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Ayurvedic Approach to Rheumatologic Disorders

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Abstract: In Ayurvedic texts rheumatologic diseases are described under "Sandhigat Roga", the diseases of joints. Although many of the diseases under this category resemble rheumatologic diseases classified under western medicine, the approach to differential diagnosis may be different. For greater understanding of Ayurvedic concept of rheumatologic diseases only few diseases are discussed here. The case presentation of Amavafa provides greater understanding of how Ayurvedic differential diagnosis is made in context of its western counterpart, the rheumatoid arthritis.

Rheumatology in western medical terms involves diseases affecting joints, tendons, muscles, ligaments and associated structures characterized by pain, stiffness, inflammation around the joints with varying degrees of disability. Most common conditions under this category are osteoarthritis, rheumatoid arthritis, ankylosing spondylitis etc. (1).

Rheumatology is described in detail in ancient Ayurvedic texts under 'Sandhigat Roga', the diseases of joints, and involves Asthi (bones) and Majja (connective) dhatus (tissues). Symptoms may involve pain, stiffness of joint, swelling and fever as a result of immune dysfunction and dhatu kshyaya (tissue damage) (2, 3).

Constitution (Sharira): According to Ayurveda every man is a miniature of nature and a product of universal consciousness. The attributes of the universal consciousness such as Satva the clarity, Rajas the movement and Tamas the inertia are present in all living and non living things.

At an atomic level all living and nonliving things are made of five gross elements (Panchamahabhutam): Akash (Ether), Vayu/anil (Air), Agni (Fire), Jala/Apa (Water), Prithavi (Earth). These elements are present in all living beings in varying ratios as Vata, Pitta and Kapha known as Tridosha and constitute one’s physical and biological makeup. The genetic composition inherited from one’s parents at the time of conception is represented by the biological constitution of Vata, Pitta and Kapha (VPK) or Tridosha and is known as Prakirti. Tridosha plays an important role in maintaining health and influences patho-physiology and psychopathology. Constant exposure to outer environment, seasons, diet and life style influences the bodily ratio of doshas (Prakirti) and may alter one’s prakriti. This altered ratio of VPK is known as Vikriti (2-4).

Although VPK are present throughout the body, their presence is more striking at specific sites or organs. The colon is the main seat of vata, the small intestine is more dominant in pitta and kapha is centered in the stomach. These sites are more susceptible to vitiation of respective doshas. All vata disorders may start in the colon, pitta in the intestine and kapha in the stomach.

Further aggravation (prakopa) of doshas will spread the doshas(s) to the weak sites and accumulate (sthansanchaya) to manifest (vyakti) disease(s) and may bring about disease oriented complications (bheda). Movement of dosha or irregular Prana (vata) is governed by agni(metabolic fire) and production of ama (toxin) (2-6).

Agni and Ama: Agni, the gastric fire or ones digestive capacity plays an important role in the above described pathogenesis. Improper Agni contributes to ill health. “Rogo sarvyapi mandagni” (root cause of all diseases is “manda Agni” low Agni or impaired Agni). Wrong diet, wrong life style and repressed emotions all lead to an imbalance of Agni. Cold, frozen and incompatible food contributes to improper digestion, absorption and assimilation and leads to the formation of ama (toxin) (2,3).

Ama not only clogs the digestive flow but because of its obstructive nature, clogs bodily channels (srotas) and disrupts physiology including the formation and excretion of waste and it adversely influences the formation and functions of the tissues (dhatus). At a cellular level ama may disrupt the cellular movement, change cell membrane composition (7,8), inhibit shedding of membrane vesicles (7-13), disrupt cellular communication and membrane functions, alter antigen antibody interaction and leads to improper antigen presentation causing derangement of the immune system resulting in autoimmunity and/or autoimmune like symptoms (13-15).
According to Ayurveda Ama contributes to

Srotorodha bala bhramsha gauravanila mudatah
Alasyapakti nishthiva malasangaruchi klamah
Ashtang Hridaya 13,23

Srotorodha (obstruction in srotasas- body channels), occlusions, embolisms, and venous engorgements may occur due to the clogging by Ama. Accumulation of fluid may also result from such obstructions (15).

balabhramsha (decreased physical and immunological strength), low energy, fatigue, chronic fatigue syndrome and weakness may result from this condition.

