

## Ayurvedic Interventions in Cholelithiasis: A Single Case Study Evaluating the Outcomes of Herbal and Dietary Therapies

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**Abstract:** *In this case study, a 38-year-old female patient's is a chronic recurrent of gallstone, which has hepatobiliary system in population, 5% in children, 19% in females and 10% in male between 30- 69 years of age and increase in 70 – 80 year old people to 30 – 40 %. One of the most common gastrointestinal conditions, gallstone disease (GD/cholelithiasis) places a significant financial strain on healthcare systems. Ultrasonography screening for gallstone disease can identify asymptomatic patients, allowing for early treatment and averting major consequences. With few postoperative problems and minimal financial burden on the patient, laparoscopic cholecystectomy is the most widely accepted therapeutic option. Litholytic therapy (LT), extracorporeal shock wave lithotripsy (ESWL), cavitory cholecystectomy, endoscopic cholecystectomy, and percutaneous transhepatic LT are additional treatment options for GD; however, their applications are either restricted or fraught with side effects. Regarding the medical treatment of cholelithiasis, it falls short of contemporary healing standards.*

**Key words:** Cholelithiasis, Dietary management, Ayurvedic Management, Gallstone .

### INTRODUCTION :

**Background:** A chronic recurrent condition of the hepatobiliary system is gallstone disease. The development of gallstones in the hepatic bile duct, common bile duct, or gallbladder is indicative of poor metabolism of cholesterol, bilirubin, and bile acids. One of the most common gastrointestinal conditions, gallstone disease (GD) (Cholelithiasis) places a significant financial strain on healthcare systems. Among gastroenterological disorders, GD is one of the most costly illnesses in the world.

**Prevalence:** Gallstone disease is more prevalent in western societies. Compared to other regions of India, it is more prevalent among women in the north, northeast, and east. Gall bladder stones are found in about 5% of children, 10% of men and 19% of women between the ages of 30 and 69, and 30% to 40% of those aged 70 to 80 as well.

**Pathophysiology:** The disease GD is multifaceted. Women are more likely than men to have gallstones. Race, genes, and age are other influences. Obesity, fast weight loss, insulin resistance, glucose intolerance, high dietary glycemic load, alcohol consumption, diabetes, hypertriglyceridemia, medications, and pregnancy are additional factors. There are four main categories of factors:

(1) Those that contribute to cholesterol supersaturation of bile;

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- (2) Those that contribute to cholesterol rush and crystallization core conformation;
- (2) Those that result in impairment of basic gallbladder functions (contraction, absorption, secretion, etc) and
- (3) Those that lead to impairment of the enterohepatic circulation of bile acids.

On the basis of their composition, gallstones can be divided into the following types: Cholesterol stones, Bilirubin stones & mixed stones. It is connected with a change in lifestyle: reduction of motor activity, reduction of the physical load and changes to diets. Early screening for gallstone disease by ultrasonography can detect asymptomatic cases, which results in early treatment and the prevention of serious outcomes.

**Symptoms:** Characteristic symptom of gallstones is grandiloquent dyspepsia with right handwinger dull aching pain & frequently a "gallstone attack", in which a person may witness violent pain in the upper right side of the tummy, accompanied by nausea and vomiting, that steadily increases for roughly 30 twinkles to several hours. A case may also witness appertained pain between the shoulder blades or below the right shoulder. frequently, attacks do after a particularly adipose mess and nearly always be at night, and after drink.

