Supplementary file 2: Case Scenarios

1. A case of Hemopoietic Disorder [1]

Nandini is a 33-year-old woman who lives in gangtok. One day, in the month of April, she presented to the outpatient department with the chief complaints of generalized weakness, giddiness, exertional dyspnoea, and decreased appetite for the past two months along with mild ankle edema for the last 2 weeks. The ankle edema is bilateral, pitting in character, and not associated with pain.

Past History: There was no history of fever, chest pain, vomiting, diarrhea, jaundice, bleeding episodes, etc. and She was non diabetic & non hypertensive.

Family history: Not significant

Personal History: 1. No Addiction, 2. Appetite- decreased, 3. Diet - mixed, 4. Thirst- normal, 5. Bowel movement: Constipated, 6. Micturition- Regular, 7. Sleep- Normal, but Feels drowsy during daytime, 8. Exercise- Develops dyspnoea after mild exercise

Treatment History: She took multivitamin syrup without a physician's prescription for the last 20 days.

General Examination & Systemic examination:
Examination of the patient revealed a pulse rate of 92/min, blood pressure of 114/70 mm Hg (supine), and an axillary temperature of 98°F. She had moderate conjunctival pallor and no icterus. There was no lymphadenopathy, clubbing, skin rashes, or pigmentation. Cardiovascular examination revealed a normal S1 and S2 with no murmur. Upon examining the chest, vesicular breath-sound was heard with no added sound, and the findings of nervous system examination were within normal limits. Gastrointestinal Tract (GIT) examination showed aphthous ulcers in the oral mucosa, and abdominal examination was within normal limits. The patient's routine liver and renal function tests were within normal limits. Her chest X-ray and ultrasound-whole abdomen revealed no significant abnormalities except for mild hepatomegaly. Her upper GIT endoscopy showed antral gastritis. Peripheral smear showed that microcytic hypochromic cells are predominant and normocytic cells are seen with a good number of macrocytes with hemochromatosis.

Ayurveda *Pariksha* (Examination):
Prakriti - *Vata-Kaphaja*
Agnibala - *Mandagni*
Sharirbala - *Avara* (Mild *Vyayama* leads to dyspnoea)
Satva* is *Avara (~poor)
***Nadi* (pulse)** 92/min
***Mala* (stool)** *Asamyak* (Unsatisfactory bowel evacuation, once in 2–3 days)
***Mutra* (urine)** *Samyak* (regular)
***Jihva* (tongue)** *Saama* (coated)

***Shabda* (speech)** *Spashta* (normal hearing)

***Sparsha* (skin)** *Anushnasheeta* (normal on touch)

Druk (eyes) *Prakruta* (Normal vision)

Akruti (posture) *saamanya*

Investigation Report:

Parameter	Units	Results	Normal Value
Hb	g/dl	7.8	12.0 - 15.8
RBC Count	(×10^6 /uL)	5.4	4.3 - 5.6
WBC Count	(×10^3 /uL)	06	5.9
Neutrophils	(%)	66	40 - 70
Lymphocytes	(%)	34	20 - 50
Monocytes	(%)	04	4 - 8
Eosinophils	(%)	02	0 - 6
Basophils	(%)	0	0 - 2
ESR	(mm/h)	70	0 - 20
HCT	(%)	28	32 - 44
MCV	(fL)	70	79 - 83
MCH	(pg)	20	26 - 31
MCHC	(g/dL)	31	32.3 - 35.9
RDW	(%)	17	< 14.5
Reticulocyte Count	(%)	1.9	0.8 - 2.0
Platelet Count	(×10^3 /µL)	220	150 - 415
Serum Ferritin	(ng/ml)	25	10 - 150
TIBC	(µg/dL)	530	240 - 450
Serum Vitamin B12	(pg/mL)	115	279 - 996
Serum folic acid	(ng/mL)	5	2.3 - 17

The eight questions asked under this case were as follows:

1. According to Ayurveda what would be your clinical diagnosis in this case? (If you prefer only modern diagnosis, please write NA)
2. As per modern clinical medicine, what would be your diagnosis in this case? (If you prefer only Ayurveda diagnosis, please write NA)
3. What would be your treatment plan? (Please write Shodhana/ Shamana/ Specific formulations etc. as you practically do in your day-to-day practice)
4. Did you consider Ayurveda physiology/pathology as the basis while finalizing the treatment plan?
5. If yes, please explain the physiological/pathological logic that forms the basis of your intervention. (For example, "Pitta Dosha is involved and hence recommended Virechana" OR "Iron deficiency is suspected and hence recommended Navayasa Lauha" etc)
6. If no, please tell us what else did you consider while finalizing the treatment plan?
7. Do you think in the given case, details are enough to finalize the diagnosis and prescribe the medicine
8. If not, then please write down what more details you need regarding the case.

