



Research Article

EFFICACIOUS STUDY OF IKSHURAK (*ASTERACANTHA LONGIFOLIA*) KSHARA IN THE MANAGEMENT OF THE GALL STONE (CHOLELITHIASIS) WITH VARIOUS VEHICLES

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ABSTRACT

Gall bladder stone (Cholelithiasis) is one of the commonest among the major gallbladder disease, affecting large population of community. In untreated cases it may lead to numerous complications. The clinicians and scientists all over the world are trying hard to find out any safe and effective remedy. The effective method for the treatment of gallbladder stone available so far is surgical maneuver. In surgical management of diseases sometimes patients have to lose the organ associated with disease. In this context Cholelithiasis (Gall bladder stone) is a disease in which patient has to sacrifice with his gall bladder. After the removal of gall bladder, patient becomes away from the normal physiological life and suffers from hyperacidity, nausea, dyspepsia etc. for whole life. Ayurveda being pioneer of the medical modalities of the world has a definite role in the management of such diseases. Efficacy of indigenous herbs in reference to the management of gall bladder stone has not been well documented till date. The critical review of Ayurveda literature revealed that Ikshuraka Kshara might be the solution of problem as Ikshuraka is hepato-protective and Kshara preparation is effective in stone management.

Keywords: Cholelithiasis, Gall Bladder Stone, Ikshurak, Kokilaksha, Kshara, *Asteracantha longifolia*, *Hygrophila schulli*

INTRODUCTION

The prevalence of gallbladder disease at any point in time (i.e., prevalence) has advanced with the use of ultrasonography as opposed to previous studies based on clinical or necropsy evidence.^{1,2} These population surveys have better defined important risk factors as non modifiable and modifiable. Modifiable risk factors are family history, genetic predilection, ethnic background, female sex and age. Non modifiable factors are obesity, diabetes mellitus, metabolic syndrome, dyslipidemia, drugs, reduced physical activity, rapid weight loss, total parental nutrition (TPN), diet, underlying disease such as cirrhosis, crohn's disease etc.³ Incidences of gall bladder stone increases with the age. In children the gall bladder stone found in approximately 5 % (even babies may have gall stones), between 30th to 69th year of age the prevalence is up to 10 % in male and 19 % in females and increase in 70-80 year old people to 30-40 %. The increasing figures in old age mirror a decreased contractility of the gall bladder, an increased cholesterol secretion and augmented nucleation of the precipitated cholesterol. The speed of stone growth is 1-4 mm/year and seems to be same in older and younger people.⁴

Clinical Manifestations in Gall Stone

Asymptomatic/Silent gallstones

The majority of patients up to 80 % never experience biliary pain or complications such as acute cholecystitis, cholangitis, or pancreatitis.⁵ Hence, most gallstones are clinically "silent," an incidental finding often uncovered during abdominal ultrasound being performed for another reason.⁶ People with such asymptomatic cholelithiasis, however, eventually may develop symptoms (biliary pain) that require treatment,⁷ but this risk is quite low averaging 2 % to 3 % per year⁸. An even lower proportion, 1 % to 2 % per year, develop major gallstone complications.⁹⁻¹⁰

Symptomatic gallstone disease

Since most gallstones are asymptomatic, it is essential to define exactly which symptoms are caused by gallstones: true biliary pain and/or complications, versus nonspecific abdominal complaints including dyspepsia.¹¹⁻¹³ Gallstone-associated pain seems to follow a certain pattern in most patients.^{14,15} Consensus groups have attempted to establish criteria for biliary pain relative to defined characteristics (e.g., episodic, steady, severe pain located in the upper abdomen and lasting more than 30 minutes) and some accompanying features (e.g., nocturnal onset; nausea and vomiting; radiating through to the back)¹⁶. The importance for clarifying what constitutes true biliary pain is to better predict relief following cholecystectomy. Currently, cholecystectomy does not relieve biliary pain in 10 % to 33 % of people with documented gallstones.^{17,18} Confusion with other functional gut disorders like irritable bowel syndrome (IBS) and dyspepsia will not provide a favorable outcome from cholecystectomy.^{19,20}

Complications and management

Sequelae of gallstone disease include acute cholecystitis, chronic cholecystitis with additional complications like empyema or hydrops, phlegmon in the gallbladder wall, abscesses, biliary pancreatitis and other pathological alterations in the biliary tree originating from stone migration or developing during the course of chronic progressive inflammation.²¹ Oral litholysis, extracorporeal shock wave lithotripsy, contact litholysis and cholecystectomy by conventional and laproscopic methods are the main modalities of treatment in Cholelithiasis.

MATERIAL AND METHODS

Selection of Patients

Total forty five patients suffering from cholelithiasis were selected from the OPD and IPD of Seth Laxmi Narain Sanwaria Hospital

attached to Murari Lal Rasiwasia Ayurvedic College, Charkhi Dadri, India.

inferior angle of right scapula, Recurrent mild fever, Itching, Asymptomatic known case of gall stone.