**Management:** Surgery is only indicated in characteristic cases. Cholecystectomy (gallbladder junking) has a 99 chance of barring the rush of cholelithiasis. The lack of a gallbladder may have no negative consequences in numerous people. still, there's a portion of the population between 10 and 15 who develop a condition called post cholecystectomy pattern which may beget gastrointestinal torture and patient pain in the upper-right tummy, as well as a 10 threat of developing habitual diarrhea. Surgery has long remained the exclusive form of remedy for Gallstone Disease. The achievements in corrosiveness molecular biology and biochemistry have extended the views of intricate corrosiveness product and excretion processes and the mechanisms responsible for conformation of Gallstone and their structure. This could expand suggestions for medical treatment in cases with GD. thus, surgical and medical treatments for cholelithiasis are inversely used moment. The introductory treatments for GD are:

- (1) Cavitory cholecystectomy cholecystectomy;
- (2) Litholytic therapy (LT);
- (3) Extracorporeal endoscopic shock wave lithotripsy (ESWL);
- (4) Extracorporeal shock wave lithotripsy + Litholytic therapy; and
- (5) Percutaneous transhepatic LT.

But so far as the medical operation of cholelithiasis is concerned, it is not over to the mark in ultramodern mending system. This principle underlies the dissolution of Gallstone by using corrosiveness acids medicines. For this, litholytic medicines containing chenodeoxycholic or ursodeoxycholic acid (UDCA) are used. Preference is given to UDCA- containing agents. They're more effective and have nearly no side goods.

**Case Report:**

A 38 year old female patient (house wife from middle class family with mixed food habits, having a 7 yrs. old child) reported at OPD -14 on 29 Nov. 2023 as a diagnosed case of

Cholelithiasis (18.3mm solitary gall stone with Grade I fatty liver on USG report dated 29/11/2023) with symptoms viz Aruchi (Anorexia), Adhmana (fullness of abdomen), flatulence, Hrillasa (nausea), Malabaddhata (constipation) and Udarashool (Intermittent abdominal pain in epigastric and right hypochondric region) since past 2 months. She visited certain Allopathic Doctor and Gastroenterologist and received medication for the same with mild to moderate relief, but as the symptoms progressed she was advised cholecystectomy by the General surgeon. As the patient was very much reluctant to surgery, the patient visited to the OPD for Ayurvedic treatment. As per the etiology and clinical presentations, Cholelithiasis can be correlated to Pittashmari described in Ayurveda & considering nidanpanchaka following treatment was started:

**Pharmacological Treatment:**

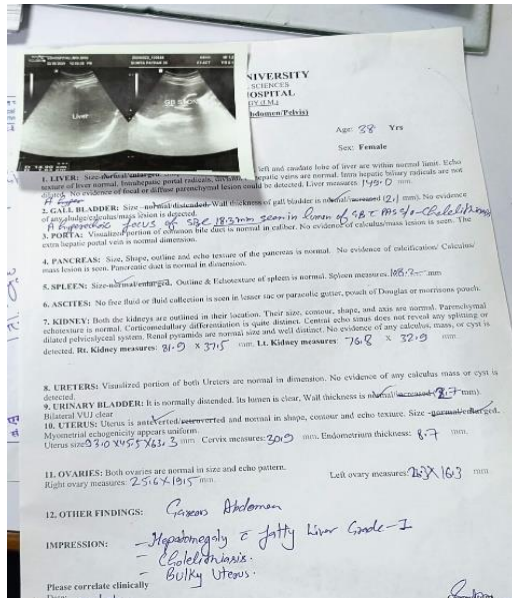
1. Aarogyavardhini Vati 500 mg BD after meals with luke warm water
2. Chandraprabha Vati 500 mg BD after meals with luke warm water
3. Suthshekhar ras (Sadha) 500 mg BD between meals with luke warm water
4. Avipattikar Churna (3gm) + Gudvel satva (1gm) + Praval Bhasma (125mg) + Shankh bhasma (125mg) + Makshik Bhasma (125mg) + Kapardik Bhasma (125mg) + Kokilaksh Kshar (125mg) Mixture BD Before meals with luke warm water.
5. Kumariasava 15 ml BD with after meals mixed with equal amount of luke warm water. Aarogyavardhini Vati was stopped after 45 days for 15 days, thereafter restarted again and given for further one month. Rest of the medicines was continued for consecutive six months.

