ROLE OF AYURVEDA IN MANAGEMENT OF POST-CHEolecystectomy GASTRIC REFLUX AND DYSPEPSIA WITH SPECIAL REFERENCE TO AMLAPITTA – A REVIEW

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ABSTRACT
Post-cholecystectomy syndrome comprises of reoccurrence of symptoms similar to those of before cholecystectomy. It is usually symptoms like upper abdominal pain, vomiting, dyspepsia, gastric reflux, with or without jaundice. The incidence rate has been reported as high as 40%. The management of disease is somewhat difficult, the patient needs to follow the restrictions and medications for lifelong. Hence they are continuously looking towards Ayurveda for solution of these problems. The symptom of gastric reflux and dyspepsia is similar to disease Amlapitta of Ayurveda. The cardinal symptoms of amlapitta are avipaka(indigestion), hritkantha daha(heart and throat burn) and tikta-amlodgara. The treatment of these symptoms with modern medicine can cause severe side effects hence, in this article an attempt is made to review ayurvedic classical text and related literature to understand the disease post cholecystectomy; symptoms of gastric reflux and dyspepsia with emphasis on ayurvedic treatment in relation to amlapitta.

Keywords: Post-cholecystectomy, amlapitta, gastric reflux, dyspepsia, PCS
Introduction:
Post-cholecystectomy syndrome is defined as the reoccurrence of the symptoms similar to those experienced before cholecystectomy. This usually takes in the form of upper abdominal pain and dyspepsia, with or without jaundice.\(^{(1)}\) It was originally defined by Pribram as a pure functional disturbance after cholecystectomy.\(^{(2)}\) It is well known fact that the gallbladder acts as a volume reservoir, collecting the bile produced by the liver and releasing it when required i.e after a meal. The loss of gallbladder causes impairment in cyclic pattern of bile juice excretion; the loss of neurohormoral responds also causes motility changes in upper gastrointestinal system and lead to duodenogastric reflux; thus regurgitation of duodenal content into the stomach induces the gastric mucosal injury resulting in persistent symptoms such as epigastric pain, nausea and vomiting.\(^{(3)}\) The incidence of post cholecystectomy syndrome has been reported to be as high as 40\% and the onset of symptoms may range from 2 days to 25 years.\(^{(1,4)}\) There has been gender-specific risk factor for developing symptoms; in one study the incidence of recurrent symptoms among female is 43\% compared to 28\% of male patients.\(^{(5)}\) Patients with symptoms like gastric reflux, abdominal pain, vomiting, reduced appetite nausea and heart burn can be seen in the disease Amlapitta mentioned in Ayurveda. Amlapitta has been mentioned in various Ayurvedic texts such as Kashyapa Samhita, Yogaratnakara, and Bhaishajya Ratnavali. Amlapitta is a Pitta Pradhan vyadhi and possess symptoms such as Amlodgara, Hrikantha daha, Avipaka, Aruchi, Utklesha, Hritshula and Vidbheda(diarrhea).\(^{(6,7)}\) It is suggested that it is very common issue suffered by the patients in more or less severity. However the antacids are among the one most widely used medicine all over the world. By taking antacids for long may cause dose-dependent rebound hyperacidity and milk-alkali syndrome. Antacids that contain aluminum hydroxide may cause constipation, aluminum-intoxication, osteomalacia and hypophosphatemia.\(^{(8)}\) From Ayurvedic point of view, Amlapitta can be treated with various formulations mentioned in Samhitas without any harmful effects of the drugs.

Aim and Objective:
To study Ayurvedic management of Postcholecystectomy gastric reflux and dyspepsia with reference to Amlapitta.

Material and Method:
Amlapitta is one of the pitta pradhan vyadh mentioned in ayurved samhitas. This samhitas were used to take information on chikitsa aspects of Amlapitta vyadi. In this article we have made an attempt to study treatment of gastric reflux and dyspepsia in post cholecystectomy syndrome with ayurvedic drugs.

Disease Review:
Amlapitta is considered as a good symptom in number of places by Acharya Charaka. Acharya Charaka says in Samprapti of Amlapitta described as Aamvisha when get mixed with pitta, the disease Amlapitta develops. Amlapitta is composed of word Amla and Pitta.\(^{(9)}\)

Acharya Kashyapa was the first one to give detailed description on the disease and to analyse its Doshik basis. The details of the disease including classification according to gati i.e Urdhvaga and Adhoga Amlapitta was given by Madhavakara.

