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Original Article

Non Surgical Management of Cholelithiasis (Pittashmari): A Case Study

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ABSTRACT

As a matter of fact, surgery (cholecystectomy or gall bladder removal) is the most common form of treatment for cholelithiasis (gallstones). However, the fact that surgically removing gallstones requires the removal of an entire organ has led to a growing interest in non-surgical treatments for gallstones. Besides alleviating symptoms, treatment for gallstones is necessary to avoid a progression that can result in severe conditions such as acute cholelithiasis. But so far as the medical management of cholelithiasis is concerned, it is not up to the mark in modern healing system. Although ursodiol or chenodiol in the form of oral bile acid pills, extracorporeal shock-wave lithotripsy (ESWL), contact dissolution therapy [injecting a solvent known a Methyl tertiary-butyl ether (MTBE) into the gallbladder to dissolve the gallstones], Percutaneous Cholecystostomy are good non-surgical measures, their roles are either limited or these are not free from adverse effects. Obviously, there is an urgent need of help from Alternative therapy to counter these difficulties. This article is a step in the direction of making an availability of a safe and effective non-surgical management of cholelithiasis to the ailing mankind.

Key words: Cholelithiasis, Cholecystectomy, Pittashmari, Herbal medicine

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INTRODUCTION

Presence of stones in the gallbladder is referred to as cholelithiasis. The stones are formed when the concentrations of various constituents in the gall bladder are not in the desired proportions. The composition of gallstones is affected by age, diet and ethnicity.[1] On the basis of their composition, gallstones can be divided into the following types:

Cholesterol stones

Cholesterol stones vary from light yellow to dark green or brown or chalk white and are oval, usually solitary, between 2 and 3 cm long, each often having a tiny, dark, central spot. To be classified as such, they must be at least 80% cholesterol by weight (or 70%, according to the Japanese- classification system).

Bilirubin stones

Bilirubin ("Pigment", "Black Pigment") stones are small, dark (often appearing black), and usually numerous. They are composed primarily of bilirubin (insoluble bilirubin pigment polymer) and calcium (calcium phosphate) salts that are found in bile. They contain less than 20% of cholesterol (or 30%, according to the Japanese-classification system).[2]

Mixed stones

Mixed ("**Brown pigment**") stones typically contain 20–80% cholesterol (or 30–70%, according to the Japanese-classification system). Other common constituents are calcium carbonate, palmitate phosphate, bilirubin and other bile pigments (calcium bilirubin ate, calcium palmitate and calcium stearate). Because of their calcium content, they are often radiographically visible. They typically arise secondary to infection of the biliary tract which results in the release of β-glucuronides (by injured hepatocytes and bacteria) which hydrolyzes bilirubin glucuronides and increases the amount of unconjugated bilirubin in bile.

A characteristic symptom of gallstones is a "gallstone attack", in which a person may experience intense pain in the upper-right side of the abdomen, often accompanied by nausea and vomiting, that steadily increases for approximately 30 minutes to several hours. A patient may

also experience referred pain between the shoulder blades or below the right shoulder. These symptoms may resemble those of a "kidney stone attack". Often, attacks occur after a particularly fatty meal and almost always happen at night, and after drink.

Risk factors Female gender, fecundity, and a family history for gallstone disease are strongly associated with the formation of cholesterol gallstones[3].

Obesity [4,5] as well also other factors contributing to the metabolic syndrome[6] such as dyslipidemia (in particular hypolipoproteinemia type IV [7,8] with hypertriglyceridemia and low HDL cholesterol), hyperinsulinemia-insulin resistance [9,10] or overt type 2 diabetes are risk factors for the development of gallstones, itself supposed to be a complication of the metabolic syndrome [11]. Oestrogen- treatment enhances the risk, both in women when used for anticonception or hormone-replacement[12] and in men with prostatic cancer[13-14].

Among specific dietary factors, short-time high cholesterol[15] as well as high-carbohydrate diets were associated with increased risk for gallstones[16-17], and in highly prevalent areas, the intake of legume [18], while unsaturated fats [19], coffee[20], and moderate consumption of alcohal[21-22]seem to reduce the risk. Also physical activity was found to decrease the risk for symptomatic gallstone disease, both for men and women[23-24], and independent of weight reduction. On the other hand, rapid active weight loss[25-26] and weight cycling [27,28]strongly increase the risk for the development of gallstones. Thus, weight reductions should not exceed 1.5 kg per week[29]. Fibrates, used for the treatment of dyslipidemia, interfere with cholesterol and bile acid synthesis and increase cholesterol secretion into bile[30-31]. However, in contrast to the prototype Clofibrate, during treatment with newer fibrates only a relatively small percentage do actually develop gallstones[32]

Pathophysiology

Cholesterol gallstones develop when bile contains too much cholesterol and not enough bile salts. Besides a high concentration of cholesterol, two other factors are important in causing gallstones. The first is how often and how well the gallbladder contracts; incomplete and infrequent emptying of the gallbladder may cause the bile to become over concentrated and contribute to gallstone formation. This can be caused by high resistance to the flow of bile out of the gallbladder due to the complicated internal geometry of the cystic duct.[33] The second factor is the presence of proteins in the liver and bile that either promote or inhibit cholesterol crystallization into gallstones. In addition, increased levels of the hormone estrogen, as a result of pregnancy or hormone therapy, or the use of combined (estrogen-containing) forms of hormonal contraception, may increase cholesterol levels in bile and also decrease gallbladder movement, resulting in gallstone formation.