gaurav (feeling of heaviness), sense of heaviness and restriction of movements may occur.

anila mudhata (decreased activity of vata). When vata channels are blocked the vata moves into other available channels or any open and available empty space, and creates pressure where it has stagnated creating breathlessness, tingling and numbness, mental confusion and restlessness.

alasya (lassitude), loss of interest, laziness, and inactiveness occurs due to improper physiologic functions.

apaki (indigestion), nishthiva (repeated spitting-due to increased salivation), these may create flatulence, congestion, body ache due to the accumulation of Ama and enhance further build up of Ama.

malasanga (inadequate removal of wastes from the body), may result in uremia, constipation, and mental illusions.

aruchi (anorexia) and klam (exhaustion without any work). Lack of taste and loss of appetite may result into exhaustion and fatigue. Ama can contribute to various doshic disturbances and many of these symptoms are present in rheumatologic diseases.

Dhatus /Tissues: Formation of bodily tissues, the dhatus, and their qualities are also influenced by Agni and Ama. Ancient Ayurvedic texts describe seven types of tissues
Ras (plasma, serum and Lymphatics)
Rakta (red Blood Cells)
Mamsa (Muscle)
Meda (Adipose/fat tissues)
Asthi (bone or cartilage)
Majja (marrow, Nerve and connective tissues)
Shukra (Reproductive)

Dhatus carry important functions and play a vital role in the maintainence of proper physiology and join with ligaments cartilage and tendons to maintain proper functions. Building of autoantibodies or toxins may result in improper dhatu formation (2-4). The ama may accumulate in joints causing kapha dosha and result in fluid accumulation and inflammation (2-4,15).

In Ayurveda joints, 'Sandhi', not only denotes joints of bone tissue (Asthi) but also indicates joints of muscles, vessels, tendons cartilage etc. Sushrut, the Ayurvedic physician around 700 BC, described 210 joints in the body in the following order:

Upper limbs – 34  Trunk – 59,  Neck & skull – 83,
Lower limbs – 34  Total – 210 joints.

Components of joint include Tissues (bone tissue), cartilage, tendons and muscles. Joints are further classified as
a) Cheshtavanta – Chala – Mobile joints –
b) Sthira – Achala – Immobile joints.

# ELEMENTS
Sandhi (Joints)

Cheshtavanta (Mobile)

Sthira (Immobile)

Alpacheshta Joints.
Limited movements
of Jts.: spine &
intra tarsal jts etc.

Bahucheshta jts.
with varied range of
movements: shoulder jt
hip jt. etc

Constituents of Sandhi (joints) include
Dhatu (tissues)—
- Asthi (Bone), Tarunasthi(Cartilage), Mamsa (muscles, tendons)
- Rakta(blood)

Upadhatu (tissue-components)
- Kandara, sira (vessels), Snayu (ligaments) and Twacha (skin)
- Shleshmadhara Kala(synovial membrane)

Kala (membrenous)
- Vata (Vyan), Kapha (shleshak Kapha)

Dosha (VIPIK)
- Vata (Vyana), Kapha (shleshak Kapha)

Under normal conditions the shleshmadhara kala along with the kapha dosha (shleshak kapha) acts as a nutrient and avoids joint friction. Vyan vayu is responsible for the movements of the joints. Mamsa dhatu gives strength to the joints. Vitiation of any of the constituents gives rise to abnormalities of the joints such as Kaphakshaya (diminished Kapha either in quantity and/or quality) and leads to sandhishaitilyata (tenderness of joints), vitiation of Majja vaha srotas (bone marrow, nervous and connective tissue channels) leads to pain in the joints of phalanx similarly diminished medoagni (altered adipose tissue metabolism) leads to a feeling of Sandhisphutan (popping of joints or crackling of joints) (15-19).

Diseases of joints:-
Vata dosha is dry, light, oily, cold, mobile, rough, and subtle and is aggravated by diet, working conditions, lifestyle and emotions. According to the Ayurvedic principles of "like attracts like", dry food and dry weather will increase vata by its dry qualities similarly damp, cold weather will aggravate vata by its cold and mobile qualities. Increased vata dosha will accumulate in the colon as it is the main seat of Vata dosha.

According to Ayurveda vata dosha and Asthi (bones and cartilages) are intimately associated and is nourished by the minerals absorbed by the mucus membrane of the GI tract.

