of lymphadenitis, causes, pathogenesis, tubercular lymphadenitis, modern diagnostic tools (radiological & blood investigations), management as per STG.

4. **Adhimamsa:**

- A. *Nidanapanchaka*, diagnostic tools, assessment tools for severity & prognosis, demonstration of clinical presentation (pictorial/ bedside), management as per STG
- B. Brief introduction of muscular hypertrophy, pseudomuscular hypertrophy, differential diagnosis, investigations, management as per STG.

5. **Mamsakshaya, Mamsavridhi:**

- A. *Nidanapanchaka*, assessment tools for *Mamsagnimandya*, D/D with *Mamsagnimandyajanya Mamsakshaya and Asthimajjagata Vata janya Mamsakshaya*, management as per STG
- B. Brief introduction of myopathies, muscular dystrophy, hypertrophy, atrophy due to MND (multiple sclerosis, ALS, etc.), LMN diseases, neuromuscular disorders, Myasthenia Gravis, management as per STG.

6. **Mamsagata Vata:**

- A. *Nidanapanchaka*, diagnostic tools, assessment tools for severity & prognosis, demonstration of clinical presentation (pictorial/ bedside), management as per STG
- B. Brief introduction of Muscle cramps, Fibromyalgia and myositis, clinical sign and symptoms, investigations, management as per STG.

7. **Mamsavritta Vata:**

- A. *Nidanapanchaka*, diagnostic tools, assessment tools for severity & prognosis, demonstration of clinical presentation (pictorial/ bedside), management as per STG
- B. Brief introduction of subcutaneous nodules, lymphomas, neurofibromatosis, D/D of subcutaneous nodules, calcinosis, etc. management as per STG.

B. Srotomula: Snayu & Twaka

1. **Snayugata vata:**

- A. *Nidanapanchaka*, diagnostic tools, differential diagnosis, *Bahyrama, antrayama, khalli, kubja, savangavata, ekangavata*, management as per STG.
- B. Overview of tendinitis, anterior cruciate ligament injury (ACL), medial collateral ligament (MCL) injury, Carpal tunnel syndrome, torticollis, lockjaw, opisthotonos (meningitis, tetanus), achilles tendinitis, radiological investigations interpretation, management as per STG.

2. **Twaka gata Vata:**

- a. *Nidanapanchaka*, diagnostic tools, differential diagnosis with *Kitibha, charmakustha*, etc., management as per STG.

- b. Overview of Acanthosis nigricans, Vit D deficiency induced skin disorder, hyperpigmentation and atopic eczema, neuralgia, clinical presentation, investigations and management as per STG.
3. **Kshudra Roga: Nidanapanchaka**, clinical sign and symptoms of each type of *Kshudra roga*, differential diagnosis, investigations, management as per STG. Brief introduction about skin diseases like acne, dermatitis, eczema, rosacea, impetigo, melasma, fungal skin diseases, keratosis pilaris, wart, measles, etc. diagnostic tools and their treatment as per STG.

Unite: 5 Medovaha Srotasa

A. Srotasa

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Tools for assessing healthy state of *Meda Dhatu* in human (*Meda Sara Pariksha*), clinical importance of *Pravara*, *Madhyma* and *Avara Medasara*.
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Elucidating concept of *Kleda*, *baddha* and *abaddha meda*, *bahudrava shleshma* and enumerate diagnostic tools for their quantitative and qualitative assessment.
 - Overview of *Medo-agnimandya*, parameters for quantitative assessment.
 - Overview of Cholesterol metabolism, adrenal gland functioning, glucocorticoids synthesis and functioning, minerolocorticoids and sexcorticoids synthesis and functioning, leptin hormone and ghrelin hormone secretion, synthesis, functioning and homeostasis.
 - Functioning and homeostasis of Insulin hormone.
 - Diagnostic tools – clinical sign and symptoms of *Medovaha srotodusti* & *Avarana*, laboratory parameters for assessing *Medovaha srotasa sanga*, *vimarga-gamana*, *atipravriti* and *siragranthi*.
 - Assessment tools for defining severity & prognosis

Pathological aspects:

- **Prameha:**
 - A. *Nidanapanchaka*, differential diagnosis of *Vatika*, *Pattika* and *Kaphaja Prameha* based on urine examination, differential diagnosis of *Avarnajanya Prameha* and *Dhatukshayajanya Prameha* based on clinical presentation and laboratory investigations, treatment protocol for *sthula* and *krisha pramehi*, *Beeja doshajanya Prameha chhikitsa*, treatment as per STG.
 - B. Emergency management of : *Raktameha* (hematuria), *Madhumeha Uppadrava* (hypoglycaemia, DKA diabetic coma, etc.)
 - C. Overview of diabetes, etiological factors, pathogenesis, classifications, investigations, complications, titration of dose of insulin, pharmacology of oral hypoglycaemic medicines in brief.
- **Sthaulya: Nidanapanchaka**, clinical presentation, diagnostic tools, management as per STG, Yoga and diet therapy protocol as per Ayurveda, overview of obesity, classification/grading, dietary modulation therapies, pharmacology of anti-obesity medicines.
- **Medavritta Vata: Nidanapanchaka**, clinical demonstration (pictorial/ bedside), management as per STG, overview of myxoedema.

B. Srotomula: Vrikka, Vapavahana

- **Basti roga:**
 - a. *Nidanapanchaka*, clinical sign and symptoms of all basti rogas as defined by Acharya Charaka & Sushruta, D/D with *Mutrakriccha*, *mutragata ashmari*, *pratuni*, investigations (pyelography, urineflowmetry, USG (KUB),CT, blood investigation, etc.)
 - b. Emergency management of *Mutraghata*, *Vatakundalika*, *Bastikundala*, *Vrikkavidhradhi*, acute renal failure as per STG.
 - c. Overview of acute and chronic renal failure, pyelonephritis, renal tuberculosis, medical renal disease, polycystic kidney, nephrotic syndrome, diagnostic tools, assessment tools for assessing severity and prognosis, management of these condition as per STG.
 - d. ***Bastimarmaghatajanya roga***: clinical presentation, diagnostic tools (imaging techniques, blood investigations), complications, prognosis, management as per STG.
- **Vapavahana:**
 - a. Understanding concept of *Vapa* as *dhatu*, *vapavahana* as *kosthanga*, differentiating *vapavahana kosthanga* and *vasavahana kosthanga*, tools for quantitative assessment of *vapa dhatu* in body, physiological functioning of *vapadhatu*.

C. Concept of *Gramya Dosha*

- Clinical relevance of concept and practical applicability in managing metabolic syndrome and autoimmune disorders.

Unite: 6 *Asthivaha Srotasa*

A. *Srotasa*

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Tools for assessing healthy state of *Asthi Dhatu* in human, Determinants of variation (*Prakriti*, *Kulaja*, etc.), importance of *Pramana Pariksha* in depicting state of health.
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Asthivaha srotodusti* & *Avarana*, laboratory parameters for assessing *Asthivaha srotasa sanga*, *vimarga-gamana*, *atipravriti* and *siragranthi*.
 - Assessment tools for defining severity & prognosis
 - Understanding Vitamin D metabolism and physiology of bone and cartilage synthesis, blood circulation and lymphatic drainage.
 - Modern diagnostic tools like BMD, radiological investigations, blood investigations.

Pathological aspect:

- ***Asthivridhi/ Adhyasthi***:
 - A. *Nidanapanchaka*, diagnostic tools (physical examination, radiological investigations, blood investigations), management as per STG.
 - B. Overviews of bone spur or osteophytes, osteoarthritis – etiopathogenesis, clinical features, diagnostic tools (physical examination, radiological investigations, and blood investigations), and management as per STG. Calcaneal spur, etc.
- ***Asthikshaya***

- A. *Nidanapanchaka*, diagnostic tools (physical examination, radiological investigations, blood investigations), management as per STG.
- B. Overview of osteoporosis, osteopenia, osteomalacia, clinical features, investigations, differential diagnosis, management of these diseases as per STG.
- ***Asthyavritta Vata, Asthi-majja gata Vata***
 - A. *Nidanapanchaka*, diagnostic tools (physical examination, radiological investigations, blood investigations), management as per STG.
 - B. Overview of Vit D deficiency, management as per STG.
- ***Asthividhradhi*** :
 - A. *Nidanapanchaka*, clinical presentation, diagnostic tools (physical examination, radiological investigations, blood investigations), management as per STG.
 - B. Overview of osteosarcoma, bone tuberculosis, clinical presentation, investigations, management as per STG.
- ***Kesha, Nakha, Loma, Shamshrudosha*** :
 - A. *Nidanapanchaka of Khalitya, Palitya, Indralupta, kunakha, Chippa, Nakhabheda*, clinical presentations, investigations, management as per STG.
 - B. Overview of greying of hair, hair loss, alopecia, pathogenesis, diagnostic criteria, introduction to nail deformities, fungal nail diseases.

