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TO STUDY EFFICACY OF MINILAP CHOLECYSTECTOMY IN MANAGEMENT OF CHOLELITHIASIS

General Surgery

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ABSTRACT

INTRODUCTION : Laproscopic cholecystectomy has shown promising results in developed countries but requires expensive equipments and infrastructure, specialized training and associated with higher incidence of morbidity. So minilap cholecystectomy is viable alternative to conventional open cholecystectomy and is introduced by **'O' DWEYER** et al through right subcostal incision less than 5 cm in 1982.

MATERIAL AND METHODS: In this study 30 patients with symptomatic gall stone disease including all severity of symptoms with their confirmed diagnosis were selected for study between the age group of 15 and 85 years admitted in surgery department. We had surgical approach with 3-5cm oblique incision located two finger breadth below the costal margins with muscle cutting and splitting techniques. The out come was assessed in terms of intraoperative and postoperative parameters.

RESULTS: All the procedure were completed successfully. The incision was 4-5cms. Avarage time 47 minutes. Maximum number of cases operated between 30-45 miutes were 19 (63%). Mean hospital stay was 3 days. All patients resumed back to routine work within 15 days of surgery . Postoperative mortality was nil, morbidity was minimal.

CONCLUSION : Our results suggest that minilap cholecystectomy is viable alternative to laproscopic cholescystectomy and better than open cholecystectomy. Minilap approach is safe, feasibleand lesser morbidity and postoperative stay as compared to conventional open cholecystectomy. The technique is cost effective , easy to perform for surgeons and benefitial to patients as compared to laproscopic cost. So it is gold standard for treating symptomatic gall stones.

KEYWORDS

minilap cholecystectomy, technique.

INRODUCTION

Gall stone disease is very well known before the Christ.(1084-945 B C). Many research occurred for the etiology and management. Three types of gall stonesoccurs in human namely cholesterol,(6%) mixed (90%) and remaining with other components (4%). [13]

Innovation of laproscopy in surgery is opened new chapter[3] . First open cholecystectomy was pwerformed by KARL LAENBUNCH IN 1882. Since then it was gold standard procedure for more than 100 years[16]. Although conventional cholecystectomy is low mortality 0.1-1%. It carries significant morbidity in the form of post operative pain, discomfort, wound infection and prolong hospitalization[7]. This ied to innovation of alternative treatment and surgical management like laproscopic cholecystectomy and minilap cholecystectomy[1,2]. First laproscopic cholecystectomy was performed by Prof. Dr. Med Erich Muhe of Boblingen , Germany 1985. Laproscopic cholecystectomy has shown promising results[25] in developed countries but requires expensive eqipments and infrastructure, specialized training and associatedwith higher incidence of morbidity[22, 10] So minilap cholecystectomy innovated as a alternative to both conventional and laproscopic by smaller subcostal incision[4]. It was first performed by DUBOIS AND BARTHELOT G[9]. It was also describedby O DWEYER et al through right subcostal incision (4-6cm). We modified the technique by muscle cutting or splitting[24] to active small incision to achieve early recovery with less morbidity. Alternative goal to achieve safe surgery with maximum benefit to patients.

MATERIALS AND METHODS:

This prospective study was conducted in Department of Surgery , DR . V. M. G. M. C. Solapur. 30 patients were studied within two year duration with age, sex incidence, severity of symptoms, any difficulty during operation , length of incision, time required for surgery, nasogastric decompression, early return to oral diet, postoperative pain score and analgesic requirement, duration of hospital stay after operation and complications[15]. Each patient and his or her attendants were fuly explained surgery in their local language with informed conset for procedure. Investigations like CBC, RFT, LFT, ECG, CXR and USG done before surgery. Preanaesthetic cheakup and fitness done before surgery. Preoprative prophylactic antibiotic injection Cefotaxim 1gm given to all patients.