Selection Criteria

Inclusive criteria

- All the cases presenting with the clinical signs and symptoms of cholelithiasis.
- Patient diagnosed to be suffering from Cholelithiasis.
- Patient of cholelithiasis who has undergone any type of the treatment with no or sub optimal relief.

Exclusive criteria

- Severe or complicated cases of cholelithiasis.
- Patient not complying with the direction of the physician
- Any condition which cannot be rendered as a case of cholelithiasis.

Criteria for Diagnosis

The diagnosis of these patients of cholelithiasis was confirmed on the basis of clinical features and radiological investigations described in the texts. These are as follows.

a) Clinical features

Right Hypochondriac discomfort, Right Hypochondriac pain, Nausea and Vomiting, Flatulent dyspepsia, Tenderness in right hypochondriac region, Pain referring to shoulder blade and

b) Investigations

Ultrasonography (USG) was done to confirm the diagnosis, to assess the size of stone and gallbladder.

Drug Description

- Drug:- Ikshurak (*Asteracantha longifolia*) Kshara
- Dose: - 300 mg bid
- Method of preparation of Kshara from Ikshurak (*Asteracantha longifolia*)²²

Drug administration through vehicles (Anupaan)

- Vehicals; Plain Water, Phalatrikadi Kwath²³, Distilled cow urine
- Dosage of vehicles:
 - Plain Water- 200 ml
 - Distilled cow urine - 10 ml b.i.d.
 - Phalatrikadi Kwath²³- 15 g b.i.d. (prepared as per Ayurvedic methodology²⁴)

Study Plan

Total 45 patients were categorized into three groups and each group having the 15 patients. A patient code has been given to all Patients of each group. Total duration of the work was of 90 days in all groups and follow-up was done after every 15 days. The description about the groups is as follows.

Group	Drug	Dose	Duration	Vehicle
A	Ikshurak Kshara	300 mg b.i.d.	90 days	Plain Water
B	Ikshurak Kshara	300 mg b.i.d.	90 days	Distilled cow urine
C	Ikshurak Kshara	300 mg b.i.d.	90 days	Phalatrikadi Kwath

Table 1: Statistical Analysis of Clinical Recovery in Group A

S. No.	Clinical Finding	Mean + SD	S.E.	t-value
1	Discomfort	1.133 ± 0.957	0.247	4.587
2	Pain	0.667 ± 0.596	0.154	4.330
3	Nausea vomiting	1.267 ± 0.772	0.199	6.357
4	Flatulent dyspepsia	1.4 ± 0.712	0.184	7.618
5	Tenderness	0.2 ± 0.4	0.103	1.936
6	Referred pain	0.2 ± 0.4	0.103	1.936
7	Recurrent fever	0.267 ± 0.442	0.114	2.335
8	Itching	0.333 ± 0.471	0.122	2.739

*Confidence level- 0.01

Table 2: Statistical Analysis of Clinical Recovery in Group B

S. No.	Clinical Finding	Mean + SD	S.E.	t-value
1	Discomfort	1.2 ± 0.833	0.215	5.582
2	Pain	0.8 ± 0.4	0.103	7.746
3	Nausea vomiting	0.6 ± 0.712	0.184	3.265
4	Flatulent dyspepsia	1.4 ± 0.879	0.227	6.166
5	Tenderness	0.8 ± 0.542	0.140	5.721
6	Referred pain	0.267 ± 0.442	0.114	2.335
7	Recurrent fever	0.6 ± 0.611	0.158	3.803
8	Itching	0.933 ± 0.772	0.199	4.684

*Confidence level- 0.01

Table 3: Statistical Analysis of Clinical Recovery in Group C

S. No.	Clinical Finding	Mean + SD	S.E.	t-value
1	Discomfort	1.867 + 1.087	0.281	6.649
2	Pain	1.533 + 0.957	0.247	6.206
3	Nausea vomiting	2.4 + 1.306	0.337	7.115
4	Flatulent dyspepsia	2.4 + 1.356	0.350	6.852
5	Tenderness	0.867 + 0.618	0.160	5.429
6	Referred pain	0.867 + 0.718	0.185	4.675
7	Recurrent fever	1.267 + 0.854	0.220	5.746
8	Itching	0.667 + 0.699	0.181	3.693

*Confidence level- 0.01

RESULT AND DISCUSSION

In present study out of us patients maximum 27 (60 %) patients were in the later age group (31-60 years) followed by 15 (33.33 %) in middle age group (17-30). One patient was child (0-6 years) age group. The youngest was of 14 years and oldest was of 61 years. Sex distribution shows female predominance. Out of 45 patients 28 were female and 17 were male.