Nidhana of Amlapitta:
Aharja Hetu: Viruddha ahar, sandusta bhojna, vidhahi bhojna, vidhgdh bhojna.(10)

Viharja Hetu: Divaswapana, Atisanana, Avagahana.(11)

Manashika Hetu: Kama, Kruddha, Lobha,Moha,Irshaya, Shoka ,Bhaya.(12)

Purvarupa of Amlapitta: Trishana, Alasya, loss of bala, Annavidaha,Gauravata.(13)

Rupas of Amlapitta: Avipakka, Utklesha, Tikta-amlo udgara, Hritkantha daha, Aruchi.(14)

Samprapti of Amlapitta:
According to Acharya Kashyapa, the indulgence of nidana causes dosha prakopa especially pitta prakopa. This Pitta prakopa creates mandha agni in amashaya due to which the food ingested does not digest properly; it becomes vidhagada and shuktibhava. This vidhagada and shuktibhava of food creates amlata in amashaya. This condition is called as Amlaitta.(15)

Prakar of Amlapitta: Adhoga Amlapitta (downward), Urddwaga Amlapitta (upward).(16)

Also by dosha dominance-- Vataj,Pittaj and Kaphaj.(7)

Drugs used for Dosha pachana:
Acharya Kashyapa mentioned three drug combinations which are-
· Nagar (Zingiber officinale Roscoe)+ Ativisha (Aconitum heterophyllum wall)+ Musta (Cyperus rotundus)
· Nagar (Zingiber officinalis)+ Ativisha (Aconitum heterophyllum wall)+ Abhaya (Terminalia chebula)
· Trayamana (Gentiana kurroo) + PatolasyaPatra (Trichosanths dioica) +Katukarohini (Pichrohiza kurroa)
· In dose of three Karsha (36gm) should be given for drinking either alone or decoction of Kiratatikta (Swertia chirata) or Rohini (Pichrohiza kurroa) till the Amashaya (stomach) becomes Vishudha (clear). By this the Agni gets into the normal stage and the person starts attaining Utsaaha, Tushni, Pushthi and Bala.

When the Doshas becomes Pakva and move towards the Pakvashaya (large intestine) it should be eliminated through Mild purgation.(17)

Drugs used for Vamana and Virecahan:
Emesis should be induced with salt water or lukewarm milk or with sugar cane juice or with honey water or with bitter drugs.(17)
· A combination of Triphala (Terminalia chebula, Terminalia bellirica, Emblica officinalis), Trayamana (Gentiana kurroo), Katuruhini(Pichrohiza kurroa), Trivrit(Operculina turpethum) all these in ½ Pala (24gm) and Trivrit (Operculina turpethum (L.) half to the total quantity of above four should be taken for attaining Virechana.
· Leaves of Patola (trichosanths dioica) and pulp of Triphala (Terminalia chebula, Terminalia bellirica, Emblica officinalis) 24gms + Trayanti(Gentiana kurroo), Rohini (Pichrohiza kurroa) Nimba (Azadirachta indica) and Yashtika (Glycyrrhiza glabra) –
1 Karsha (34gms) +2 Pala (96gms) of Masura (Lens culinaris) all should be cooked with one Adhaka (768ml) of water till 1/8th remains. After straining, it should be recooked along with one Kudava (192gms) of Ghirta till ½ Prastha (384gms) remains.

- By drinking this either hot or cold one gets immediate purgation comfortably. This cures even very chronic Amlapitta and also destroys immediately the disorders of Vata, Pitta Jwara (Pyrexia), Kushta (Skin disorders), Visarpa (Erysipelas), Vatashonita (Gout), Rakta gulma (Fibroid tumor), Vispota.\(^{18}\)

Some important single drugs useful in Amlapitta:

- Shatavari, 3gm twice a day with milk
- Yashtimadhu 3gm twice a day with milk
- Amalaki (Indian gooseberry) 3gm twice a day with water
- Sunthi (dry ginger) 1- 3gm twice a day with water

Some important Pharmacopeial Preparations:

- Kamdudha Rasa 250-500mg twice a day with Honey
- Sutashekhar Rasa 250mg with Honey twice a day
- Prawal Pishti 125 to 250mg with Amalki Juice
- Prawal Panchamrit Rasa 250-500mg twice a day
- SwarnaMashik Bhasma 125-250mg twice a day
- Dashang Kwath 14-28ml twice a day with 1tsf of Honey
- Bhoonimbadi kwatha 15-20ml twice a day
- Patoladi kwatha 15-20ml twice a day
- Gulkucyadi kashaya 15-20ml twice a day
- Aragwadhamrtadi kashaya 15-20ml twice a day
- Amalakyadi Churna 3gm twice a day with water
- Avipattikar Churna 1-2gm twice a day milk
- Shatavarighrit 6-12gm twice a day
- Yashtighrit 6-12gm twice a day
- Sukumaaraghritam 6-12gm twice a day
- Dadimadighirta 6-12gm twice a day

Do's (Pathya):
- Follow the meal times.
- Light food, Coconut water, articles having cooling properties.
- Vegetables like white pumpkin, bitter gourd, matured ash gourd, leafy vegetables except Methi, Wheat, old rice, barley, green gram, sugar candy, cucumber, Fruits like gooseberry, dry grapes, black grapes, sweet lime, pomegranate, fig, dry fig, Take adequate amount of fluids like pomegranate juice, lemon juice, amla juice, sweetlime juice, Medicated water with ushir (wala) or coriander seeds, or laja (puffed rice).
- Warm water.
- Dadimpak (sweet preparation made of pomegranate), Moramla (jam made from amla), gulkand (jam made from rose petals) with milk.
- A cup of lukewarm milk after every two or three hours.
- One teaspoonful of ghee with warm milk.
- Take adequate sleep & rest
- Practice Yoga, Pranayam, meditation & exercise regularly.\(^{19,20}\)