Medical Treatment

Cholesterol gallstones can sometimes be dissolved by oral ursodeoxycholic acid, but it may be necessary for the patient to take this medication for up to two years.[34] Gallstones may recur, however, once the drug is stopped. Obstruction of the common bile duct with

Gallstones can sometimes be relieved by endoscopic retrograde sphincterotomy (ERS) following endoscopic retrograde cholangiopancreatography (ERCP). Gallstones can be broken up using a procedure called extracorporeal shock wave lithotripsy (often simply called "lithotripsy")[34], which is a method of concentrating ultrasonic shock waves onto the stones to break them into tiny pieces. They are then passed safely in the feces. However, this form of treatment is suitable only when there is a small number of gallstones.

Surgical Treatment

Cholecystectomy (gallbladder removal) has a 99% chance of eliminating the recurrence of cholelithiasis. Surgery is only indicated in symptomatic patients. The lack of a gallbladder may have no negative consequences in many people. However, there is a portion of the population — between 10 and 15% — who develop a condition called post cholecystectomy syndrome[35] which may cause gastrointestinal distress and persistent pain in the upper-right abdomen, as well as a 10% risk of developing chronic diarrhea.[36]

There are two surgical options for cholecystectomy:

- Open cholecystectomy is performed via an abdominal incision (laparotomy) below the lower right ribs. Recovery typically requires 3–5 days of hospitalization, with a return to normal diet a week after release and to normal activity several weeks after release.[37]
- Laparoscopic cholecystectomy, introduced in the 1980s.[38] is performed via three to four small puncture holes for a camera and instruments. Post-operative care typically includes a same-day release or a one night hospital stay, followed by a few days of home rest and pain medication.[39] Laparoscopic cholecystectomy patients can, in general, resume normal diet and light activity a week after release, with some decreased energy level and minor residual pain continuing for a month or two. Studies have shown that this procedure is as effective as the more invasive open cholecystectomy, provided the stones are accurately located by cholangiogram prior to the procedure so that they can all be removed.

CASE REPORT

A 36 year old female patient reported at OPD of Akhandanand Ayurveda College Ahmedabad in feb.2017 as a diagnosed case of Cholelithiasis with its full-fledged signs and symptoms. As per the patient he had developed these symptoms in past 6 months. In an attempt to get rid of these problems he consulted many renowned Allopathic doctors, but owing to no improvement in the condition the patient was advised to undergo surgery. Very much reluctant to surgery, the patient visited our hospital for a conservative treatment.

AYURVEDIC MANAGEMENT

As per the etiology and clinical presentations, Cholelithiasis is akin to *Pittashmari* described in Ayurveda. Therefore taking *Pittashmari* line of treatment

into account, the patient was switched on to following Ayurvedic medicines in this way- Mixed powder was given in three divided doses.

Table: 1 Ayurvedic medicines in three divided doses

S .No.	Ayurvedic medicines	Dose
1	Gokshurchurna(*Tribulus terestris*) Punarnavachurna(*Boerhavia diffusa lin*) Pasanbheda churna(saxifrage ligulata) Hazrulayahuda bhasma Kokilakshkshar	3 gm/day 3 gm/day 2 gm/day 250 mg/day 250 mg/ day
2	Tab Arogyavardhini vati	1 TDS
3	Tab Chandraprabha vati	1 TDS

DISCUSSION

According to Ayurveda, all the three Doshas viz. Vata, Pitta and Kapha play a role in formation of gallstones. Excessive increase of Pitta (caused by hot, spicy food, alcohol etc.) creates the basis for stone formation. Kapha increased by fatty, heavy foods mixes with Pitta and produces a highly sticky mixture. Vata dries this mixture and moulds it into shape of a stone. Ayurvedic treatment eliminates the need for surgery by assisting the body to expel the stones naturally.

Cholelithiasis has been compared with Pittashmari. As the name suggests, Pittashmari borrows both Pittavardhaka and ashmari producing etiological factors in its causation. Therefore management of Pittashmari. /Cholelithiasis should incorporate the medicines having properties to nullify both the factors.

Ingredients of Gokshurchurna Punarnavachurna Pasanbhedachurna-Hazrulayahudabhasm Kokilakshkshar- Arogyavardhinivati have Lekhana, Chhedana, Bhedana, Mootrala Bastishodhana, Anulomana, Deepana, Paachana, Vedanaasthaapana and Kaphashaamaka properties, so it is also helpful to dissolve/ reduce the size of Ashmari (stone). Chandraprabha vati have predominantly Pittashamaka property and thus these are responsible for inhibition of further stone formation.

CONCLUSION

In this case study, the patient has shown encouraging results during the management of Cholelithiasis *(Pittashmari*). As per the USG-abdomen, the patient has got rid of 6 to mm of gall stone within only 3 months of short duration by adopting Ayurvedic treatment. In addition, the general condition of the patient has also improved positively.

Therefore, on the basis of observations and results of this case study, it can be inferred that Ayurveda has the potential to treat cholelithiasis effectively and hence the sufferers must be advised to get benefitted from the Ayurvedic healing sciences and give active participation in national prosperity by leading enthusiastic and happy lives.

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