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LAPAROSCOPIC CHOLECYSTECTOMY – THE SURGICAL PROCEDURE OF CHOICE IN CHOLELITHIASIS

KEYWORDS: laproscopic cholecystectomy, cholelithiasis, mixed gall stones, ultrasonography, mortality.

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ABSTRACT *240 cases of cholelithiasis were studied in osmania general hospital, Hyderabad. Clinical features, age incidence, sex ratio, presentations, investigations & surgical modalities of treatment were studied. The youngest patient was 16yrs of age & the oldest patient was 66yrs. The maximum number of patients were between 41-50yrs of age. The female to male ratio was 2:1. Most of the patients were not over weight or obese but moderately built. Pain in the rt. Hypochondrium was the presenting symptom in 98% of the cases. Ultrasonography of the abdomen was the most accurate investigation (nearly 100%). Laproscopic Cholecystectomy was the most common surgical procedure done in our series. Laparoscopic cholecystectomy was the surgical procedure of choice in 160 cases out of 240 cases (66.6%). Recovery after laparoscopic cholecystectomy is rapid and the patients are discharged within 24 – 48 hours. There was no mortality in the series.*

INTRODUCTION

"To study the epidemiology of gall stones is both exciting and frustrating; Exciting because epidemiology holds the key to etiology; when we know exactly who gets a disease we are a long way to defining why they get it; Frustrating because accurate information on who gets gall stones is so hard to come by". Thus wrote Heaton (1975) who went on to describe fascinating geographical differences in known prevalence. The highest in the world is among the Pima Indians in the U.S.A. and the lowest among Greenland and Canadian Eakimoa. Cholelithiasis is common generally in U.S.A., U.K., Sweden, France, Germany, Israel and Australia but rather less so in Egypt, India, Japan, Thailand and Singapore.[1]

The incidence of Cholelithiasis varies not only from country to country but also from place to place in one country. Even in our country, the incidence of gall bladder disease differs in various regions. The incidence reported in Calcutta, West Bengal is 25% of all operated surgical cases (Raha & Aikat, 1967). In Sasson General Hospital, Pune the incidence is very low i.e., 0.4% of all operated cases (Joshi M. 1975). In the more affluent urban population of that region, gall bladder disease accounts for 2.35% of all operated cases (1970). In Delhi, from Lady Hardinge Medical College and Hospital, 290 cases of Cholecystitis were recorded from 1956-1967 out of which 171 were cases of stones. The present study is undertaken to find out the incidence in Osmania General Hospital and also to study various aspects of the disease and different surgical modalities of treatment.

MATERIALS AND METHODS

A retrospective review was made of all patients admitted with diagnosis of Cholelithiasis and treatment at Osmania General Hospital from October 2011 to October 2013

240 cases of cholelithiasis were personally studied to compare the age incidence, Sex ratio, Clinical features, Laboratory and imaging studies and different surgical modalities of treatment.

ANALYSIS, OBSERVATION AND DISCUSSION

During the period of October 2011 to October 2013, 240 cases of cholelithiasis were admitted in Osmania General Hospital and analysis which include 240 cases for the purpose of studying the incidence in osmania general hospital and also to study the various surgical modalities of treatment.

Age incidence:

The youngest patient was 16 years age and the oldest was 66 years.

In the present series maximum number of patients was in the 41 to 50 years age group.

SEX DISTRIBUTION

In the present series female patients accounted for 66.6% of the total cases and males are 33.3% with a female to male ratio of 2:1.

PHYSICAL CONSTITUTION

Although obese people suffer more but in the present series of cases studied it is evident that most of them are not over weight, and most of them moderately built.

PRESENTING SYMPTOMS

TABLE :1

Symptoms	Present Series	North American Surgeons series (1991)	**Vijaypal series(1980)**
Pain	96%	87.5%	84%
Vomiting	66.6%	52.5%	54.7%
Jaundice	20%	17.7%	22.7%
Fever	41.6%	14.0%	16.%
Dyspepsia	33.3%	63.5%	34.6%

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INVESTIGATIONS
1. HB% T.C. & D.C.
2. Urine analysis
3. Chest X-ray
4. E.C.G. (for the patient above 40 years of age)
5. Blood sugar
6. Blood urea
7. Blood group
8. Serum cholesterol
9. Serum Calcium

SPECIFIC INVESTIGATIONS
1. Plain X-ray abdomen
2. Ultrasonography of abdomen
3. ERCP
4. L.F.T.

Urine examination revealed bile salts and bile pigments in 33% of cases. Leucocytosis was present in 10% of the cases. 16 patients were found to be diabetic on investigation. chest x-ray, E.C.G. served as routine pre-operative investigations.

IMAGING STUDIES
X – Ray erect abdomen

FIGURE 1:

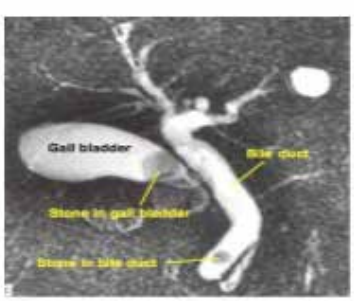
FIGURE 2:

US showing cholelithiasis

ERCP

FIGURE 5:

MRCP



LAPAROSCOPIC CHOLECYSTECTOMY

FIGURE 6:

FIGURE 7:

FIGURE 8:

FIGURE 9:

FIGURE 10:

INVESTIGATIONS
TABLE :2

Investigations	NO. of cases done	No. of cases diagnosed	Percentage
Plain X-ray Abdomen	240	10	4.1%
Ultrasound Abdomen	240	240	100%
ERCP	20	20	100%

MANAGEMENT
240 cases were studied during the period of October 2011 to October 2013. All the cases were taken up for elective surgery after preparing the patients with antibiotics. Parenteral glucose and inj. Vitamin K were given for the cases of obstructive jaundice.