Don'ts (Apathya):
- Avoid excessive spicy, sour and salty substances.
- Avoid fried and junk food items.
- Do not remain hungry.
- Avoid fast.
- Do not over eat, take small frequent meals.
- Avoid untimely and irregular food habit.
Avoid foods containing excess amount of garlic, salt, oil, chillies, etc. very often.
Avoid rice curd and sour fruits.
Avoid lying down immediately after food and in supine position. The best recommended position is left lateral.
Avoid smoking, alcohol, tea, coffee and aspirin type drugs.
Avoid stress.\(^{19,20}\)

**Domestic Remedies:**
1) The Infusion of coriander seeds (Dhanyak) taken with sugar twice a day.
2) Water obtained from green fruit of Coconut 100-500 ml to be taken twice a day.
3) Powder of Amla 3-6gm BD with water.
4) Powder of Shatapuspa(Saunf-Anethumsowa) with sugar mixed in a glass of water - 20 ml twice daily for 1 week or till the symptom subsides.
5) Chewing of half a teaspoon of fennel seeds after food.

**Discussion:**
Laparoscopic cholecystectomy has rapidly gained popularity and is now considered the treatment of choice for symptomatic gallbladder disease. The advantages over laparotomy including reduced hospitalization, pain, morbidity, better cosmesis and financial savings. Overall, cholecystectomy is an established successful operation which provides total relief of pre-operative symptoms in more than 90% of patient. Post-cholecystectomy syndrome is defined as the recurrence of symptoms similar to those experienced before the cholecystectomy. These patients may present with abdominal pain, jaundice or dyspeptic symptoms. Many of these complaints can be attributed to complications including bile duct injury, biliary leak, biliary fistula and retained bile duct stones. Cholecystectomy is associated with several physiological changes in the upper gastrointestinal tract which may account for the persistence of symptoms or the development of new symptoms after gallbladder removal. The cholecystosphinicter of Oddi reflex, cholecysto-antral reflex, and cholecysto-oesophageal reflexes are all disrupted and a number of local upper gastrointestinal hormonal changes also occur after cholecystectomy.\(^{21}\) The disease Amlapitta is a common functional disease of Annavaha srotas. Pitta is a bodily chemical substance which is mainly responsible for the maintenance of the process of digestion, transformation and transmutation. The above postcholecystectomy symptoms like gastric reflux and dyspepsia are similar of Amlapitta. Amlapitta is a patho-physiological condition in which the Pitta gets vitiated in terms of Vruddhi (excessiveness) and sourness of Pitta is increased\(^{20}\). So a person should avoid all the factors responsible for aggravation of pitta. Milk is excellent in the condition specially preceded by langana. Along with is Ayurveda suggests to drink warm water freely because according to it “hot destroys hot” (ushnam ushnena hanti).\(^{19}\)

According to Ayurveda majority of the drugs have Tikta-Madhura Rasa, Laghu-Ruksha Guna, Shita Virya, Madhura Vipaka and Pitta-Kaphaghna properties which alleviates the Pitta dosha, the aggravating factor of Amlapitta. The drugs also have Dipana-Pachana property which acts directly on Agni, thus increasing Jatharagni and Dhatvagni. Thus stopping the process of vitiation of Rasa and Raktadhatu which are the main dusshyas of Amlapitta. Some of the drugs also possess Rochana, Anulomana, Rakta-shodhana and Krimighna properties which are essential to treat Rasa-Raktadushti. Mandagni is the motive cause for the disease Amlapitta. As a result, Ama is produced. Dipana-Pachana property of
the drugs corrects the Mandagni and breaks the pathogenesis of Amlapitta. It also has Amapachana property. Hence it promotes Dhatvagni and as a result Dhatupusti process is motivated. Most of the drugs possess Laghu-RukshaGuna and Tikta-Madhura-KashayaRasa which purifies the Srotasa through their srotoshuddhikara property.[22,23] Thus with all the mentioned effect of ayurvedic drugs and formulations one can treat symptoms of post cholecystectomy gastric reflux and dyspepsia without any harmful effects of medications and dependency for life.

Conclusion:
The fast and modern lifestyle, irregular food habits and disturbance in natural cycle of human body i.e sleeping pattern causes the high incidence rate of post cholecystectomy symptom- gastric reflux and dyspepsia. These can be corrected with proper diet-lifestyle (Pathya and Apathyas of Amlapitta). Food should be consumed according to persons own digesting capacity. Ayurvedic drugs on Amlapitta can help reduce symptoms, help in smoothing mucosal layer of stomach and control the secretion of Pitta dealing with amlapitta symptoms like gastric reflux and dyspepsia.

References:
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