



RESEARCH ARTICLE

ROLE OF AYURVEDIC COMPOUND IN CHRONIC CHOLECYSTITIS AND CHOLELITHIASIS PATIENTS

^{*,1}Dr. Rashmi Gupta, ²Dr. Gopal Das Gupta, ³Dr. Santosh Kumar and ⁴Dr. Lakshman Singh

¹MS, Ex SR & PhD Dept. of Shalya Tantra, Faculty of Ayurveda, IMS, BHU-Varanasi, Lecturer, Dept. of Shalya Tantra, CSS Ayurveda Samsthana, Koilaha, Kausambi (UP)

²MD, PhD Dept. of Kayachikitsa, IMS BHU, Lecturer, Dept of Kayachikitsa CSS Ayurveda Samsthana, Koilaha, Kausambi (UP)

³Senior Research Officer, Dept of Centre of Experimental Medicine & Surgery, Institute of Medical Science, Banaras Hindu University-Varanasi 221005

⁴Professor & Head Dept. of Shalya Tantra, Faculty of Ayurveda, Institute of Medical Science, Banaras Hindu University-Varanasi 221005

ARTICLE INFO

Article History:

Received 10th February, 2017

Received in revised form

28th March, 2017

Accepted 08th April, 2017

Published online 31st May, 2017

Key words:

Cholecystitis,
Cholelithiasis,
Lithotryptic,
Rohitkadhya choorna,
Phaltrikadi kwath etc.

ABSTRACT

The Cholecystectomy for Cholecystitis and cholelithiasis is immerging one of the commonest general surgical procedure performed in India as well as world. The India is a developing country & has a high growth rate of population accordingly the gall bladder stones and also have high incidence particularly northern part e.g. U.P., Bihar, Delhi and West Bengal etc. As per its etiology, it commonly occurs in case of faulty diet and activity as Fatty, Fertile, Female, and Forty. A high risk of GBD was observed in older, multiparous women and men with diabetes, intake of chickpeas, unsafe water and villages with heavy metal water pollution⁽¹²⁾. No curative & safe medical management has been accepted for chronic Cholecystitis & cholelithiasis as per modern medicine. Although some drugs are available e.g. Ursodiol & Chenodiol but both drugs are toxic, very costly and limited only to cholesterol stone. This study was done with 75 patients. Evaluation has been made on the basis of clinical and biochemical findings. In Ayurvedic classics various herbal, mineral and metallic element are mentioned on the basis of clinical use of thousands year of clinical experience. Out of these compounds one of the important compounds (e.g. Rohitkadhya capsule and Phaltrikadi kwath) has been found very much useful in the same clinical manifestation. The effect of Rohitkadhya and Phaltrikadi decoction was explained in *Bhaisajyaratnavali*. After complete study, it was found that the treated groups have got earlier improvement than control group. The improvement in symptoms and biochemical changes was reported more when both trial drugs used together (Group C in Patients). It was found that anti lithogenic effect of Ayurvedic formulation.

Copyright©2017, Dr. Rashmi Gupta et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Dr. Rashmi Gupta, Dr. Gopal Das Gupta, Dr. Santosh Kumar and Dr. Lakshman Singh, 2017. "Role of ayurvedic compound in chronic cholecystitis and cholelithiasis patients", *International Journal of Current Research*, 9, (05), 51241-51244

INTRODUCTION

The treatment of Cholecystitis and cholelithiasis at present is mainly cholecystectomy. No drug is available which can alter the inflammatory changes of Cholecystitis and neither drug is available which can completely remove or dissolved lithiasis without any complication. Perhaps few drugs are there in modern medicine which one reported their activity to dissolve the gall stones with few extent but these are with harmful adverse effect. e.g. chenodeoxycholic acid & ursodeoxycholic acid. There is need to avoid harmful effect of drugs, so the conventional eco-friendly herbal & natural preparation are being search & scrutinized as alternative.

*Corresponding author: Dr. Rashmi Gupta,

Department of Shalya Tantra, Faculty of Ayurveda, IMS, BHU-Varanasi, Lecturer, Dept. of Shalya Tantra, CSS Ayurveda Samsthana, Koilaha, Kausambi (UP)

More than 5 lakh operations are done per annum in united state (1975). A latest study shows that 1 in 10 American has gall stone. In India 18% female & 9% male suffered from gall stone. It is higher than every incidence in U.S. & Western Europe, where the incidence is approximate 8-10% and in India overall 12% incidence. The treatment of choice is at present only surgical management that is open, minimal access surgery and laparoscopic cholecystectomy.

