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CLINICAL APPLICATION OF CONCEPT OF AGNI

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ABSTRACT

Ayurveda (Indian system of medicine) is the world oldest known medical system. This is very amazing truth that when other civilizations were in infancy phase, Indian system of medicine was at its maturity phase. From the decades this science is serving humanity successfully with its time tested and eternally fundamentals. Even today it comprises the world second most reliable and used complementary and alternative medicine. Thus the fundamentals of this life science should be explore and reestablished on the parameters of present medical science or their clinical validation should be established for its easy access ability and enrichment.

Key words: Ayurveda, Agni, Clinical assessment parameter.

INTRODUCTION

In Indian ancient literature, man is considered as a replica of the universe. Whatever found in universe is wholly presented in human body also. There is no fundamental difference in physical and biological fire or Agni. The effect of fire at physico-chemical level is decompositions, disintegration and acceleration of various chemical reactions occurring in nature. Similarly the main function of the Agni in the body is to breakdown or to disintegrate the food into simplest possible components making it fit for absorption and utilization by the body. Technically these functions are termed as digestion and metabolism. In Ayurveda, word Agni often comes with the *dehadhatwagni*. *Dehadhatu* is one that's responsible for maintenance, protection and construction of body. Agni, on the other hand, is involved in the formation of various tissues.

In Bhagvad Gita, Lord Krishna says:

**AHAM VAISVANARO BHUTVA PRANINAM DEHAM
ASRITAH PRANAPANA-SAMAYUKTAH PACAMY
ANNAM CATUR-VIDHAM**

"I am the fire of digestion in the bodies of all living entities, and I with the help of *prana* & *apana*, digest the four kinds of foodstuff." That is *Bhaksya*, *Bhojya*, *Lehya*, and *Choshya*.

The term Agni in common language means fire which is usually employed to cook our food and render it

fit for digestion.

Types of Agni

The enumeration of the number of Agni (which includes *Pitta*) varies from Author to Author. According to Charaka, read together with its commentary by Chakrapanidatta the numbers of Agnis enumerated are 13 as : *Antaragni- 1, Bhutagni-5, Dhatvagni-7* [1-3].

On the other hand Sushruta had classified Agni in 5 type's viz. *Pachakagni, Ranjakagni, Alochakagni, Sadhakagni*, and *Bhrajakagni* and given reference to five Bhutagnies.

Vagbhata is seen to have reckoned 5 *Pittas*, 5 *Bhutagnis*, 7 *Dhatvagnis*, 3 *Doshagnis*, and 3 *Malagnis* i.e. in all 23 Agnis [4]. Recent authorities Sharangadhara recognized five *Pittas* only. Bhava Mishra is seen to have followed Charaka and Vagbhata [5-9]

Concept of Kayagni

The Agni which is situated between *Pakwashaya* and *Amashaya* is called *Kayagni*. *Kayagni* is also known by other synonyms viz. *Pachakagni, Jatharagni, Kosthagni, Dehagni, Antaragni, Audarya Tejas, & Pachaka Pitta*. It is seen that according to Ayurveda, *Pitta* is comparable to Agni or fire, as the actions it performs in the living body resemble those of the fire i.e. Agni viz. *Paka* or *Pachana*. It is for this reason that Charaka is seen to have expresses

the view that Agni in the body is implicit in the *Pitta*. Sushruta himself amplified the term Agni used by him in the description of *Pitta*, he says that as *Pitta* performs *Dahana*, *Pachana* and such other actions as does Agni, it (the *Pitta*) is spoken of as *Antaragni*.

TYPES

As per influence of *doshas*, four functional states of Agni have been envisaged.

(1) **Mandagni** – Due to dominance of *Kapha* out of *tridoshas*, when agni is unable to metabolise even a small quantity of easily digestible food can be taken as *mandagni*.

(2) **Tikshnagni**- This state of Agni is influenced predominantly by *Pitta* dosha, Here, even a very heavily diet is digested with in short span of time again causing hunger. It can also be referred as *Atyagni*.

(3) **Vishmagni**- When action of Agni is erratic and irregular due to predominance of *Vata* dosha, can be called as *Vishmagni*. Sometimes, it completely digests food and sometimes causes distension of abdomen, colicky pain etc.