All the cases belongs to the Hindu religion, this might be because of the area in which patient has been registered. Among all the cases one male case was unmarried and rest all 44 cases were married.

As per literature, the incidence of disease is more in sedentary patients. The present study shows the same 64.4 % patients having the sedentary life style and occupation and 73.33 % patients consume more fatty food in their diet. Mostly patients (88.89 %) were vegetarian and 27 patients belong to middle income group. Mostly cases (71.12 %) have multiple stones and duration of illness is mainly 1 to 5 years (46.66 %). Incidence of family history shows that only 13.33 % patients having the family history of cholelithiasis.

In study maximum no. of patients' shows the history of typhoid in past and seven patients do not have history of any other relevant disease. Out of 45 patients mostly 37 patients have active stone and only 8 patients were having the silent stones. Among 45 cases, 28 patients were female. In those 28 females, 19 patients were fatty, 20 were fertile, 23 were flatulent and 14 were above the age of forty.

Clinical features may be of different grade. The study shows that maximum number 82.22 % cases shows the pain, nausea, vomiting and flatulent dyspepsia followed by discomfort in abdomen in 80 % cases. Only 19 cases shows the referred pain, tenderness was observed in 31 (68.88 %) cases, recurrent fever and itching was seen in 26 and 25 patients respectively. On clinical evaluation there was considerable improvement in subjective parameters. Majority of patients demonstrated a significant increase in feeling of wellness after the therapy in all the groups and more in third group. There was 54.67 %, 61.49 %, 85.48 % improvement in clinical parameters of group A, B and C respectively. In all groups maximum improvement was noticed in clinical features and almost nil improvement was seen in size of stone. The gall bladder wall thickness was about to normal after the treatment in all the groups.

In Group A, 13 patients were of activated stone and two patients of silent stone. Among 13 patients of activated stones 7 patients shows the fare response, 5 patients shows the poor response and only one patient shows the good response. Maximum response in clinical recovery is seen in patient no. 1 and least response is seen in patient no. 8. In same group maximum benefit 67.74 % was seen in flatulent dyspepsia followed by nausea, vomiting by 59.38 %. Minimum response was seen in tenderness of patients. Statistically, in group A flatulent dyspepsia (t value- 7618) was more significant followed by nausea and vomiting (t value- 6.357) and last significance was seen in tenderness (t value- 1.936) and referred pain (t value- 1.936). Stone size in group A is almost same before and after treatment. After the treatment gall bladder wall thickness was normal (≤ 2) in 10 patients and in rest 5 patients thickness was more than normal but less than before treatment (Table 1).

In Group B three patients were with the silent stone and 12 patients were having the activated stone. Among 14 patients the symptomatology of 11 patients shows the overall fare response to the treatment and only one patient shows the poor response. None of the patient shows the good response to the treatment. Maximum clinical recovery was shown by patient no. 7 and 4 patients numbered 5, 10, 11 and 15 shows the 66.67 % response to the treatment. Patient no. 4 shows the least response i.e. 64.67 %. In clinical feature maximum 77.78 % result seen in the itching instead of that 75 % response was seen in recurrent fever. Minimum 33.33

% result shown in nausea and vomiting. Statistically, in group B pain (t value-7.746) was more significant followed by flatulent dyspepsia (t value- 6.166) and least significance was seen in referred pain (t value- 2.335). There are no significant changes in the size of stone. Gall bladder wall thickness is normal in all the case except two numbered 11 and 14, which is about to normal (Table 2).

In Group C three cases were of silent stone they did not show any clinical features. Rest among 12 cases 11 shows the good response to the therapy and only one patient shows the fare response. Maximum response was seen in patient no. 10 (94.44 %) and least response in the patient no. 13 (73.68 %). Every clinical feature shows the marked recovery. Maximum recovery was seen in the itching 90 % and recurrent fever 89.47 % followed by nausea and vomiting 88.89 %. Least response was seen in Right hypochondriac tenderness of patients. Statistically, in group C maximum significance was seen in nausea vomiting followed by flatulent dyspepsia (t value- 6.852), abdominal discomfort (t value- 6.649) and pain (t value- 6.206). Least significance was seen in the itching (t value- 3.693). In all the cases gall bladder wall thickness was in normal limits after the treatment. Stone size could not show any recovery same as to the other groups (Table 3).

On intra-group comparison best recovery was seen in the group C. All clinical features were relieved by more than 80 %. In recovery of nausea vomiting and referred pain in group A is better than group B. Both the groups A and B show the same response in flatulent dyspepsia. Gall bladder wall thickness response is best seen in group C but the stone size could not be markedly decreased in any group. According to data there is a little variation in the size of stone but as per discussion with radiology experts there might be minor variations in the size of stone because of machine, position of stone and human error. So, we are not considering any success/ change in the stone size (Table 4). All the patients tolerate medicines very well and not a single patient complaint about side effect or toxic effect of drugs used in present trial.

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