B. Srotomula: Janghana & meda

- ***Urustambha***:
 - A. *Nidanapanchaka*, clinical presentation (pictorial/ bedside), D/D with *Urusada*, investigations, management as per STG.
 - B. Overview of femoral neuropathy, clinical features, investigations, differential diagnosis, , management as per STG.
- ***Medoroga***:
 - A. *Nidanapanchaka*, clinical presentation, D/d of *Medoroga, Sthaulya* and *Medavritta Vata*, management as per STG.
 - B. Overview of dyslipidemia, fatty liver disease, hypothyroidism, clinical presentation of metabolic syndrome, investigations, management of these conditions as per STG.

Unite: 7 Majjavaha Srotasa

A. Srotasa

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Majjavaha srotodusti & Avarana*, laboratory parameters for assessing *Majjasavaha srotasa sanga, vimarga-gamana, atipravriti* and *siragranthi*.
 - Physiology of bone marrow, grey & white matter of brain and spine.
 - Assessment tools for defining severity & prognosis
- **Pathological aspect:**
 - A. ***Bhrama, Tama, Murccha***:
 - *Nidana, Samprapti*, diagnostic criteria, complications, prognosis, management as per STG, vertigo- causes, pathogenesis, sign and symptoms, assessment tools for severity, Syncope- causes, pathogenesis, clinical presentation, investigations, assessment of severity, complications, management as per STG.

- Overview of leukaemia's, myeloproliferative disorders, lymphoma, management as per STG.

B. *Majjavritta Vata*:

- *Nidana, Samprapti*, diagnostic criteria, complications, prognosis, management as per STG.
- Overview of compressive & non compressive myelopathies, diagnostic criteria, investigations, management as per STG.

B. *Srotomula: Asthi and Sandhi*

- ***Sandhigata Vata: Nidanapanchaka***, diagnostic criteria (physical examination of joints, tools for assessing joint mobility, various relevant questionnaires for evaluating joint functions), differential diagnosis with *Sandhichyuti* (dislocation of joints), investigations (radiological, blood investigations), complications, prognosis, management as per STG.
- ***Janubheda, Januvishlesha: Nidanapanchaka***, clinical features, investigations, management as per STG.
- ***Gulphagraha, Trikgraha, Prusthagraha, Shronibheda: Nidanapanchaka***, clinical features, investigations, management as per STG.
- Overview of joint disorders, clinical presentation, differential diagnosis between arthritis, investigations, management as per STG.

Unite 8: *Sukravaha Srotasa*

- *Vrishanakshepa, Shephastambha, Klevya, Shuka dosha, Bandhatava*,

Unite 9: *Udakavaha Srotasa*

A. *Srotasa*

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Udakavaha srotodusti & Avarana*, laboratory parameters for assessing *Udakavaha srotasa sanga, vimarga-gamana, atipravriti* and *siragranthi*.
 - Quantitative assessment of *Udaka dhatu* in healthy state, physiological understanding of intracellular fluid compartment, interstitial fluid, extracellular fluid compartment, composition, pressure, homeostasis, factors causing imbalance of intracellular and extracellular fluid compartment, etc.
- **Pathological aspect:**
 - ***Trishna*:**
 - A. *Nidanapanchaka*, diagnostic criteria, clinical presentation, classification, investigations, complications, prognosis, management as per STG.
 - B. Illustration of biochemical characterization of Luke warm water, normal water and cold water and their effect on the physiology of fluid balance. Effect of various types of water as per disease condition.
 - C. Overview of causes of polydipsia, dehydration, electrolyte imbalance (hyponatremia, hypernatremia, hyperkalemia and hypokalemia), pathogenesis, clinical presentation, complications, investigations, management as per STG.
 - D. Emergency management of hyponatremia, dehydration.

