INTRODUCTION

Modern Era of fast, busy and stressful life has created several disharmonies in human biological system; one among them is the digestive system (Annavaha Srotas). The word Annavaha Srotas means the channel through which food is transported. The Annavaha-Srotas (Alimentary canal) is concerned with Anna Adana (ingestion of food), Anna Pachana (digestion), Sara Kitta Vivechana (Separation of nutrient and waste portion) and Rasa Shoshana (Absorption of nutrients). Ayurveda considers that dehagni is responsible for life, complexion, strength, health, Oja, Teja, and prana. Any disharmony at any level of Annavasrotas or De-
hagni results in Ama; an intermediate product generated due to the deranged metabolism of digestive fire triggering digestive process in the body results into Anna-visha formation and Ajeerna and its further stage is Aandravshoola and Parinamashoola. Aandravshool and Parinamashoola, in modern sciences can be correlated with Peptic ulcers and duodenal ulcers. Peptic ulcers and Duodenal ulcers affect thousands of people and in clinical practice are the most common gastrointestinal disorders. The goal of the treatment is complete remission without side effects with the help of Yashtimadhu and Yogic Practice.

AIM & OBJECTIVES:
The main aim of the article is to study the literary aspect of Annadravashoola and Parinamashoola and how Yashtimadhu and Yogic practices are effective in management of Annadravashoola

ANNADRAVA SHOOOLA:
Annadravashoola is described as a type of shoola by Acharya Madhav Nidana having the characteristic features of pain before and during digestion of food and that relieves after vomiting. Annadravashoola is explained as due to vata prakopa, the aggravated vatadosha encircles nearby located pitta and kaphadoshas in the koshta and become powerful enough to produce colic pain during the digestion of ingested food and kapha breaks down from its own location and interact with pitta and combines with vata to cause colic pain during the transformation process of the consumed food and this typical shoola or colic is known as Aandravshool.

NIDANA

Virudh Sevan, Asatmaye Sevan, Abhojan, Atibhojan, Ahara having Ruksha Tikshna, Ushna Guna, Shar, Lavan, Katu, Amla Rasa Sevana Viharaj Nidan like Vegdharan, Raatrijagran etc., Various Manik Hetu’s like krodha (Anger), Chinta (Tension/Stress), etc. are the etiological factors of Annadravashoola and Parinamashoola.

SAMPRAPTI
Virudh Ahara, Abhojan, Asatmaye Ahara, Ahara having Ruksha, Sheeta, Ushna, Tikshna Guna, Amla Rasa causes Vidagdha of Pitta Dosha. This Vidagdha pitta leads to Agnidusti that forms Ajeerna i.e Amajeerna, Vidagdhaajeerna, Vishtabdajeerna. If Ajeerna persists and continues for a prolonged period, leads to Amalpitta (hyperacidity) and Vranashoata (inflammatory condition) of Grahi and Amashya and continue Nidan sevan results into a state of Vidagadha (Hyperacidity), Epigastric discomfort, Retrosternal burning bitter and acid eruption along with indigestion that results in Annadravashoola and Parinamashoola.

In modern science, it can be correlated with peptic ulcers. Peptic ulcers affect thousands of people and are the most common gastrointestinal disorders in clinical practice. Etiology of peptic ulcer is still debated. It is accepted that ulcers are caused due to imbalances in mucosal protective factors. Its pathogenesis is influenced by acid pepsin secretion, cellular regeneration, mucous secretion, blood flow, mucosal barrier, prostaglandins and epidermal growth and Helicobacter pylori.

PURVAROOPA:
No specific Poorva-roopa or premonitory symptoms of Annadravashoola are mentioned in any of Ayurvedic classical texts.
LAKSHANA:

Pain before meal or during digestion or any time and continuous in nature and relieves after vomiting, burning sensation in the epigastrium.⁵

PARINAMA SHOOLA:

Parinamashoola term is a self-explanatory i.e. Shoola or abdominal colic that experienced during the digestion of food i.e. 3-4 hours after intake of food when food had reached the intestines. Parinamashoola is an “AVARANA JANYA, TRIDOSHA JA VYADHI”⁶

NIDANA:

The causative factor claimed to be over exertion, late night working i.e. less sleep, extra dry /fat free incompatible diet, irregular eating habits, serve injuries leading to stress, worry and all the vata prakopaka factors.⁷

SAMPRAPTI:

Intake of Ruksha anna (Yava, Sushka Saka, Jangala Mamsa), Vishamasana and Langhana directly aggravate vayu followed by involvement of pitta and Kapha. Among Tridosha, Vayu is the most power and it encompasses kapha and pitta. Aggravated vata (by the virtue of Shoshna property) decreases pitta and Kapha. ‘Kapha pitte samavritya Shoolakari Bhaved Bali’

It shows that the cause of shoola is Bali—viz Vayu. According to Vijaya Rakshita, Pitta is the most powerful and predominant Dosa in the pathogenesis of Parinama Shoola. Hence pain is experienced during the period of digestion, i.e when pitta remains in provoked stage.