There are two main internal causes of vata aggravation.

Dhatu kshyaya (depletion and degeneration of tissues) and is common in old age (vata phase of the life) giving rise to degenerative arthritis.

Margavirodha (Clogging of channels), the clogging of the channel may be initiated by wrong diet, obesity, diabetes, Psorisis or increased uric acid build up.

Arthritis is further classified as
Sandhigat vat (osteo-arthritis)
Asthigat vat (degerative arthritis)
**Sandhigata Vata (osteoarthritis):** - It is one of the 80 vata vyadhies or vata diseases. All vata doshas are due to the aggravation of vata dosha. Increased vata dosha accumulates in the colon and initiate vata vyadhi (disease).

**Etiology of Vatavyadhis in general:** -
Dry (non-fatty), cold, light food in insufficient quantities, excessive sexual intercourse, keeping awake at nights for long periods, administration of inappropriate therapeutic measures (Panchakarma & other), excessive loss of doshas (VPK) dhatu (tissue) & malas (excretion); excessive starvation, excessive swimming, long journeys on foot, excessive physical exercise, worry, grief, emaciation due to diseases, suppression of natural urges, ama, trauma, excessive riding on elephants, camels, horses, fast moving vehicles, physical and mental stress etc aggravate vata and give rise to various generalized diseases or to those localized to a part of a body.

When vitiated vata afflicts the joints it leads to a painful swelling and ultimately destruction of the joints. One feels that the joints are filled with vayu (air) and even crackling sounds in the joints are heard. If the condition is due to the obstruction in the channels with ama, fever, rubar, increased temperature will be present in the joints.

**Asthimajgata Vata:** - This is also one of the 80 Vata vyadhis (vata conditions). When vitiated vayu afflicts the bone and bone marrow (Majja dhatu)and splitting pain may occur in the bones, the small joints of hands and the feet, severe pain in the big joints, wasting of muscles and depletion of strength, insomnia and persistent pain anywhere in the body are observed.

**Vata Kantaka:** - Walking on uneven ground or strenuous exercise lead to vitiation of vata in the region of the ankle joint to produce pain in the feet and this condition is called as vatakantaka. This condition is usually seen in the case with calcaneus spur.

**Vat Rakta (Gout):** Compliance to the harmful habits causes blood impurities in the body. At the same time unhealthy dietary habits aggravate vat. Impure blood, contaminated by ama, obstructs the normal path of vayu. Due to the obstruction vayu intensifies and contaminates blood. Since both vayu and rakta (blood) are aggravated in this disease, it is known as "vat rakta" vyadhi.

**Etiology**
Excessive intake of salty, sour, pungent, alkaline, fatty food, taking meals while one is having indigestion, curried or fried preparations of meat of aquatic or swampy animals, dried meat & cereal preparations, radish, leafy vegetables, yogurt, wine, eating incompatible food, eating before the previous meal has been digested, eating when angry, day sleep & keeping awake at night and in intake of heart-burn producing diet cause improper digestion of food leading to vitiation of blood which then gravitates & accumulates in the feet. Blood gets saturated with the deranged vayu on account of the predominance of vatarakta (15-29).

Profuse perspiration, blackish discoloration, loss of sense of touch, slackness of joints, indolence & malaise (local), appearance of eruptions on the knees, legs, thighs, serve pricking pain, twitching, tearing pain heaviness numbness, itching and splitting pain in the joints with periodic exacerbation & remission are the prodromal signs of vata vyadhi (vata diseases)(5)

Starting with initial symptoms of itching, intermittent pain as well as pricking, tingling sensations, coppery-red discolorations (effect of rakta dosha where vata dosha is predominant), burning and hot sensation in the joints, the disease advances to give rise to symptoms of swelling spreading to the joints and then moving all over the body.

The disease spreads all over the body like a violent rat poison beginning from the root of the feet (metatarso – phalangeal joint region) or sometimes from the hands. This condition can be correlated with 'Gout' described in modern science (15-16).