(4) **Samagni**- State of equilibrium of three *doshas* can be stated as *Samagni*. Here, digestion of food (taken timely) occurs completely without any irregularity and keeps health in hands.

Clinical Assessment of Agni

Signs & Symptoms of Proper Functioning of Agni

- Adequate diet
- Timely evacuation of bowel and bladder
- Good strength
- Good resistance to infection (good immunity)
- Good Skin luster and texture
- Proper functioning of all sensory organ

Mild/ Moderate Malfunctioning of Agni

- Loss of appetite
- lethargy
- Recurrent infection
- Constipation/ diarrhea
- Incomplete evacuation of bladder or difficult micturition
- Improper functioning of sense organs
- Depression/ loss of feeling of happiness

Severe Malfunctioning of Agni

- Collection of fluid in body (Ascitis, edema, pleural effusion, pericardial effusion etc.)
- Marked loss of energy and general debility
- Loss of enthusiasm
- Improper sleep, etc.

Clinical Demonstration of Malfunctioning of Agni

1. Malfunctioning of *Kayagni* and *Dhatwagni*

A 38 year male patient presented with c/o fever, cough with sputum and weight loss. Patient is K/C/O MDR T.B.(Multiple drug resistance Tuberculosis)

Management of Rajyakshma according to Agni

- Swarnabasntamalti rasa- 150mg
Shilajtvadi louha – 375mg
Tamrasindura – 150 mg
Pravalapisti – 375mg
Rudanti churna – 2g
} divided into three doses and given with pippali + madhu
- Draksharista - 15ml
Amritarista - 15ml
} B.D.

Scientific explanation for using drugs

- *Cressa cretica* (*Rudravanti*) is known to possess antibacterial, antifungal, antitussive, testicular functions and antifertility activities. It is known as a rich source of flavonoids, heavy metals, lead, copper, zinc and nickel present in *Cressa* sp. might be medicinally important and/or nutritionally valuable.
- *Pippali* is used as bioenhancer. A bioenhancer is an agent capable of enhancing bioavailability and efficacy of a drug with which it is co-administered, without any pharmacological activity of its own at therapeutic dose used.
- Zinc plays a role in several metabolic functions as well as immune function. Zinc is required for the formation of T-lymphocytes, or T-cells, a type of white blood cell that fights off foreign invaders in bloodstream. Zinc is the main ingredient of *Swarnabasantamaltirasa*.

2. Case II: Malfunctioning of *Kayagni* and *Rasagni*

- Male patient of age 40 year, suffering from respiratory distress for 2 years (Dyspnea grade -4) with acute exacerbation for last 3 days. Having cough with mucoid expectoration for last 2 years. H/O seasonal variation, allergy with dust and smokes, recurrent attacks of rhinorrhoea and angioneurotic oedema.
- O/E, B/L Silbilant (high- pitched), polyphonic expiratory and inspiratory rhonchi with coarse crepitation at base is present.
- (Patient is taking regular corticosteroid inhaler).

Management Given

- Kumarklyana rasa- 150mg
Sahastraputi Abhraka- 150mg
Sammerpannaga- 200
Shirishadi Ghana Vati- 2 tab
} divided into two doses and given with madhu T.D.S
- Shwasakasachintamani rasa – 500mg
Shwasakuthara rasa- 500 mg
Apamarga Kshara – 500mg
} divided into four doses and given with mustard oil & jaggery

☉ Rasasindura should be given when cough aggravates at morning whereas Mallacandrody should be given when cough aggravates at evening.

☉ Tamaka Shwasa associated with chest pain:

Pushkarmuladi Churna in the dose of 1g/ daily with madhu can be given.