B. *Srotomula: Talu & Kloma*

- Elucidating the anatomical site of *talu* and *kloma* according to Ayurveda and physiological functioning.

- Role of pancreas in the homeostasis of fluid in the body (interstitial, intra and intercellular compartment of fluid)
- Overview of acute and chronic pancreatitis and management as per STG.

Unite 10: *Annavaha Srotasa*

A. *Srotasa*

- Description in Ayurvedic texts including *Bhrughattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Annavaha srotodusti & Avarana*, laboratory parameters for assessing *Annavaha srotasa sanga, vimarga-gamana, atipravriti* and *siragranthi*.
 - Understanding the basics of physiology of ingestion, digestion and expulsion of stool, peristaltic movement kinetics, gut microbiome, secretion and functioning of various digestive enzymes, Neuroendocrinology of Appetite and digestion, satiety and hunger centre in brain.
- **Pathological aspect:**
 - *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG for the following:
 1. *Arochaka*,
 2. *Agnimandya, Ajeerna* ,
 3. *Anaha, Adhamana, Atopa*,
 4. *Chardi and*
 5. *Gulma* and management as per *STG*.
 6. *Udara roga*
 7. *Annavritta Vata*
 - *Differential diagnosis of Pattika Gulma and Pattika vidradhi*.
 - Emergency treatment of *Vatika chardi, Udarashula, Pattika Gulma, Alsaka, Bilamvika.cholicystitis, acute abdomen, cholera*,
 - Overview of indigestion (dyspepsia), anorexia, bloating, belching, vomiting, ascites and GI tumors, etiopathogenesis, diagnostic criteria, classification, investigations (ascites fluid analysis, USG, upper GI endoscopy, etc.), pharmacology of anti-emetic medicines, complications and management as per STG.

B. *Srotomula: Amashaya & Vamaparsva*

- *Parinamshula, annadravashula, Amla pitta: Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG.
- Overview of Gastritis, gastroesophageal reflux disease, (GERD), acid peptic disease (APD) and Barrett's esophagitis- etiopathogenesis, diagnostic criteria, classification, investigations, pharmacology of PPIs, complications and management as per STG.
- **Grahani** : *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG.
- Celiac disease, malabsorption syndrome, intestinal tuberculosis, colitis/ gastroenteritis: etiopathogenesis, classification, diagnostic criteria, investigation (UGI

endoscopy, USG, barium meal study, RUT for H.pylori, tissue transglutaminase test, ETC.) and management of these diseases as per STG.

C. Concept of *Annavisha*

- Food intolerance, food allergy, leaky gut syndrome clinical features, diagnostic tools, assessment tools, differential diagnosis and management as per STG.

Unite 11: *Purishavaha Srotasa*

A. Srotasa

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Purishavaha srotodusti & Avarana*, laboratory parameters for assessing *Purishavaha srotasa sanga, vimarga-gamana, atipravriti* and *siragranthi*.
 - Physiology of stool formation, physiology of large intestine, stool transit timing in healthy individual, neuroendocrinology of defecation.
- **Pathological aspect:**
 - *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG for the following:
 1. *Atisara*
 2. *Pravahika*
 3. *Krimi*
 4. *Udavarta*
 - Overview of Diarrhoeas, Dysentery, Irritable Bowel Syndrome, Ulcerative colitis, Crohn's disease, Intestinal worm infestation - etiopathogenesis, diagnostic criteria, classification, investigations, pharmacology of PPIs, complications and management as per STG.

B. Srotomula: *Pakvashaya & Sthulagudam*

- **Arsha:** *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG.
- Clinical demonstration of *Abhyantar Arsha*, diagnostic tools, differential diagnosis with *Brahya Arsha*.
- *Purvapurpa of Arsha* depiction for early diagnosis and prevention of *Arsha*.
- **Gudabhramsa, Gudarti:** *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG.
- Overview of Rectal prolapsed, Proctatitis, Colon and Rectal cancers and their management as per STG.

C. Concept: “*Sama Mala Pramana*” *Purisha Pariksha* (stool examination)

- Clinical demonstration of *Sama & Nirama Mala*
- Relevance of concept in early diagnosis of diseases.