**Non-Pharmacological Treatment: Life style modification:** Regular aerobic exercises, Yoga asanas (Bhujangasana, Dhanurasana, Paschimottanasana, Sarvangasana, Shalabhasana) & Pranayam/ Meditation, early to bed early to rise, avoid day time sleep.

**Dietary Modifications:** Eat Low fat, fresh fruits, berries, vegetables and grains, increase in water intake. Avoid Fatty meals, fried, spicy, baked, dairy foods products, fast foods, Butter, chocolate, ice creams, excess of tea/coffee, junk food and curd.

**Duration of treatment:** 6 Months

**Observation & Result:** As soon as the patient received the treatment, in the first follow up after 15 days the subjective parameters of the patient, symptoms viz. Abdominal pain, fullness of abdomen, flatulence, anorexia, nausea and constipation relieved significantly. So, the treatment was continued for further two and half months with a follow up in every 15 days. With gradual symptomatic relief, after 6 months of treatment the patient was absolutely asymptomatic and further one month follow up was taken to observe recurrence of any symptoms. No recurrence of symptoms found till then. USG scan was repeated and following result obtained:



**Clinical Information:** Slightly raised liver enzymes

**Liver:** shows homogeneous echotexture with slight increase of echointensity and shows mild hepatomegaly. Inferior margin of liver is smooth. The superior-inferior dimension left lobe is 97mm and right lobe at mid clavicular line is 164 mm. Echoanatomy appears normal. No space occupying lesion is seen. Size and shape is normal. Hepatic vein radicles are normal. No any dilatation of intrahepatic biliary radicles is seen.

**Portal vein:** Intrahepatic portal vein radicles are normal and shows hepatopetal flow spectrum. Extrahepatic portal vein size is normal

**Gall Bladder:** is well distended with bile. No calculi are seen. No any abnormal mucosal or wall thickening is noted. No pericholecystic fluid collection is seen.

**Common Duct:** size is normal.

**Pancreas:** is normal in echotexture. Size and shape appears normal. No focal lesion is seen. No abnormal dilatation of pancreatic duct is seen.

**Spleen:** is normal size and shape and shows normal echotexture.

**Both Kidneys:** are normal in cortical and septal echotexture. Size, shape and position is normal. No calculi or no any space occupying lesion is seen. No any evidence of any ureteric stone is seen. Sinus echo appear normal. Superior-inferior, antero-posterior and side to side length of the kidneys are - Right kidney 9.1 cm, 3.9 cm, 4.2 cm and left kidney 10.0 cm, 4.7 cm, and 4.9 cm respectively.

**Urinary bladder:** is normal with normal wall thickness. No calculus is seen. No any space occupying lesion is seen.

**Prostate:** is normal in size and shape.

**Peritoneum and bowel:** No evidence of ascites is seen. Bowels do not show any demonstrable wall thickening.

**Lymphnodes:** No paracolic and mesenteric glandular adenopathy is seen.

**IMPRESSION:**  
 1) MILD HEPATOMEGALY WITH SMOOTH INFERIOR MARGIN  
 2) GRADE (I) FATTY CHANGE OF LIVER  
 3) NORMAL PANCREAS, NORMAL KUB

Dr Utpal Kumar Saikia MBBS, DMRD  
 PG Diploma in MSK US, UCAM, Spain  
 Consultant Radiologist

As per patient concerns, we do not disclosed her identity

**Outcome:** After 6 months of Ayurvedic treatment, the patient reported significant reduction in symptoms, and ultrasound revealed a decrease in the size and number of gallstones.

**Conclusion:** In this case study, it is well understood that by adopting ayurvedic treatment symptomatic relief along with the general condition of the patient of Cholelithiasis is quite improved. As per the USG-abdomen report, the patient showed encouraging result as she got rid of an 18.3 mm of gall stone within 6 months of treatment. 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 further research studies should be carried out taking it into consideration.

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