☉ Dyspnea associated with CHF (Cardiac asthma) :

Following management can be given:

Yogendra rasa- 125mg	} divided in three doses and given with tambula patra swarasa
Hridyaranava rasa- 150mg	
Prabhakara - 250 mg	
Sringa bhasma – 500mg	

Pushkarabhrami Guggulu -1 tab	} thrice in a day with luke warm water
Pushkarmula ghana Vati - 1 tab	

Scientific explanation for using drugs

- Mustard oil is found to have anti-inflammatory and anti-bacterial properties for which it is use as Anupana in Shwasa roga.
- Jaggery is found to have cleansing activity on gastrointestinal tract moreover it is found to possess antitussive and immunomodulator activity.
- Arsenic trioxide is found to induce apoptosis in eosinophils. Thus it can be use in allergy inflammatory asthma. It is drug of choice for acute promyelocytic leukaemia.
- Phenol present in betel pepper possesses anti-bacterial property for which it is use as anupana. It is also found to have anti-oxidant and anticarcinogenic properties.
- Date palm tree found to possess highly significant anti-oxidant activity account for its use in asthma in which it reduces oxidative stress induced inflammation.
- Sahastraputi abharaka acts as rasayana and potentiate rasavaha dhamaniya. There is depletion of rasa raktadi dhatu in tamaka shwasa therefore use of rasayana is obligate for proper management. Research showed that abhraka acts as nerve tonic.

3. Case III: Malfunctioning of Jatharagni

- Female of age 42 year, presented with the C/O slowly progressive, symmetrical, peripheral arthritis for 2 year.
- O/E, B/L tenderness and swelling over MCPJs, PIP, DIPJs, MTP, Wrist joints and Knee joints. No bony deformity was present. Range of movement was slightly restricted.

• Management Given:

Panchakola churna- 2g	} divided in two doses given with luke warm water
Vaisvanara churna- 4g	

Rasona pinda – 2 tab	} TDS with luke warm water
Swarnabhupati - 200mg	
Ramabana rasa - 375 mg	

(fried) jiraka churna & madhu and given with brista

Scientific explanation for using drugs

- Pippali is reported to have immunomodulator activity, bioenhancer property, antimicrobial property and antiangiogenic activity. It not only increase the bioavailability of drugs but also modulate the immune response which plays key role in the pathogenesis of Rheumatoid arthritis.

- Sunthi (*Z.Officinale*) is found to increase the bile acid secretion from liver thereby helps in reducing the cholesterol, glucose and triglyceride levels. Stimulation of enzyme activities is responsible for its digestive action.

- Research studies showed that therapeutic use of gold is effective in the treatment of Rheumatoid arthritis as it inhibit functional activities of variety of cells. It is found to inhibit protein kinase C involved in the activation of T cells and acts as immunomodulator.

- Garlic is reported to possess hypolipidemic, antithrombotic, antioxidant and hypoglycemic effect. According to Ayurveda, *Rasona* is best for *Kaphavritta Vata*.

Case –V

A college student of age 20 year presented with C/O frequent loose stools mixed with mucous and blood for one month. He had mild persistent fever and occasional cramping pain in abdomen.

Patient was diagnosed as having Ulcerative Colitis (*Grahani*).

Management Given

Swarnabhupati rasa- 250 mg	} divided into two doses and given with madhu
Piyushaballi rasa – 250mg	
Sangayeshaba -200mg	
Trinkantamanipisti – 375mg	
Bolaparpati – 200 mg	

Tab AS3 - 2 tab T.D.S with luke warm water

Patalagaruni Ghana Vati - 2 tab T.D.S with luke warm water.

Scientific explanation for using drugs

- Swarna should be given in low dose as it act as catalyst and strength the chemical reaction. Swarna in small amount acts as immunomodulator and thus helpful in down regulation of T lymphocytes.

- *Albizia lebbeck* also known as tree of happiness is extensively used herb in various traditional medicines. It also found to possess anti-inflammatory, antihistaminic and mast cell stabilizing properties. In clinical practice it is mainly use for anti-allergic property. According to Ayurveda it helps in pacifying *Anna-visha* due to its *Vishaghna* property.

- Patalagaruni (*Cocculus hirsutus*) is *Tridoshashamaka*. It has *Deepan*, *Pachana* and *Vata-anulomana* properties.

Research showed that it possess anti-microbial activity due to which it is helpful in bacterial dysentery.