**Aamvata (Rheumatoid Arthritis):**

**Etiology:** When a person of sedentary habits with low digestion indulges in incompatible diet, or does physical exercise after taking fatty food, the ama is formed & propelled by deranged vayu & reaches to the site of kapha. The amrasa, (Ras dhatu contaminated with ama) on being completely processed & very much vitiated by vata, pitta and kapha is circulated all over the body through the vessels. It then takes on multiple colors, becomes
excessively mucoid & gets accumulated in the small channels. It renders the patient weak in no time & produces a feeling of heaviness in the pericardial region. Thus 'ama' is the cause of many distressing diseases. When the aggravated ama simultaneously afflicts the pelvic & shoulder girdles & the other joints making the body stiff, the condition is known as amavata (21).

Body ache, anorexia, thirst, malaise, a feeling of heaviness, fever, indigestion & inflammation of the body parts e.g. myositis, fibrositis, arthritis etc are the general signs & symptoms of amavata.

**Aamvata (Rheumatoid Arthritis):**

Exacerbation of amavata- when amavata is exacerbated it becomes the most distressing of all diseases. It produces painful swellings in the joints of hands & feet, cervical region, knees & thighs. The affected part is excessively painful. It gives rise to hypo functioning of the digestive system – excessive salivation, anorexia, heaviness, polyuria, burning sensation, hardness in the abdomen, colicky pain, reversal of normal sleeping habits, thirst, vomiting, vertigo, fainting, pericardial discomfort, constipation, stiffness, gurgling intestinal sounds etc are some of the complications. Cardiac involvement and strictures in joints are some of the severe complications (21-23).

The ama produced in the disease gets lodged in the joints. Here with the joints of bones, the joints of muscles, tendons are also affected & in the cardiac involvement the joints of the heart muscles and valves are considered in the pathogenesis. This condition can be compared with rheumatoid arthritis according to modern science.

Ama can also manifest into painful swellings over bones, muscle tendons of hand, feet and elbow causing joint pain and fever

In vata–pittaja Jwara (fever) along with fever, intense thirst, burning, loss of sleep, Parvabheda or pain in the phalangeal joints is observed.

In vata Kaphaja jwara along with excessive sleep, heaviness, cold, cough, & temp pain the phalangeal joints is observed.

In Sannipatik Jwara (when all three doshas are involved) pain in all the joints is seen along with jwara & other symptoms of all the doshas.

In antarvegi jawara (high grade fever), thirst, breathlessness, are the common symptoms along with pain in the joints & bones.

**Treatment for vata Vyadhi:** Most of the diseases with joint involvement are vata vyadhy. Therefore it is necessary to understand the broad range of treatments of vatav yadhies.

If there is a simple provocation of vata without any kind of occlusion, it should be treated with oral administration of unctuous preparations such as ghee (clarified butter), fat, oil and marrow. When overstrained by the snehan or oleation therapy, a patient should rest for a while and should again be oleated with milk or thin gruels of meat of domestic, wet land & aquatic animals, mixed with unctuous articles, milk pudding mixed with salt & acid.

Swedan (Sudation therapy) should be applied as per requirement using various steaming procedures. The oleation and Swedan therapy replenishes the body elements, increases the vitality & life span, relieves pricking pain, aches, stiffness, spastically, swelling and similar other conditions.

Basti or medicated enema is again the specific treatment for vata vyadhi as it acts on the "pakvashaya"/colon, which is the origin of vata.

All diseases due to vata provocation are always to be continually treated with sweet, acid, salty & unctuous article of diet. When the osseous tissues or bone marrow is affected, it should be treated with internal and external oleation therapy.

A Case study of AMVAT is attached for a better understanding of the Ayurvedic approach to Rheumatoid Arthritis.
References: Continued From page 16


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A CASE STUDY OF AMAVATA [RHEUMATOID ARTHRITIS]

Patient Name : ABC
Occupation: House-wife
Season: Rainy (Varsha)
Desh: Sadharan (Normal Climate)

Age: 38 yrs
Education: Illiterate
Religion: Muslim
Date of Admission: 4.07.07

Present Complaints:

i. Pain of migratory nature (Shoolai in both shoulders (Amsa), Elbow (Kooper), Wrist (Manibhandh) Knee (Janu), Ankle (Gulf), Pelvic (Vankshen), Phalangeal (Hasta - Pada Parva) Joints.
ii. Joint effusion (Shotha) of Knee, Wrist, Ankle joints.
iii. Joint stiffness (Graha)
iv. Pain in cervical region (Manya-Shoolai), Backache (Kati-Shoolai)
v. Anorexia (Kshudhamanya), Feeling of tastelessness (Aruch)
vi. Aalasya (Somnolence)