MATERIAL AND METHODS

All of the 75 cases of chronic cholecystitis and cholelithiasis were divided into 3 groups –

Group A : 25 patients of chronic cholecystitis & cholelithiasis were kept under observation for further manifestation after 2 weeks follow-ups.

Group B : 25 patients of chronic cholecystitis & cholelithiasis were given Rohitakadhya Capsule (i.e. treated group) kept under observation for further manifestation after 2 weeks follow-ups.

Group C : 25 patients of chronic cholecystitis & cholelithiasis were given Rohitakadhya Capsule & Phaltrikadi decoction (i.e. treated group) kept under observation for further manifestation after 2 weeks follow-ups.

Inclusion criteria

- Patients with age (18-70yrs) from both sex having chronic Cholecystitis with Cholelithiasis.
- The patients have chronic Cholecystitis with Cholelithiasis.

Exclusion criteria

- Patient's having child age group & Pregnant Women
- Acute Cholecystitis & Cholelithiasis
- Uncontrolled diabetes mellitus
- Tubercular patients
- Malignancy
- HIV positive Patients
- Hepatitis B positive patients

Contents of Drug

Rohitakadhya Capsule (Bhaisajya Ratnavali 41/10,11)

1. Rohitaka (*Tacoma undulata*)
2. Yavakshar
3. Bhunimba (*Swertia Chirayata*)
4. Kutiki (*PicrorhizaKurroa*)
5. Nagarmotha (*Cyperusrotundus*)
6. Navasadar
7. Ativisha (*Aconitum hetrophylum*)
8. Sunthi (*Zingiberofficinale*)

3. Vibhitak (*Terminalliabellerika*)
4. Katuki (*PiccorrhizaKurroa*)
5. Vasa (*AdhatodaVasika*)
6. Guduchi (*T.Cordifolia*)
7. Chirayata (*S.Chirayata*)
8. Nimba (*Azadirecta Indica*)

Dose*

Rohitakadhya Capsule 2 Capsule BD
Phaltrikadi decoction 40ml BD

*(References of Dose of Drugs.....The great stalwarts like sharangdhar, BhavPrakash mentioned the dose of the crude drug in decoction form. They have mentioned the dose as 4 tola which is equal to 44gm. Following the principle laid in the classics & 200gm crude drug added 16 times of water & boiled it. When the water became reduced to 1/4th part, then filtered decoction kept in a drier chamber. After that it was observed that 200gm of crude drug gives 9gm of extract, hence 44gm of crude drug gives 1.98gm.)

Duration: Total duration of trial period was 2 weeks with one follow-up.

Route of Administration: Drug was given per oral (P.O.) route.

Follow-ups:All the registered patients, after established diagnosis were provided the trial drug in the above mentioned form and dosage. Fortnight clinical and investigatory assessment was done in each and every patient.

RESULTS

At end of trial period of 15 days in control group no improvement was seen in Abdominal Pain and Jaundice. There was 10% increment in symptom of Nausea and 5% in

Table 1. Grading of symptom and sign

Score	Grade	Abdominal Pain	Nausea	Heperbilirubinemia	Bloating
0	Absent	No Pain	No Nausea	No yellowish discoloration	No Bloating
1	Mild	Pt. feel pain needs no medicatio	Nausea after taking food, subside after digestion	1.5to 2.0mg/dl (Yellowish discoloration only in upper conjunctiva	Bloating after food intake, needs no medication
2	Moderate	Pt need medication to get relief	Nausea without any relation to food occasionally	2.0 to 3.0mg/dl (Yellowish discoloration of bulbar conjunctiva & undersurface of tongue)	Regular bloating without relation to food, needs medication
3	Severe	Pt need hospitalization to get relief	Nausea without any relation to food regularly needs medication occasionally	>3.0mg/dl (yellowish discoloration of whole body)	Regular bloating without relation to food, needs immediate medication

*-Dr. S. K.Sharma... Effect of ArogyaverdhaniVati on liver function after cholicystactamy (1981).
Dr. Pankaj Kumar Barman, "management of post cholecystectomy syndrome by ArogyavardhaniVati" 2001