- Piyushballi rasa (herbo-mineral drug) having *Rajat bhasma* as ingredient is mainly indicated in stress induced inflammation or autoimmune hypertrophy of muscularis mucosa. *Rajat bhasma* acts on nerve tissues and nourishes them.

Case – VI:

A female patient, age 36 year having H/O severe, constant upper abdominal pain this radiates to back. The patient was diagnosed as Acute Pancreatitis and she was keen to take Ayurvedic treatment.

Management Given:

Tamrasindoor-150mg
Hema-abhraka-125mg
Pravalpanccamrita/
Srings bhasma – 375mg
Guducyadi Ghana Vati- 2 tab T.D.S with luke warm water (or)

divided into two doses and given with madhu

Guduci Ghana Vati - 2 tab T.D.S with luke warm water

Scientific explanation for using drugs

- A clinical study showed that Serum Copper and Zinc level is significantly reduced in the patients of acute pancreatitis and the pathophysiology of disease is contributed mainly to the altered serum minerals metabolism in Serum.
- According to Ayurveda Tamra bhasma is having Madhura Vipaka and Ushna Virya. By virtue of its Vipaka it acts as Pittashamaka. It is supposed to mainly acts on Accha Pitta.
- In acute pancreatitis there is vitiation of Pitta which is due to both defect in Amla-avasthapa and Avarana. Drugs that can stabilise the dhatu rupi Pitta are beneficial. Tamra sindura helps in stabilizing Dhatu rupi Pitta. Guduci is said to be best for removing Raktagata vibandha (Ca.Su. 25) i.e. Raktagata Kapha and thus helpful in Avaranajanya Pittadusti. Researched had shown that it is one among best immunomodulator drugs.

Fig 1. Diagrammatic representation of different Agni and their functions

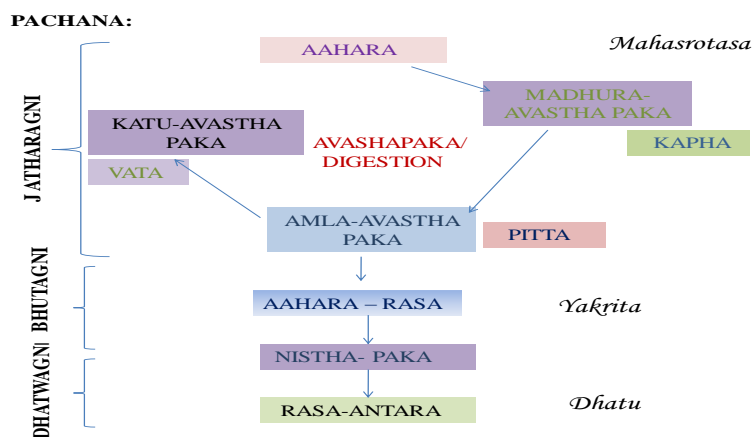


Fig 2. Diagrammatic representation of role of Agni in the pathogenesis of Disease

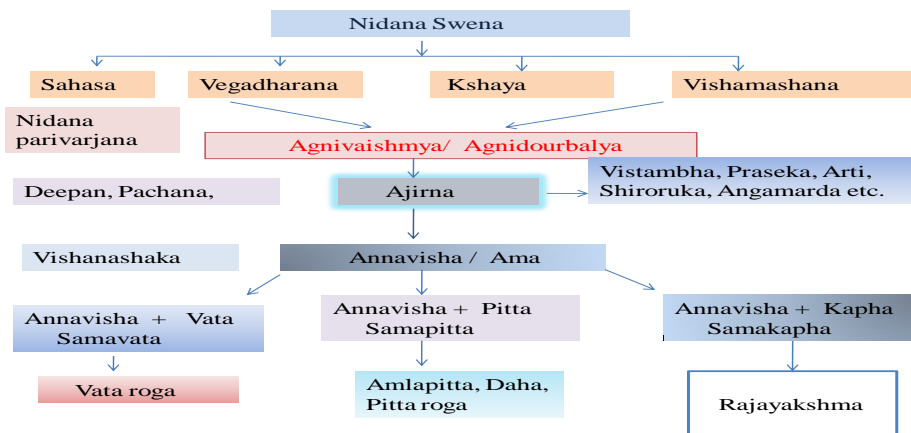


Fig 3. Diagrammatic representation of role of Agni in the pathogenesis of Disease