Onset, Duration, Progress:
A 38-yr.-old normotensive, non-diabetic, fairly nourished female was admitted to Seth Tarachand Ramnath Hospital (SRTH) with joints pain, effusion and stiffness since 3 yrs. now exaggerated since 1 and 1/2 months. She had pain in cervical region, Backache, Anorexia, Feeling of tastelessness since 1 and 1/2 months. Prior to admission she had received treatment for these complaints on different occasions on out-patient (OPD) basis by allopathic practitioners but got no or little relief. She got admitted to STRH to seek further management.

Personal History (Poorva Vrutta):
No Previous history of Hypertension, Diabetes, Asthma, Tuberculosis, Malaria, Jaundice or known drug allergy. She had H/O Eclampsia before 22 yrs. & Tubectomy before 17 yrs.

Family History (Kula - Vruttra): NAD (No Abnormality Detected)

Personal History:

i. Ahara (diet) - Vegetarian & Non-vegetarian, Rasa Pradhanya - Katu
ii. Vihara (Exercise) - House-wife, Civa-Swapa
iii. Vyasana - Tea - 2-3 Cup / day
iv. Nidra(Sleepe) - Insomnia
v. Agni (gastric metabolism) - Manda
vi. Kshudha (Appetite) - Anorexia
vii. Kosta - Krura
viii. Trishna (Thirst) - Excessive
ix. Weight - 48 kg  x) BP - 110/70 mmHg  xi) RR - 22/min.

Asthavidha Pariksha (Eight Fold-Examination):

i. Puise - 84/min, Vata - Kapha Pradhan
ii. Bowel - once / 2 days, Yellow, Hard Stools
iii. Micturation - 6-8 times / day, 2 times / night, Yellowish
iv. Tongue (Jivha) - Moist, Sama, feeling of tastelessness (Arochak)
v. Voice (Shebda) - Mrdu
vi. Sparsha - Snigdha, ushna
vii. Vision (Druk) - Normal
viii. Akruti - Fairly nourished

Samanya Pariksha (General Examination):

i. Prakriti - Vatapradhanaka-hanubandhi
ii. Sara - Madhyama
iii. Samhanam - Madhama
iv. Satmya - Vyamisha satmya
v. Satva - Avar
vi. Aaharshakti - Avar, Little qty, average time for digestion 6-8 hrs.

ELEMANTS 13
Strotas Parikshana:

A) Pranavaha Stotas (Respiratory system)
   i) RS - AEBE, Clear
   ii) CVS - S1S2 Normal
   iii) Trachea - central

B) Udakvaha Strotas
   i) Excessive Thirst
   ii) Dryness of mouth (Jivha, Talu Shosh)

C) Annavaha Strotas (GIT)
   i) Feeling of tasteless
   ii) Nausea
   iii) Anorexia
   iv) Abdominal tenderness
   v) Tongue - moist, sama
   vi) Time taken for digestion - 6-8 hrs.

D) Rasavaha Strotas (CVS)
   i) Feeling of tastelessness (Aruchi)
   ii) Somnolence (Aalasya)
   iii) Nausea
   iv) Fever (Jwar)

E) Mansavaha Strotas
   i) Upachay – Madham
   ii) Skin - Tanu, Singha

F) Raktavaha Strotas
   i) Nails - Snigdha, Pandur (Pale)
   ii) Eyes - Mild Paalor
   iii) Hepato - Spleenomegaly absent
   iv) Sira - Avagadha

G) Medovaha Strotas
   i) Fairly nourished
   ii) Fat deposition over abdomen, buttocks

10.02.07 - RA Factor - Positive
16.07.07 - Elisa for HIV - Neg
N - 63%, E - 2%, L - 35%, M - 2%, B - 0%
ESR - 29mm/hr
17.07.07 - Urine (R) - amorphous material - Present
   Sr. Uric acid - 3.5 mg/dl
   Hb - 9.3 gm %
   RBCs - 3.07 mill / cmm
   WBCs - 9200/cmm
   BSL (R) - 64.7 mg%
   BUL - 22.4 mg%
   Sr. Creat - 0.6 mg %