Table 2. Incidence of symptomatology in 25 patient of Chronic Cholecystitis with Cholelithiasis of Control group A

S.No.	Symptom	Incidence	Before treatment			Review after 15 days interval			Improved (%)
			Mild	Mod.	Severe	Mild	Mod.	Severe	
1.	Abdominal Pain	20	8	12	0	08	12	0	0%
2.	Nausea	19	9	8	2	11	10	0	-10%
3.	Bloating	23	12	8	3	13	8	3	-5%
4.	Jaundice	08	07	01	0	06	02	0	0%

Phaltrikadi Decoction (Bhaisajya Ratnavali 12/22)

1. Amla (*EmbllicaOfficinale*)
2. Haritaki (*TerminalliaChebula*)

Bloating. At end of trial period in treated group B after 15 days 90.00% improvement was seen in Nausea, 85.71% in jaundice, 83.33% in abdominal pain, and 50% in bloating. At end of trial period in treated group C after 15 days 93.33% improvement

was seen in abdominal pain, 90.90% in Nausea, 100.00% in bloating, and 100.00% in Jaundice.

cholecystitis & cholelithiasis and after taking standard treatment it comes down, it is a normal phenomenon that is

Table 3. Incidence of symptomatology in 25 patient of Chronic Cholecystitis with Cholelithiasis, treated with Rohitakadhya Capsule (Treated group B)

S.No.	Symptom	Incidence	Before treatment			After treatment				Improved (%)
			Mild	Mod.	Severe	Mild	Mod.	Severe	Nil	
1.	Abdominal Pain	18	15	3	0	3	0	0	15	83.33
2.	Nausea	20	10	08	2	2	0	0	18	90.00
3.	Bloating	22	12	10	0	06	05	0	11	50.00
4.	Jaundice	07	07	0	0	01	0	0	06	85.71

Table 4. Incidence of symptomatology in 25 patient of Chronic Cholecystitis with Cholelithiasis, treated with Rohitakadhya Capsule & Phaltrikadi Kwath (Treated group C)

S.No.	Symptom	Incidence	Before treatment			After treatment				Improved (%)
			Mild	Mod.	Severe	Mild	Mod.	Severe	Nil	
1.	Abdominal Pain	15	12	3	0	01	0	0	14	93.33
2.	Nausea	22	10	10	2	2	0	0	20	90.90
3.	Bloating	20	12	08	0	0	0	0	20	100.00
4.	Jaundice	05	05	0	0	0	0	0	05	100.00

Table 5. Effect on Biochemical report in 75 patients of Cholecystitis with Cholelithiasis with Routine OPD Treatment (Control group)

S.No.	Symptom	Group	Mean ± SD BT	Mean ± SD AT	T Value	P Value
1.	Hemoglobin (ingm%)	Group A	13.148±0.905	13.36± 0.89	t=-2.918	P=0.008< 0.01 (HS)
		Group B	11.508±1.1902	13.196±0.8682	t=-1.421	P=.000,<0.001(HS)
		Group C	11.644±1.168	12.756±.9535	t=-5.96	P=.000< 0.001 (HS)
2.	Leucocyte Count (in per cumm)	Group A	7376.80 ± 1711.77	6522.00 ± 983.93	t = 3.83	P=0.00< 0.01 (HS)
		Group B	7439.60 ± 1634.38	5954.80 ± 744.30	t = 5.08	P=0.000<0.001(HS)
		Group C	7176.00 ± 1601.79	5850 ± 609.57	t = 4.29	P=0.00< 0.01 (HS)
3.	Bilirubin	Group A	1.79 ± 0.57	0.84 ± 0.12	t = 8.96	P=.000<0.001 (HS)
		Group B	2.02 ± 0.74	0.86 ± 0.11	t = 8.02	P=.000<0.001 (HS)
		Group C	1.73 ± 0.57	1.01 ± 0.21	t = 6.38	P=.000<0.001 (HS)
4.	Serum SGOT	Group A	38.08 ± 9.74	27.76 ± 7.73	t = 8.28	P=.000<0.001 (HS)
		Group B	41.04 ± 12.78	27.04 ± 5.86	t = 7.18	P=.000<0.001 (HS)
		Group C	54.44 ± 12.88	33.80 ± 6.64	t=10.04	P=.000<0.001 (HS)
5.	Serum SGPT	Group A	39.36 ± 10.35	27.00 ± 7.65	t = 7.84	P=.000<0.001 (HS)
		Group B	43.76 ± 11.62	25.88 ± 5.89	t = 9.25	P=.000<0.001 (HS)
		Group C	56.20 ± 12.35	32.28 ± 6.22	t=11.70	P=.00< 0.001 (HS)
6.	Serum Alkaline Phosphatase	Group A	250.08 ± 73.77	145.76 ± 41.52	t=11.09	P=.000< 0.001(HS)
		Group B	252.32 ± 81.52	145.44± 43.70	t =9.48	P=.000<0.001 (HS)
		Group C	253.20 ± 77.14	180.64 ± 73.69	t =7.76	P=.000<0.001 (HS)
7.	Serum cholesterol	Group A	250.08 ± 73.77	145.76 ± 41.52	t=11.09	P=.000<0.001 (HS)
		Group B	252.32 ± 81.52	145.44± 43.70	t =9.48	P=.000<0.001 (HS)
		Group C	253.20 ± 77.14	180.64 ± 73.69	t =7.76	P=.000<0.001 (HS)