Unite 12: *Mutravaha Srotasa*

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Purishavaha srotodusti* & *Avarana*, laboratory parameters for assessing *Purishavaha srotasa sanga*, *vimargagamana*, *atipravriti* and *siragranthi*.
 - Quantitative assessment of *Mutra*, brief introduction of *Mutravirechaniya*, *Mutravirajniya gana* herbs.
 - Physiology of urine synthesis, concentration of urine, acid-base balance, acidification of urine and role of kidney in acid-base balance, renal failure, micturition, pharmacology of anti-diuretics.
 - Anatomy of urinary bladder, ureter, urethra, blood supply, physiology of urinary bladder, inguinal canal, etc.
- **Pathological aspect:** *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG for the following:
 1. *Mutrakriccha*
 2. *Mutraghata*
 3. *Mutratisara*
 4. *Ashmari*
 - Overview of dysuria, anuria, polyuria and urinary tract stone, renal colic, - etiopathogenesis, diagnostic criteria, classification, investigations, pharmacology of anticholinergic medicines (urinary bladder muscle relaxants) complications and management as per STG.

B. *Srotomula: Basti & Vankshana*

- *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG for the following:
 - *Bastimarma-aghata*
 - *Vankshana-anaha*
 - *Vrishanotkshepa*
- Overview of urinary bladder dysfunction, atonic urinary bladder, cystitis, incontinence of urine, inguinal hernia- etiopathogenesis, diagnostic criteria, classification, investigations, complications and management as per STG.

Unite 14: *Pranavaha Srotasa*

A. *Srotasa*

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Pranaavaha srotodusti* & *Avarana*, laboratory parameters for assessing *Pranavaha srotasa sanga*, *vimargagamana*, *atipravriti* and *siragranthi*.
 - Physiology of respiration, mechanics of respiration, regulation of respiration, lung volumes (expiratory, inspiratory, tidal, residual, PEF, FEV1, etc.), exchange and transport of respiratory gaseous, neuroendocrinology of respiration.
 - Elucidating Pulmonary Function Test (spirometry), reading of chest X ray, CT-thorax and other relevant investigations.

- Chest examination including inspection, palpation, percussion and auscultation. Audio demonstration of various lung sounds with hands-on training.
- **Pathological aspects:**
 - *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG for the following:
 - A. *Hikka*
 - B. *Shwasa*
 - C. *Kasa*
 - D. *Kshatakshina*
 - **Emergency management of:** *Maha- Vyapeta-Gambhira Hikka, Maha- Urdhva-china-Shwasa, Kshataja Kasa, Urah-kshata, Marma-aghataja Shwasa roga.*
 - Overview of respiratory diseases like bronchial asthma, chronic pulmonary obstructive disease (COPD), bronchiectasis, allergic bronchopulmonary aspergillosis (ABPA), pulmonary eosinophilia, interstitial lung diseases (ILD), occupational lung diseases, sarcoidosis, pneumonia, pneumothorax, consolidation, collapse of lung, lung cancers: etiopathogenesis, classifications, clinical features, investigations, differential diagnosis, complications, prognosis and management as per STG.
- **B. Concept of *Pranaprtiyagamana* in Ayurveda and its practical application.**

Unite 15: *Svedavaha Srotasa*

A. *Srotasa*

- Description in Ayurvedic texts including *Bhruhattrai* and *Laghutrai*:
 - Definition, Anatomical site, physiological functions, biophysical and biochemical characterization, factors affecting physiological functioning
 - Diagnostic tools – clinical sign and symptoms of *Svedavaha srotodusti & Avarana*, laboratory parameters for assessing *Svedavaha srotasa sanga, vimarga-gamana, atipravriti* and *siragranthi*.
 - Physiology of sweating, sweat glands, regulation and factors affecting homeostasis.

B. Pathological aspect

- *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG for the following:
 - A. *Atisveda*
 - B. *Asveda*
 - C. *Paridaha*
 - D. *Parushya, Atishlakshna*
- Overview of excessive sweating, anhidrosis- etiopathogenesis, clinical features, investigations, differential diagnosis, complications, prognosis and management as per STG.