OPERATIVE MANAGEMENT
Under General anaesthesia, Kocher's sub-costal incision was choosen for open cholecystectomy procedure while 4 ports are placed in the abdomen usually at the umbilicus and epigastrium with 10mm ports and two 5mm ports placed laterally in laparoscopic cholecystectomy.

OPERATIVE PROCEDURES ADOPTED
1. Laparoscopic cholecystectomy
2. Open Cholecystectomy (includes Lap Converted to Open Cholecystectomy)
3. CBD exploration + T-tube drainage + Cholecystectomy

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TABLE :3

Type of operation	No. of cases	Percentage
Lap cholecystectomy	160	66.6%
Open Cholecystectomy (include Lap Converted to Open Cholecystectomy)	60	25%
CBD exploration + T-tube drainage + Cholecystectomy	20	8.33%

Laproscopic cholecystectomy was the surgical Procedure of choice in 160 cases while open cholecystectomy was done for 60 cases which included conversion from Laproscopic cholecystectomy to open cholecystectomy. In 20 cases CBD exploration with T-tube drainage was done. In the present series out of 240 cases CBD exploration and T-tube drainage was done in 8.33% of cases for choledocholithiasis.

Recovery after laparoscopic cholecystectomy is rapid and the patients are discharged within 24 – 48 hours.

POST OPERATIVE CARE

Post operative care was based on general principles with restriction of oral fluids for 24 hours in Laparoscopic cholecystectomy and 48 hours for open cholecystectomy. Antibiotics were given for all the patients for a period of 7-10 days. Drainage tube was removed on the 4th postoperative day.

POST OPERATIVE COMPLICATIONS

20 patients developed wound infection, and in 10 cases respiratory tract infection developed in the post operative period in open cholecystectomy. In two cases, biliary discharge was present for 4 to 5 days through the wound of the drainage tube. All these complications were readily overcome with appropriate antibiotics. No postoperative complications were seen with laparoscopic cholecystectomy.

T-tube was removed between 8 to 12 post operative days.

POST OPERATIVE INVESTIGATIONS

Bile culture was done. In the majority of the cases, E.coli was grown. In few cases, Klebsiella & in few cases Pseudomonas was grown. The culture was Sterile in some cases.

HISTOPATHOLOGICAL EXAMINATION OF GALL BLADDER

Most of the cases showed changes of chronic cholecystitis and Biochemical analysis showed most of the stones to be of mixed variety.

There was no mortality in our series, as all the cases were taken up for elective surgery

CONCLUSIONS

240 cases of cholelithiasis were analyzed for a period of 2 years from October 2011 to October 2013. The following conclusions were drawn from the series :

1. The age incidence was highest in 5th decade.
2. Incidence was highest in females.
3. Classical symptoms were found to be Pain in the right hypochondrium, Vomiting, Dyspepsia, Fever but the incidence of Jaundice was less.
4. Ultrasonogram was diagnostic investigation of choice.
5. Ultrasonography revealed calculi in gall bladder in all the cases i.e 100%. Ultrasonography for the suspected cases of cholelithiasis is the most useful investigation with highest rate of accuracy (nearly 100%)
6. Laproscopic Cholecystectomy was the most common surgical procedure done in our series. Laparoscopic cholecystectomy was the surgical procedure of choice in 160 cases. No postoperative complications were seen with laparoscopic cholecystectomy. Recovery after laparoscopic cholecystectomy is rapid and the patients are discharged within 24 – 48 hours.
7. The most common cause of conversion to open cholecystectomy was dense adhesions.
8. Bile culture was done. The culture was positive for E.Coli in 33% of cases, making preoperative antibiotic mandatory.
9. There was no incidence of carcinoma of gall bladder in the presence of cholelithiasis in our series.
10. Biochemical analysis showed most of the stones to be of mixed variety.
11. There was no mortality in our series, as all the cases were taken up as elective surgeries.

REFERENCES

1. Trede M. Sohaupp W. Ein Pudoyer for the cholecystectomy. Goldstandard der Chirurgie 61 (1990)365.
2. Berci G, Sackier JM : The European experience with laparoscopic cholecystectomy .Am.J.Surg.161 (1991)382-384.
3. Cusshieri A et al: the European experience with laparoscopic cholecystectomy .Am. J .Surg .162(1991)385-387
4. Graves HA, Ballinger JF, Anderson WJ: Appral SAL OF laparoscopic cholecystectomy.Am.J.Surg.213(1991)655-664.
5. O.Sen DO Laparoscopic cholecystectomy Am.J.Surg.161 (1991)339-344.
6. Perissat J. et al: due to laparoscopic cholecystectomy-operations technique and Ergetruisse der ersten 100 operations. Churug 61 (1990):723-728.
7. Siewert JR Feusswer H et al: Fehler and Gefahren between laparoscopic cholecystectomi. Churgie 64(1994)221