Itiolog (Hetu):

A) Dietary Cause
   i) Spicy food 2/7 days
   ii) Stale Food - Daily
   iii) Fast Food (Vidhahi) 1-2 / 15 days
   iv) Salty fried food (Chips etc.) 1-2 1 17 days
   v) Meat, Fish, eggs 2-3 / 7 days
   vi) Sprouty Food 1/7 days

B) Life Style
   i) Vishmashan (Irregular Food Materials of opp. Characters taken together in irregular quantities)
   ii) Irregualr bowel habits.
   iii) Diva-swap (Irregular sleeping habits)

Poorvarupa (Premonitory Signs)
   i) Fever
   ii) Morning Stiffness

Roopa (Signs & Symptoms)
   i) Pain of migratory nature in joints
   ii) Joint effusion
   iii) Joint stiffness
   iv) Abdominal tenderness
   v) Bodyache
   vi) Anorexia
   vii) Feeling of tasteless
   viii) Somnolence
   ix) Thirst
   x) Insomnia
   xi) Fever

Dasha Involved
   i) Vata vruddhi - Pain of Migratory nature, Bodyach
   ii) Pitta Vruddhi - Thirst, Fever
   iii) Kapha Vruddhi - Joint effusion & Stiffness, Abdominal tenderness, Aalasya, Anorexia, Aruchi, Somnolence, Insomnia

Dushya
   Agni, Rasa, Asthi, Majja Purish, Udak, Annavaha Strotas

14 ELEMENTS
Samprapti
Hetu - Sevan
Vata Prakopa → Agnimandya → Kaphaprapkopa

Vishamashan, Paryushitannaseva Vidhahiseva → Vishamashan, Diva-swap, Sprouts → Vishamashan

Amottespal (Toxin accumulation)
Sama-Vayu
Amashaya, Sandhi ashray
Ama-vata

Patient followed a faulty diet consisting of paryushittanna, Vidhahi, Snigdha ahar with divaswap which aggravates vata & Kapha dasha leading to agnimandya which resulted in formation of sama-vayu that sama-vayu got ashray at Amashaya and sandhi causing sandhi Shoola, Shotha, Graha, Udar gaurav. Thus forms Amavata.

Treatment

A) Internal Medication

i) Singhnad Guggul 500mg
   Vatavidhvansa rasa 250
   Amapachal vati 250mg
   Thrice a day with lukewarm water

ii) Samasharkara Churna 500 mg
    Sootshekar vati 250 mg
    After meals with lukewarm water

B) External application

i) Massage with lukewarm Vishgarbha Taila
ii) Hot fomentation
iii) Patra Pottali - Nirgundi + Erandpatra
iv) Hirva Lep - Local application at joints.

As mentioned in Yog - Ratnakar main treatment in amavat is Langhan, Swedan, Tikta, Katu rasa sevan, Deepan, Virechan, Snehan, Upnah.

The first stage of treatment consisted of abolishing sama-vayu by way of Pachan, Vatanuloman. Chikitsa for which above preparation were given. The oil used for external application also served the same purpose by reducing local pain, swelling, they help in samprapti - bhang.
DIETARY RESTRICTIONS

Diet to be taken:

i) Rice, ragi,
ii) Sweet gourd, green gourd, snake-gourd, spinach.
iii) Green gram, gram dal, masoor,
iv) Almonds
v) Buttermilk, lukewarm water, whey
vi) Knee joint - measurements

Diet to be avoided:

i) Corn, cereals,
ii) Black gram, bengal gram, pea
iii) Fish, duck, bacon
iv) Banana, grapes, jackfruit, pineapple,
v) Milk, curds, cheese, paneer
vi) Tapioca, starchy food

Joint pain Assessment on VAS

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Outcome / Prognosis

1) Patient's Knee joint swelling showed on average reduction of 0.5 -1 cm
2) Patient's joint pain was reduced by 2-3 as recorded by VAS scale
3) Morning stiffness (Graha) improved greatly patient had no longer complaint of morning stiffness.
4) Patient had satisfactory passage of bowels
5) Patient was fresh for longer period, his appetite also showed marked improvement.
6) Sleep pattern also improved bouts of insomnia due to arthralgia reduced.
7) Patient was able to carry on his daily chores with less difficulty.

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