Unite 14: *Manovaha & Sanghyavaha Srotasa*

A. *Srotasa*

- Description of *Mana* in Ayurvedic texts: definition, characteristics, biophysical and biochemical properties, physiological functions, location, regulation, *Buddhi*: definition,

classification, synonyms, physiological functions, assessment tools for *Buddhivibhramsa*, *Dhritibhramsa*, *Smritibhramsa*, *Prajyaparadha*, *Asatmyeindriyasamyoga*, *Manshika prakriti*, *Suddha Mana* characteristics, *Suddha Buddhi* characteristic, *Vishama buddhi* characteristic, definition of *Sanghya*, assessment tools, *Graha Dosha*.

- Description of *Medhya Rasayana*, *Satvavajaya chikitsa*, *Sanghyasthapana* medicines in Ayurveda, depiction of mode of action.
- Demonstration of Panchakarma techniques –technique of *samvahana* through *brahya abhyanga* (different types of massage), *shirodhara*, *vamana* and *virechana*.
- **Pathological aspect:**
 - *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication prognosis and management as per STG for the following:
 1. *Apasmara*
 2. *Unmada*
 3. *Anavasthita cittatavam* (Ca. Su. 20:11),
 4. *Visada* (Ca. Su. 20:11)
 5. *Atipralapa* (Ca. Su. 20:11)
 6. *Atatvavinivesha*,
 7. *Mada*, *Murccha*, *Sanyasa*
 8. *Manshika Jwara*
 - **Emergency management of :** *Samyasa*, *Apasmara* (*Vega-avastha*), *Marmagrah*, *Tandra*, *Atipralapa*.
 - Overview of Epilepsy, Seizure disorders, Schizophrenia, Mania, Mood disorders, Depression, Anxiety, Bipolar mood disorders, Somatoform diseases, Amnesia, Sleep disorders (parasomnias, narcolepsy, day time somnolence): etiopathogenesis, classifications, diagnostic tools, various mental test assessment tools, complications, prognosis and management as per STG.

Unit 15: *Vata vyadhi*

- Clinical examination of Nervous system (cranial, sensory & peripheral).
- Examination of coordination and gait.
- Reading of CT, MRI of brain & spinal cord, EEG, CSF analysis, other relevant investigations.
- Physiology of nervous system including brief introduction of neurotransmitters, reflex activity, degeneration and regeneration of nerve fibers, limbic system, pyramidal, extrapyramidal system, reticular formation and nerve conduction mechanics.
- *Nidanapanchaka*, classification, diagnostic criteria, differential diagnosis, investigations, complication, prognosis and management as per STG for the following:
 - ***Kupita Vatajanya Vyadhi:*** *Pakshavadha*, *Ekanavata*, *Sarvangavata*, *Ardita*, *Avbahuka*, *Kati Graha*, *Gridhrasi*, *Vishwachi*, *Khalli*, *Khanja*, *Pangu*, *Padaharsha*, *Padadaha*, *Vatakantaka*, *Kampavata*,
 - **Emergency management of :** *Akshepaka*, *Vyanavritta Prana*, *Pranavritta vyana*, *Udanavritta Prana*, *Samanavritta Vyana*, *Dandaka*, *Apatantraka*, *Apatanka*.
 - Overview of Hemiplegia, Paraplegia, Facial paralysis, Brachial plexus neuropathy, Hirayama disease, diseases related to motor and sensory neuropathy, Tremor, Ataxia, Parkinsonism and Sciatica: etiology, pathogenesis, classification, differential diagnosis, diagnostic tools, complications, prognosis and management as per STG.

- *Avaranjanya Vata Vyadhi*: Sign and symptoms of *dhatugata*, *ashayagata Vata*, *parspara-avarana*, *anyoanya-avarana*, diagnostic tools, complications (if any), prognosis and management as per STG.
- Overview of aphasia, dysphasia, dystonia, diseases of autonomic nerve neuropathy-causes, pathogenesis, clinical manifestations, examination and grading tools, investigations, complication (if any), prognosis and management as per STG.