2. A case of Musculoskeletal Disorder [2]

Suresh, a 43-year-old auto driver, residing in Wardha, Maharashtra, was apparently healthy before seven months. Then he started complaining of pain in the lower back region which gradually started radiating to the posterior aspect of the thigh, knee, calf region, and foot of the left leg over the past six months. He also had complaints of stiffness in the lower back region and left leg, tingling sensations in left leg, heaviness in both legs, and difficulty while walking and bending forward for five months. Simultaneously, he had pain in the cervical region for three months. Along with above complaints, he had associated symptoms of loss of appetite, gaseous distension of abdomen, constipation, sour belching, and fainting intermittently. He had also taken modern medicine for low backache for one month, but didn't get satisfactory relief and there was an increase in the intensity of symptoms since last week.

Past history: Continuous jerk to low back region while driving auto for long distance.
No history of trauma or fall.
No history of major medical illness (e.g., HTN/DM/ bronchial asthma/dengue).
No surgical intervention.

Family History: Not significant

Personal History: Mixed diet, craving for pungent food items, Sleep: disturbed sleep due to pain, Addiction: alcohol (occasionally once in a month) and tobacco (3-4 times/day)

Medication History: Patient had taken medicine (painkillers, antacids and multivitamins) prescribed by a registered medical practitioner.

Examinations specific to diagnosis Locomotor system examination:
Inspection: Limping gait Discomfort in walking and sitting for long duration, no localized swelling, no varicosities, reflexes are intact.

Palpation: Tenderness at L4–L5 region, Muscle tone–good Muscle power, Range of movement of Lumbar spine (ROM) Forward flexion of lumbar spine is limited to 20 cm above ground Right lateral flexion is limited to 35° with pain, left lateral flexion is limited to 30° with pain, Extension is limited to 10° with pain.

Straight leg Raise test (SLR): Right leg: positive at 40°, Left leg: positive at 30°.

Bragard's test: positive at left leg.

Magnetic resonance imaging (MRI): Lumbosacral spine screening of the whole spine reveals S/o osteoporotic spine with diffuse circumference. disc bulge at L4-L5 disc level and early spondylodegenerative changes in L4-L5 spine.

Ashtavidha *Pariksha*:

Nadi (pulse) 74/min

***Mala* (stool)** *Asamyak* (Unsatisfactory bowel evacuation, once per 2–3 days)

***Mutra* (urine)** *Samyak*

***Jihva* (tongue)** *Saam* (coated)

***Shabda* (speech)** *Spashta*

***Sparsha* (skin)** *Anushanasheeta*

***Druka* (eyes)** *Prakruta*

***Akruti* (posture)** *Madhyama*

The eight questions asked under this case were as follows:

1. According to Ayurveda what would be your clinical diagnosis in this case? (If you prefer only modern diagnosis, please write NA)
2. As per modern clinical medicine, what would be your diagnosis in this case? (If you prefer only Ayurveda diagnosis, please write NA)
3. What would be your treatment plan? (Please write Shodhana/ Shamana/ Specific formulations etc. as you practically do in your day-to-day practice)
4. Did you consider Ayurveda physiology/pathology as the basis while finalizing the treatment plan?
5. If yes, please explain the physiological/pathological logic that forms the basis of your intervention. (For example, lubrication function of Shleshaka Kapha is affected in kati region. so, Kati Basti is used in which both the properties of snehana & swedana are incorporated OR Parijat ghana vati possesses Anti-inflammatory and Analgesic action due to presence of Tannins, Glycosides, Methyl Salicylate and Alkaloids etc.)
6. If no, please tell us what else did you consider while finalizing the treatment plan?
7. Do you think in the given case, details are enough to finalize the diagnosis and prescribe the medicine
8. If not, then please write down what more details you need regarding the case.

3. A case of Infectious Disease [3]

Jaya Patil, 37-year-old female, employee in MNC is from New Delhi. During the second wave of ongoing Coronavirus pandemic, on July 27,2020 when she woke up, she had fatigue, fever 100°F, irritation in throat, and myalgia. She felt these symptoms three days after her colleague found COVID-19 positive. She called you (suppose you are her family physician), & you advised her for the COVD-19 RT- PCR swab test. On the same day at evening her COVID RT-PCR result was positive. Patient isolated herself at home as per the instruction from the Government authorized COVID Center.

Past History: She had Ankle joint swelling (2015), Urticaria (2016), Hyperacidity (2017), Weight gain (2018), Hypertension (2019). The patient was treated with Ayurvedic medicines for the above-mentioned complaints successfully. Her hypertension is in control with the Ayurvedic treatment regime.

Family History: The patient's father is a known case of type 2 diabetes along with Hypertension and on prescribed medicines by modern medicine practitioners. Her mother's diabetes and gout are under control. Her brother and elder sister are asthmatic and are on Ayurvedic prescribed medicines.