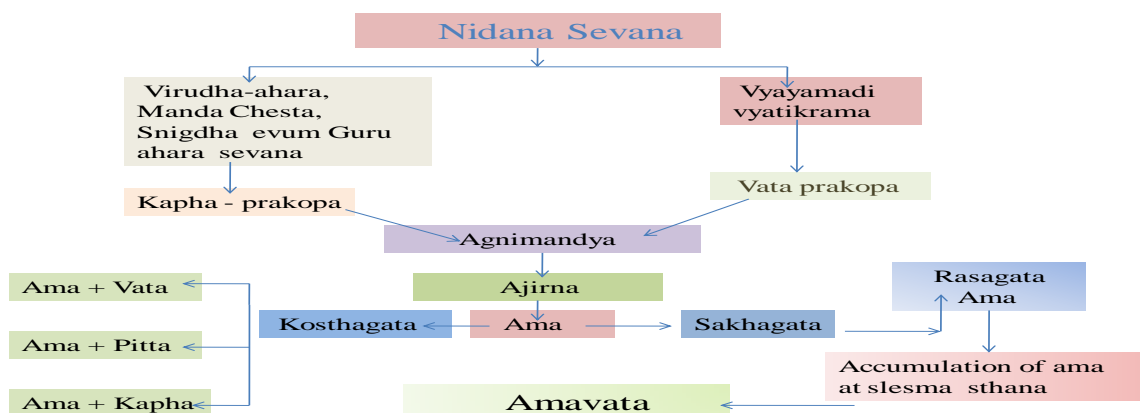


Fig 4. Diagrammatic representation of role of Agni in the pathogenesis of Disease

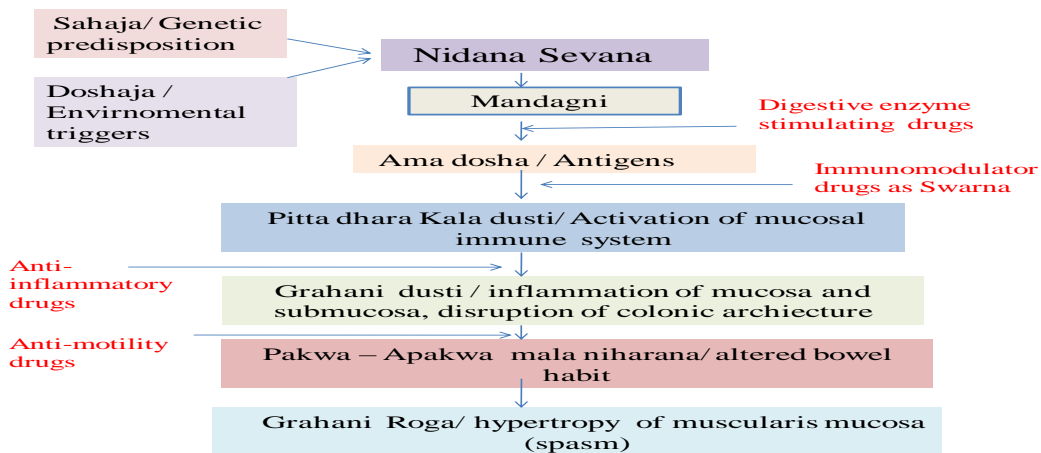


Fig 5. Diagrammatic representation of role of Agni in the pathogenesis of Disease