Unit 16 Topic: Rasayana and vajikarana

Categories: Microteaching session of *Kayachikitsa*

Course contents:

i. Interactive session

- Concept, clinical significance of Rasayana and Vajikarana and its scientific validation
- Role of Vajikarana in sexual dysfunction

ii. Activity session (Group discussion)

- Interactive session topics will distributed to each group by the Resource person.
- Each group will present learning objectives of topics, which will be redefined by the resource person.
- Each group will propose methods of achieve respective learning objectives of topic, which will be designing by the resource person.
- Defining possible research topics related to *Rasayana* and *Vajikarana* in the prevention and management of various conditions

Unit 15 Topic: Diet

Categories: Microteaching session of *Kayachikitsa*

Course contents:

i. Interactive session

Basic

- Importance of diet in health and disease.
- Concept of *Viruddha Ahara* (incompatibility of the *Ahara*).
- Understanding of the *Anupana*, *Pathya* - *Apathya* in diseased condition and its relevance in clinical practice.
- Nutritive value of *Ahara* (diet)
- Designing of diet chart for various diseases and their rationale.

ii. Activity session (Group discussion)

- Prescription writing (*Anupana*, *Pathya* & *Apathya* for a particular disease).
- Discussion on Therapeutic diet(AHA diet,dash diet, mediterranean diet,Elemental diet,Gluten-free diet,Ketogenic diet, etc) preventive diet,Fad diet,Detox diet etc
- Practical application of *Ashtavidh Aharavidhivisheshayatana* in daily life.
- Participants will be prepare balanced diet chart for particular disease condition or healthy individuals as preventive aspect.

Proposing the method for enrolment, participation and evaluation of the CME programme.

A. Enrolment/ Selection:

Statement of Purpose (SOP) for attending CME:

It will be a short brief summary of the participant's background including Education, Institute working, special interest in the subject. Initiatives adopted by the teacher in teaching subjects. Why participants want to attend CME. Considering the CME topic list; which areas he wants to learn or refresh. How he will utilize the knowledge gained during this program.

After selection: Providing schedule, Study material and introducing with participants expectations from the participants, Activities they need to complete and probable submissions.

C. During the session:

Pre-test: (we recurrently conducting for the CME): (It will be based on Topics of CME, with questions of Qualitative and Quantitative measures, Questions of all types including Recall to application)

Formation of Group: Before starting of the CME, the organizer will divide the participants into suitable groups (minimum 5 participants in each group). Each day the group will decide the group leader/coordinator. Interactive session topics will distributed to each group by resource persons. The average duration of most group discussions is 15 minutes (not including the prep time). Group leader/coordinator will share and present the view of the group during activity session of that topic.

New sessions of CME are well divided and are imparting essential knowledge and skills considering the participants. Organizers can plan interactions and ensure at least one individual submission and one group presentation/day.

Organizers should carefully plan activities. The activities should have fixed objectives, resource material, planned discussions, and methods of assessment like presentation or submission as result.

An effective group discussion generally has a number of elements:

- All members of the group have a chance to speak, expressing their own ideas and feelings freely, and to pursue and finish out their thoughts
- Even in disagreement, there's an understanding that the group is working together to resolve a dispute, solve a problem, create a plan, make a decision, find principles all can agree on, or come to a conclusion from which it can move on to further discussion

D. Evaluation can be planned in four stages.

1. Reaction of participants: - (Feedback on contents - Currently we are taking daily feedback and one feedback at the end.) A survey preferably online can be planned and submitted by participants. Questions will include reactions related to the CME of the participant. Qualitative and Quantitative questions can be planned based on sessions

2. Learning: - Post-test: Similar to Pre-test, quiz, or presentation from the participant. This will be an opportunity to know about the conducted program as well as the knowledge and skills gained by participants.

3. Behavior:-

A report of the change in Knowledge, skills, Practice to teaching will be reported by the participants within three months after completion of CME.

4. Benefits –

Participants will share a detailed report related to the benefits due to CME related to Knowledge, Skills and behavior/practice. What is implemented in the teaching? What was reaction of Students,

Peers and Students? Remark of the participant implementing change. Any support difficulties noted. What else can be added in CME.

Total Duration of Hours

36 Hours + 01 Hour

i.	Microteaching session	12 Hours
ii.	Problem based learning	1 ½ Hours
iii.	Practical	13 ½ Hours
iv.	Research Methodology & Teaching Technology	9 Hours
v.	Pre and post training assessment	01 Hour

Note: Each session is 1 ½ Hour (45 min. Interactive session+ 45 Min. Activity session)