Personal History: medium statured (Weight: 55 kg, Height: 150 cm), Diet- mixed, Exercise-not regular.

General Examination:
Her Blood pressure was 134/ 90 mmHg,
pulse rate 98/min, SpO2 97. All hematological parameters of CBC are within normal limits except white blood cells (neutrophils slightly raised and lymphocytes slightly decreased). LDH is 260 U/L , D-dimer 420 ng/ml, CRP- 5.4 mg/l, Sr. Ferritin- 78 ng/ml, HRCT- Minimal fibrotic scarring in bilateral lung bases.

Ayurveda examination:
Fatigue (*Vata* domination),
Fever (*Kapha Vata* dominated Jwara),
irritation in throat (*Kapha* vitiation),
myalgia (*Kapha* and *Vata* vitiation),
hypertension in her case (*Vata Pitta* vitiation) was analyzed as *Kapha Vata* vitiation.
Her body constitution is *Vata Pitta Prakriti*,
Medium *sattva* (Psychic state),
Agnimandya (Low digestive power),
***Nadi* (Pulse):** *Pitta Pradhan*, Vatanubadhi
***Tongue*:** *Sama* (coated),
***Koshtha*:** Medium (nature of digestive tract),
***Mala* (Faeces):** *Sama Mala* (Foul smelling, sticky stools),
***Mutra* (Urine):** pale yellow, 6 to 7 times per day, no burning sensation.

The eight questions asked under this case were as follows:

1. According to Ayurveda what would be your clinical diagnosis in this case? (If you prefer only modern diagnosis, please write NA)
2. As per modern clinical medicine, what would be your diagnosis in this case? (If you prefer only Ayurveda diagnosis, please write NA)
3. What would be your treatment plan? (Please write Shodhana/ Shamana/ Specific formulations etc. as you practically do in your day-to-day practice)
4. Did you consider Ayurveda physiology/pathology as the basis while finalizing the treatment plan?
5. If yes, please explain the physiological/pathological logic that forms the basis of your intervention. (For example, Rasa dhatu being the major dhatu that is affected leading to Sama avastha, Ama Pachana and Doshapachana is considered, OR, tribhuvan kirti rasa & swasakuthar ras for symptomatic relief.)
6. If no, please tell us what else did you consider while finalizing the treatment plan?
7. Do you think in the given case, details are enough to finalize the diagnosis and prescribe the medicine
8. If not, then please write down what more details you need regarding the case.

4. A case of Skin Disease [4,5]

Simran Kaur, 21-year-old student, who lived in college hostel in Chandigarh city & from last 4th month she suffered from an intensely itchy, vesicle rashes affected over palms of both hands on & off manner. Onset is acute and gradual. She had taken treatment from a modern science dermatologist but found a temporary effect for the first 2 weeks & again above symptoms raised.

Past history: No h/o DM/HTN/hypothyroidism or any other major medical or surgical history.

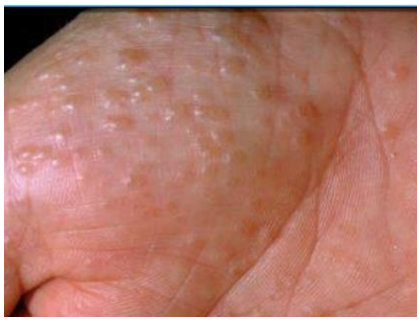
Family history: No history of the same illness in any of the family members.

Psychological evaluation: She was in stress due to being unable to do the work and cosmetic consideration.

Treatment history: Topical and systemic corticosteroids along with antihistamines for the same problem.

Personal history: Her weight is 64 kg & height 170cm. She had Agni mandya (low digestive fire), Ajirna (indigestion), Chardi (nausea sensation in morning), *Mala* vibhanda (constipation) and a regular sleep pattern. She has a habit of drinking tea, Virudh aahar (milk shakes, fish) and fast food as she lives in a college hostel.

Local examination: Deep-seated "tapioca-like" vesicles and, less commonly bullae primarily at all over the palms and lateral surfaces of the fingers with few rupturing of vesicles. (Figure given below).



On Inspection, symptoms like *raga* (redness), *saphota* (vesicles), *pidika* (small pustules), *kandu* (itching), *paka* (suppuration), *kleda* (fluid filled secretion), *anga patana* (cracking of skin), *utsedha* (swelling/inflammation), *ati swedana* (hyper sweating), *sheeta* (coldness), *snigdha* (sliminess) were present over palms of both hands.

The eight questions asked under this case were as follows:

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2. As per modern clinical medicine, what would be your diagnosis in this case? (If you prefer only Ayurveda diagnosis, please write NA)
3. What would be your treatment plan? (Please write Shodhana/ Shamana/ Specific formulations etc. as you practically do in your day-to-day practice)
4. Did you consider Ayurveda physiology/pathology as the basis while finalizing the treatment plan?