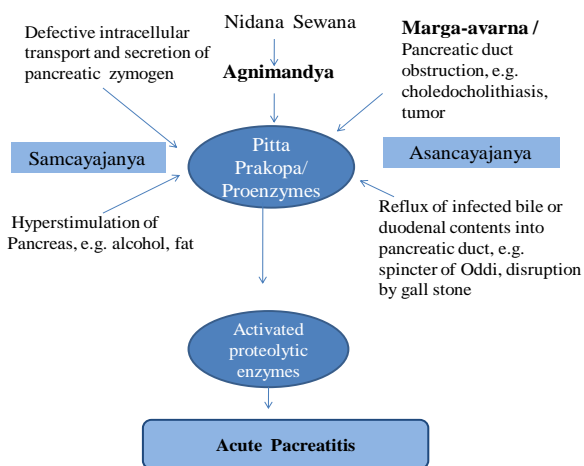
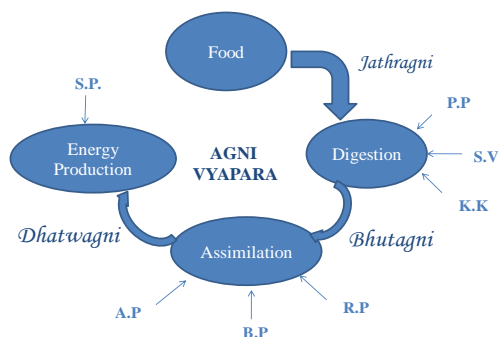


Fig 6. Diagrammatic representation of Function of Agni



Note: P.P= Pachaka Pitta, S.V= Samana Vayu, K.K= Kledaka Kapha, R.P= Ranjaka Pitta, B.P= Bhrajaka Pitta, A.P= Alochaka Pitta, S.P= Sadhaka Pitta.

DISCUSSION

Agni is the process by which digestion of food takes place. Agni in body and fire in universe are same, as for fire wood is required similarly *Pitta* is required in the body to produce/ generate Agni in the body (heat energy). Agni is a form of heat energy in the body and thus clinical assessment of functioning of Agni is based on body temperature and level of energy.

Pitta is necessary for proper digestion and energy production. In clinical practice we use broad term i.e. Agni rather than *Pitta* to evaluate/ assess the effect of drug on body. Status of Agni in the body can be evaluated on the basis of specific signs & symptoms. In Ayurveda polyherbal drugs are mainly use for the management of

diseases. In the light of science we today know that polyherbal compounds consists of multiple phyto-constituents targeted to multiple molecules in the body. In synthetic drugs it is always known that a particular metabolite is targeted to a particular protein/ enzyme/ receptor etc, but in polyherbal compound where several phyto-constituents are working simultaneously on different targets (eg- signaling proteins, enzymes, receptors or even on genes) it is never be possible to evaluate the effect of drug on single parameter. In such case only overall effect of drug (i.e whether drug is compatible to body or not) can be assess. Thus in Ayurveda Agni is used to assess the overall effect of drug on body.

REFERENCES

1. Agnivesa, Charaka Samhita with elaborated Vidyotini Hindi commentary by Pt. Sastri Kasinath and Dr. Chaturvedi Gorakha Natha: Chaukhambha Bharti Academy, Varanasi: Part-II, Edition-20, 1994.
2. Ashtanga Hridaya with commentaries Sarwanga Sundara of Arunadutta and "Ayurveda Rasayana" of Hemadri, Chaukhambha Orientalia, Varanasi, 2002.
3. Charaka Samhita with Ayurvedeepika commentary by Chakrapanidutta, Edi. By Vd. Acharya, Chaukhambha Samskrit Sansthana, Varanasi, 2001.
4. Charaka Samhita with Vidyotini Hindi commentary by Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi, Part 1 and 2, Chaukhambha Bharati Academy, 1996.
5. Sushruta Samhita with Nibandha Samgraha, commentary of Shri Dalhanacharya and "Nyayachandrika Panjika" of Shri Gayadasacharya on Nidanasthana, Chaukhambha Orientalia, Varanasi, 2005.
6. Sushruta Samhita with Ayurveda Tattva Sandipika commentary by Kaviraj Ambikadutta Shastri part 1 and 2, Chaukhambha Sanskrit Sansthan, Varanasi, 1995.
7. Sharma Ajay Kumar. Kayachikitsa Vol. II; Published by Chaukhambha Orientalia, Delhi; 1st Ed., 2006.
8. Ayurveda Saar Sangraha. Published by Shri Baidyanath Ayurveda Bhawan Pvt. Ltd., Calcutta; Edition 1999.
9. Database on Medicinal plants used in Ayurveda. CCRAS, Dept of ISM and Ministry of Health and Family Welfare, Govt. of India, 2002.