Preoperativel y with due preparation, patient taken to operation theater. Patient given general anaesthesia and positioned supine with slight right lateral turn 10-15 degree with bonester under tip of right scapula. Parts are painted, prepared and drepped. Right subcostal incision 1-1.5cm beolw costal margin starting from lateral margin of rectus muscle and medial to anterior axillary line 3-5cm[20]. Layers are cut above downwards skin, subcutaneous tissue, internal oblique and transverse abdominalis muscle [24]. All muscles are devided as length of skin incision. Peritonium opened transversely, gall bladder visualized. Fundus of gall bladder grasped with sponge holder and pulled outward and laterally and other structures are retracted by DEVERS retractor.[17,26]

Then-(A)by cystic duct first method: Callots triangle; {common hepatic duct, cystic duct and inferior boarder of liver} is first exposed. Cystic artery identified in triangle and ligated. Then cystic duct freed from surrounding , ligated and gall bladder removed. (B)fundus first method: when callots triangle is not visualized due to adhesions, with ligation of cystic artery and cystic duct fundus dissected and separated. After adequate haemostasis ,tube drain kept in morrisons pouch via separate incision and abdomen is closed in layers with vicryl, catgut and ethilion respectively.

Postoperatively inj Voveran 75 mg deep I M T I D given . Patient kept NIL BY MOUTH on same day with vitals and input output monitoring 4 hourly. Ryles tube aspiration every 6 hourly. Postoperatively antibiotic with injection Cefotaxim 1 gms. Drain continued for 36hours. Soft diet continued on the first poetoperative day and most of patients discharged within 48 hours after drain removal.[18] After discharge from hospital patients were called for follow up at 1 week, 4 week and 6 months.

RESULT:

Age /sex: among 30 diagnosed case of gall bladder calculus for minilap cholecystectomy , the youngest was 17 years female and oldest was 81 year male . Maximum cases were seen from 61 -70 age group. Females are more 22 (73%) cases as compared to males 8 (27%) cases.[15]

Symptoms: Pain in right hypochondriac region was the commonest symptom among all cases , and other was fatty food intolerance and vomiting (10%). [8]

Difficulty score: Difficulty score with parameters oesity(37%), adhesion (43%), bleeding (3%), upper abdominal incccision (7%), technical difficulty in (7%), injury (3%) were observed.

Duration of surgery: 63% of patients were operated below less than

45 minutes.

Incision: 80% were opeated through 4-5 cm incision [20]

Nasogastric aspiration: We put Ryles tube before induction of general anesthetia and removed within 4 to 6 hours after surgery in 90% of cases. [12]

Postoperative pain score: 100% have grade 2 pain score. Injection Diclofenac 75 mg deep I M only 3 injections were required.[27]

Duration of hospital stay : Near about three days median, lowest was two days (10%) and highest was seventh day in a case of accidental injury to hepatic flexure and two cases of acute cholecystitis.[18]

Return to routine work: Majority of patients fit to work within one to two week.

Drain: Required in cases 12.(40%)

Comlications: Only one patient have intraoperative injury to other organ colon.

DISCUSSION:

Aim of study was to asses the safety and efficacy of minilap. In our study female preponderance was more than male.[16] Same was observed by MANGOITS 1992 and RAZA NAIM moreover, our modification technique by dissection of gallbladder off the liver bed and with oblique incision[24] helped for less intraoperative time and post operative recovery. Lower analgesic requirement and shorter hospital stay found in 80 % cases.[15]

SUMMARY AND CONCLUSION:

1. Minilap cholecystectomy if an efficacious minimal invasive surgical technique with low morbidity rate, less analgesics and short hospital stay.
2. It serves as alternative to conventional open cholecystectomy and laproscopic cholecystectomy.
3. It can be done with minimum instrumentation with less technical expertise. So reduces cost burden of patient.
4. Thus minilap cholecystectomy is alternative to laproscpic particularly in developing countries , where cost of treatment and budget is main problem.

DECLARATION:
Conflicts: NIL
Funding: None
Ethical approval: Done.



1. SKIN INCISION



2. EXPOSURE OF EXTERNAL OBLIQUE MUSCLE



3. E.O. MUSCLE CUTTING WITH CAUTERY



14. POST OPERATIVE - 2nd DAY

DECLARATION:
Conflicts: NIL
Funding: None
Ethical approval: Done.

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