In physiological state Kapha protects Amashaya from the eroding effects of Pachaka pitta. When the equilibrium between secretion of protective Kapha (mucosal gel layer containing glycoprotein, phospholipids, bicarbonate ions) and Pitta (HCL) is breached, causes Vrana in the Gastro-antral mucosa of the Stomach. “Balasah Pracyutah Sthanata Pitten Saha Murechitah” when Kapha has shifted down from its original place and is subdued, aggravated Vayu overtakes Pitta and Kapha and produces pain during the digestion of food.⁸

LAKSHANA:

Abdominal pain which precipitates and aggravates during digestion of food. The common sites of pain include kukshi (Epigastric region), Jathara-Parshva (Right and Left Hypochondria), Nabhi (Umbilical region), Basti (Hypogastric region), Stanantra (Retrosternal) etc.

Treatment of peptic ulcer as per Ayurveda:

Emesis ending with the pitta and purgation ending with kapha should be applied in Annadravashoola which subsides after Amashya and Pakvasaya are evacuated and the measures prescribed in Amalapitta should be adopted.⁹

Role of Ayurvedic drugs and yoga practices

YASHTIMADHU (Glycyrrhiza glabra)

Description of Yashtimadhu in different treatise:

Charaka Samhita: Jeevaneeya, Sandhaneeya, Varnya, Kanthy, Kandughna, Chardinigraha, Shonitasthapana, Snehana etc.¹⁰

Sushruta Samhita: Kakolayadi, Sarivadi, Anjanadi gana.

Vagbhata: Sarivadi and Anjanadi gana.

Main Active Constituents of Glycrrhiza glabra:

Glycyrrhizine (Glycyrrhizicacid), licoagrone, liqoumarine, isoflavon, quercitin, atragalin, liquirigenin and isoliquiritigenin (root). Principle constituent i.e 3% and 30-50 times more sweeter than sugar. The most active compound of liquorice is glycyrhizine. The root contain 4% glycyrrhizin, potassium or calcium salt of glycyrhrizinic acid. When glycyrhizin is re-
moved from liquorice, the product is called deglycyrrhizinated liquorice or DGL. Deglycyrrhizinated liquorice formulation used in the treatment of ulcer does not suppress gastric acid release like other antiulcer medication; rather, they promote healing by increasing mucous production and blood supply to the damaged stomach mucosa thereby enhancing mucosal healing. Glycyrrhizin inhibits prostaglandin production. Glycyrrhizin structure is similar to hormones secreted by the adrenal cortex accounts for the mineralocorticoid and glucocorticoid activity. Its anti-inflammatory property is due to inhibition of phospholipase A2 activity, an enzyme critical to inflammatory processes. Several studies have indicated that Glycyrrhiza glabra extracts have antipyretic, antimicrobial, anxiolytic, antiviral, anti-inflammatory, and antioxidant activities.

**Action:**
Being Guru, Snigdha and Madhura Rasa which are antagonistic to Vata pacifies Vata and due to Madhura Rasa and Sheeta Veerya it pacifies Pitta.

**Pharmacological Activities:** Antacid, Antiulcerogenic, Anti-inflammatory, Anticancer, Antioxidant, Demulcent, Expectorant, Diuretic, Antibiotic, Antiulcer, Antiviral, Anticholinergic, Hypolipidemic, Memory Stimulant.

**Precaution:** The intake of higher doses (50 mg/day) over an extended period (more than 6 weeks) may cause sodium retention, potassium depletion, hypertension, kidney failure.

**Contraindication:** In patient with history of hypertension, renal failure and using digitalis preparation. It should not be administered larger than 4-6 wks.

**Yashtimadhu as antiulcer:**
Yashtimadhu is known as aphrodisiac and rejuvenating tonic. Licorice acts as antacid and reduces free and total HCl level in the stomach and decreases acidic irritation of peptic mucosa and used as mild laxative. It has anti-inflammatory and antiulcer properties. It has protective effects against stomach ulcer and chances of gastritis induced by aspirin and NAISD’S. Licorice has some flavonoids extract which inhibits the growth of Helicobacter pylori act as Anti-Helicobacter pylori such as Glabridin and Glabrine. and also inhibits several DNA and RNA Viruses, inactivating herpes simplex virus particles irreversibly various studies has proved its beneficial effects and hence it is recommended in peptic ulcers.

**Effect of yoga practices on peptic ulcers disease:**
Yoga is a mind-body practice that combines stretching exercises, controlled breathing and relaxation. Yoga can help reduce stress, lower blood pressure and improve heart function. And almost anyone can do it. The brain and gut are intricately linked—we might even say that the gut is where the mind and the body meet. Our digestive tract contains hundreds of millions of nerve cells that receive a constant barrage of signals about the state of your body, thoughts, and emotions. This makes the gut highly responsive to changes in our well-being, both physical and emotional. It is currently unknown whether the chronic digestive problems create chronic anxiety, or whether heightened levels of stress and worry trigger heightened gut sensitivity. Yoga works along 4 principle mechanisms.