DISCUSSION

Clinical manifestation on the basis of subjective study, Group A (Table & Figure no. 13) having no improvement shows in abdominal pain, nausea, bloating, jaundice. Even that occurrence of nausea & bloating increase after review of 15 days of interval. Trial group B & C showing improvement of symptoms in patients but group C shows more improvement in Symptoms than group B (Table & Figure no.14, 15). Group B received Rohitakadhya Capsule & Group C received Rohitakadhya Capsule & Phaltrikadi decoction So that Group C shows more improvement in symptoms of patients as comparison to Group B, It seems that Rohitakadhya Capsule with Phaltrikadi decoction has caused earlier and fast recovery of symptoms. Hemoglobin percentage is observed & revealed that there is no significant difference in comparison to group A, group B & C. But comparison between before and after treatment in group B & C revealed a highly significant improvement statically. Comparative increasing of hemoglobin percentage has been higher in trial group e.g. group B & C. Total leucocytes count is usually increased in case of

why paired t-test showed highly significant. But inter group comparison shows much improvement in trial group B & C (Table & Figure no. 18). The study showed that serum bilirubin, ALT, AST & alkaline phosphatase decreased after 15 days of interval; statistically it was highly significant in all groups (Table No.25, 26, 27, 28 & figures). But group B & C showed comparatively much improvement.

Conclusion

After complete scientific and statistical study, it has been concluded that treated group are earlier benefited and probable normalization of biochemical changes of chronic cholecystitis and cholelithiasis than control group, total duration of therapy was 15 days. Assessment has been done on the basis of subjective and objective parameter.

- Objective assessment by biochemical changes, which are found to be decreased significantly after completion of therapy.

- In nut shell it can be concluded that Rohitakadhya Capsule & Phaltrikadi kwath exhibits a number of health benefits including.
 - Protects and improves liver function
 - Promote the proper extra hepatic circulation of bile.

In this way, further researches are needed to explain its complete mode of action.

REFERENCES

Astanga Hridayam - English translation by Prof. K. R. Srikantha Murthy; Vol. 1-3; Krishnadas Academy / Chowkhamba Sanskrit Series. (2003)

Bhaishajya Ratnavali - Vidhyotani Hindi Commentary by Kaviraj Sri Ambika Datta Sastri, Chowkhamba Sanskrit Series. (2005)

Bhavaprakash Nighantu - Vidhyotani Hindi Commentary by Sree Bramha. Sarikar Shasthri, Chowkhamba Sanskrit Series. (2004)

Classical uses of Medicinal Plants - Prof. P.V. Sharma, Chowkhamba Sanskrit Series. (2003)

Dravya Guna Vignana - By Prof. P. V. Sharma; Vol. I & II, Chowkhamba Bharati Academy. (2003)

Glossary of Indian Medicinal Plants with Active Principles; Part-I, by L.V. Asolkar, KK Kakkar and O.J. Chakre, Publications and Information directorate, CSIR.

Harrison's - Principles of internal medicine, 16th Edition, Vol. I and II, McGraw Hill (2000)

Robbin's Pathologic basis for disease - 5th Edition. LE. Saunders Publications. (2002)

Yoga Ratnakar - Vidhyotani Hindi Commentary by Kaviraj Sri Ambika Datta Sastri, Chowkhamba Sanskrit Series. (2003)