5. If yes, please explain the physiological/pathological logic that forms the basis of your intervention. (For example, Aragwadhadi Kashaya as Kapha pitta hara & Neutralizes all kind of visha (poison). OR Visha Hara and Rasayan Chikitsa in automimmune skin condition)
6. If no, please tell us what else did you consider while finalizing the treatment plan?
7. Do you think in the given case, details are enough to finalize the diagnosis and prescribe the medicine
8. If not, then please write down what more details you need regarding the case.

5. A case of reproductive system disorder [6]

46-year-old Rajeev, who is a shopkeeper in Jaipur, attended the outpatient department, presenting with the complaints of having no children for 7 years of married life with his second wife who is 35 years old. However, he has a son from his divorced first wife who is healthy. He did not report any problems with erections or ejaculation and he was not taking any medication for any systemic disorders like hypertension, diabetes mellitus, etc. The initial history of the female partner suggested regular ovulatory cycles and revealed no problems with her endocrine profile or the patency of her fallopian tubes. There was no history in the patient suggestive of sexually transmitted diseases, mumps, tuberculosis, filariasis, epididymo-orchitis, herniorrhaphy/herniotomy, chronic persistent genital infection, paraparesis, and exposure to gonadotoxins, for example, cigarette smoke, alcohol, alkylating agent, gossypol and pesticides.

Clinical examination revealed no abnormality (physical and systemic). During **scrotal examination**, the temperature was normal and no scar or swelling was noticed. The position and size of the testes were normal in nature. The epididymis is palpable with swelling, spermatic cord thickened and prostate gland normal during the examination. **Testicular sperm extraction (TESE)/Testicular biopsy** indicates seminal ducts are blocked. **FSH level is 13mlU/mL**.

A. PHYSICAL/LOCAL EXAMINATION:

S.No.	**Physical/Local Examination of the patient**	**On Examination Observation**	
1.	Pubic hair distribution	Normal	
2.	Examination of the penis – i) Texture of skin ii) Body/shaft iii) Prepuce iv) Glans v) External urethral meatus	 Normal Normal Normal Normal Normal	
3.	**Examination of scrotum**	**Right**	**Left**
a)	Pigmentation	Dark brown	Dark brown
b)	Temperature	Normal	Normal
c)	Rague	Present	Present
d)	Scars	No	No
e)	Swelling	No	No
f)	Position	Normal	Normal
g)	Size	Normal	Normal
h)	Surface	Smooth	Smooth
i)	Consistency	Firm	Firm
j)	Border	Regular	Regular

B. SEMEN ANALYSIS:

S.No.	Semen analysis	value	Reference range
1.	Volume (ml)	2	1.5 – 5
2.	Color	Grayish white	
3.	Reaction	Alkaline	
4.	Liquefaction	Liquified after 30 min.	30 - 60
5.	Sperm count (millions)	2	>= 15
6.	**Motility (%)**	**0**	**>40(grade A+B)**
	(Grade A) actively progressive (%)	0	>32
	(Grade B) Slowly Progressive (%)	0	
	Non progressive (%)	0	
	Non motile (%)	100	

Semen Morphology:

Morphology	
Normal (%)	96
Abnormal (%)	04
Agglutination (%)	Absent
Head-to-head	Absent
Head to tail	Absent
Tail to tail	Absent
Pus cells	4-6/hpf
RBCs	Nil
Epithelial cells	2-4/hpf

INVESTIGATION:

Investigation	**Impression**
Examination of epididymis	palpable with swelling
Examination of vas deferens	not palpable
Examination of spermatic cord	thickened
Examination of prostate (P/R)	normal
USG abdomen & pelvis	prostate is normal in contour (Volume 13 cc) & echo pattern Mild right varicocele
USG scrotal	small left epididymal cyst (0.25 cm) minimal left hydrocele

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3. What would be your treatment plan? (Please write Shodhana/ Shamana/ Specific formulations etc. as you practically do in your day-to-day practice)
4. Did you consider Ayurveda physiology/pathology as the basis while finalizing the treatment plan?
5. If yes, please explain the physiological/pathological logic that forms the basis of your intervention. (For example, Vataja Dushti leads to defects in quantity due to Rukshata so, Koshta-Shuddhi with Eranda Taila is to be given for detoxification and to pacify Vata. OR Sarivadi Vati is a drug of choice in Klaibya (male infertility) and urogenital infections)
6. If no, please tell us what else did you consider while finalizing the treatment plan?
7. Do you think in the given case, details are enough to finalize the diagnosis and prescribe the medicine
8. If not, then please write down what more details you need regarding the case.

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