- Intra organ massage: Improving blood flow and allowing better healing.
- By better glandular secretion of mucus Acid reduction by specific poses
- Control of mind and calm.
The quality of massage is such that in specific Asana like Suptveerasana, Parvatasa-
na, Suryanamaskar etc.

**Asana:**

- **Vajrasana:** 5 min.
- **Pawanamuktasana:** 10 min.
- **Shavasana:** 10 min.

**Pranayama:**

- **Anuloma-Viloma:** 5 min.
- **Kapalabhati:** 5 min.

Vajrasana can be done immediate after meals.

All above yogic procedures should be done in morning hours at least 1 hour before breakfast.

**Probable mode of action of Asanas**

**Vajrasana:**

Vajrasana can help to make number of physical discomforts - for example, problems related to poor circulation, digestion, elimination, low energy, depression etc. People in today’s life usually do not sit straight even after meals or they even lie down and sleep immediately after food consumption. Also eaten food when comes in contact with digested enzymes causes reactions, which releases gases. It is assumed that lying down immediately after food intake causes epigastric sphincture to close physiologically, which obstructs release of gases causing belching, regurgitation resulting in GERD. Sitting in Vajrasana after meals helps the eaten materials to move forward to duodenum for further level of digestion. This forward movement is acted upon due to force of gravity during sitting in Vajrasana.

**Pawanmuktasana:**

As this Asana is done before Pranayama deep breathing increases the oxygen in take to the body cells and the oxygen carrying capacity of the blood is increased and it provides more nourishment to the organs. When this Asana is practiced the breathing is deep and synchronized and at the end of inhalation the forehead, nose, chin, cheek should touch or be as close as possible. This Asana give the excellent massage to the abdomen. In this pose the abdominal muscles are tensed and simultaneously the internal organs are compressed by the folded legs. This increases the blood circulation and stimulates the nerves which connect the organs to the brain. Moreover upward pressure is also applied through the forward bending of neck, head. On completing this Asana fresh blood is soaked up into the muscles. The increase blood flow causes the increased functioning of the organs and increases the secretion that can be related to “Jatharagni”. Therefore this Asana may correct the vitiate Agni which is a causative of Aan-

**Shavasana:**

Shavasana relaxes the whole physiological and psychological system of the body. It aims at slowing down the breathing rate to improve the exchange of oxygen and carbon dioxide in the lungs as well. Asanas are to induce mental Tranquility. Digestive ailments are generally caused by tension. Tension interferes with the normal digestive function which in turn cause ailment. Therefore, as the mental cause the damage to gastric mucosa results in fluctuations in the production of gastric secretions. All the tension, stress, problem etc. are flowing out via the exhaled breath. Also this is a meditation procedure and it calms the mind, reduces stress and emotional tension.

Each asana is held for a period of 5 minutes at least. As healthy blood flow occurs, the gland secretes mucus which coats the lining of stomach. Stretching of Vagus nerve is probably the most important mechanism when back bends which reduce acid secretion and hunger de-
creases Innervations promote lightness in the organ at once, good absorption and elimination of excess wind in the system. Forward bend though quenches the mind but contraindicated because they increase acid production by Vagus nerve stimulation, may be introduced by healing. To relieve bloating, belching, fullness and acid burn after meals in both conditions, Asana can be performed after food i.e, Vajrasana, Pavana-muktasana, Shavasasanana etc. Effects are just like ingestion of antacid even faster and lightness is perceived. If the disease is in the early stage, yoga alone is sufficient .Drugs work at the cellular level, inhibiting acid flow by antagonizing some receptors ,the peripheral reflux is controlled by crux of the problem is not tackled. If medicine is discontinued it reoccur. Asanas prevent this as yoga works on Vagus nerve itself and prevent acid flow. Drugs can be discontinued fully if a patient combine Yoga will medication in early stage of disease.

CONCLUSION

From above study, it reveals that combining Yashtimadhu along with Yogic practice is a beautiful remedy and had definite effects for the patients suffering from the Annadrava shooola and Parinamashoola due to presence of Madhurrasa and snigha guna it acts as mild purgative (Mridurechak) and pacify the of stomach (Aamlaadikya), due to Madhur and sheet veerya it act as wound healer (Vran Sandhan-kar) and Madhur Rasa also act as Vaatanulomak and pacify abdominal pain. Due to its rejuvenating property (Rasayan guna) the drug also Rejuvenate cells and maintains cellular integrity. Yogasana gives excellent massage to abdomen and Abdomen gets more blood supply help to correct gastric juice formation, increases bicarbonates and mucous secretion. Bicarbonates neutralize acid and mucous give strength to the gastric and duodenal area and pacify the symptoms. So it is a hope for the medical science to cure the disease in low cost and more efficiently.

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