SJIF Impact Factor: 5.464

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 5.
Issue: 3.
Page N. 171-173
Year: 2021

Original Article www.wjahr.com

A COMPARATIVE STUDY OF CHOLEDOCHOLITHIASIS IN VIEW OF ASSOCIATED WITH BILIARY INFECTION AND ITS MANAGEMENT LAPAROSCOPIC AND OPEN TECHNIQUE

Dr. Dheeraj Raj, *Dr. Pawan Kumar and Dr. Sanjeev Kumar

[1]Professor LLRM Medical College Meerut.
[2]Junior Resident LLRM medical College Meerut.
[3]Associate Professor, LLRM medical college Meerut.

Received date: 21 February 2021 **Revised date:** 13 March 2021 **Accepted date:** 03 April 2021

***Corresponding author: Dr. Pawan Kumar**
Junior resident, LLRM Medical College, Meerut.
Email Id: drpawan1993@gmail.com, **Telephone no** - 9466571475.

ABSTRACT

One or more concentric bilayers made up of amphiphilic molecules cover an aqueous compartment in a vesicular drug delivery device. Because of their capacity to localize drug activity at the location or organ of operation, they are an effective distribution mechanism for targeted drug delivery. The drug activity is sustained at a fixed pace by the vesicular drug delivery mechanism. As a result, the opioid frequency in the body is maintained while the negative side effects are minimized. Unsaturated fatty acid vesicles are known as ufasomes. They are suspensions of closed lipid bilayers made up of fatty acids and their ionized species (soap) that are holding in a pH range of 7 to 9. Fatty acid vesicles are typically prepared using the lipid film hydration process. The most important fatty acid used as a major component in the preparation of ufasomes is oleic acid. The benefits, drawbacks, potential development, and classification of ufasomes are all discussed in this paper.

KEYWORDS: Ufasome, Vesicular Drug Delivery System, Fatty Acid Vesicles, Development, Characterization, Applications.

INTRODUCTION

Common bile duct (CBD) stones are the most common cause of obstructive jaundice and cholangitis. Primary CBD stones are rare, comprising about 15% of the cases, rest being secondary.[1] About 10- 18% of patients with gallbladder stones will have CBD stones at the time of cholecystectomy.[2] Patients with a history of pancreatitis or jaundice, elevated preoperative bilirubin and alkaline phosphatase levels or multiple small gallstones carry a moderate (10%-50%) risk of choledocholithiasis.[3]

The diagnosis of choledocholithiasis can be preoperative, intraoperative or postoperative. Transabdominal ultrasonography (sensitivity 20–80%), MRCP (sensitivity 81 -100%, specificity 92 –100%), ERCP/ EUS (sensitivity 88–97%, specificity 96–100%) are the primary imaging modalities that can detect CBD stones.

Management strategy of common bile duct stones involves either endoscopic common duct clearance followed by removal of the gallbladder surgically or surgical exploration and clearance of the CBD. Surgical exploration can be done by open OR laparoscopic CBD exploration.

MATERIAL AND METHODOLOGY

A prospective study to compare the management of choledocholithiasis: open vs laparoscopic CBD exploration from march 2019 to October 2020 in LLRM medical college, Meerut [UP].

Following parameters were assessed in our study:
1) Duration of operation
2) Blood loss
3) Postoperative pain assessment
4) Postoperative complication
5) Hospital stay
6) Bile culture

OBSERVATION AND RESULT

Parameters	LCBDE (mean)	OCBDE(mean)
Duration of operation(min)	138.4 min	106.8 min
Blood loss(ml)	45.6 ml	91.5 ml
Postoperative pain assessment (VAS)	3.53	6.6
Hospital stay(days)	4.8 days	7.6

Complication

Wound site infection	4 patients
Post op fever	10 patients
Bile leak	Zero
Pancreatitis	Zero
Retained stones	Zero

Bile culture: All patients sample of bile from CBD were sent for culture. Out of 30 samples in 8 (26.6%) had biliary infection. Organisms detected were E.coli(62.5%) and Klebsiella(37.5%).

DISCUSSION

In the present study, the outcome of Lap vs Open CBD exploration was compared on 30 patients. In our setup both Lap and Open surgical management for CBD stones is done.

1. Duration of operation

	Yi HJ study[4]	Rojas study[5]	Our study
LCBDE		120 min	134.8 min
OCBDE	115 min		106.3 min

2. Blood loss: Mean blood loss in patients was 68.6 ml. For lap group mean blood loss was 45.6 ml and for open group mean blood loss was about 91.5 ml. this difference was found to be statistically significant (P- value <0.0001.

3. Pain assessment: For lap group mean of pain assessment score was 3.53 out of 10 and for open group mean of pain assessment score was 6.60 out of 10. This difference was found statistically significant (P- value <0.001).

4. Hospital stay

Procedure	Lyu Y study[6](days)	Marwah study[7] (days)	Our study (days)
Laparoscopic	2.46		4.8
Open		13.2	7.6

5. Bile culture: All patients sample of bile from CBD were sent for culture. Out of 30 samples in 8 (26.6%) had biliary infection. Organisms detected were E.coli(62.5%) and Klebsiella(37.5%). But it was not change postoperative management.

Acc. to Mamatha Ballal et al[8] (2011-16) bile culture was positive in only 60.9% of patients. Organisms were detected most commonly E.Coli (44.4%) and Klebsiella(27.3%).

CONCLUSION

There are numerous options for the management of choledocholithiasis. Laparoscopic approach is better than open approach. Laparoscopic CBD exploration requires advanced surgical skills specially endosuturing. A skilled surgeon can handle most of the choledocholithiasis laparoscopically. Ultimately the operating surgeon should decide on the appropriate approach and treatment based on his own skills, the patient condition and the availability and expertise of the endoscopist. In skilled hands, LCBDE is a safe and feasible option with the advantages of minimal access and early recovery.

REFERENCES

1. Tompkins RK. Choledocholithiasis and Cholangitis. In: Zinner MJ, Schwartz SI, Ellis H eds. Maingot's Abdominal Operations. 10ed. Stamford: Appleton & Lange, 2001; 1739-54.
2. Martin DJ, Vernon DR, Toouli J. Surgical versus endoscopic treatment of bile duct stones. Cochrane Database Syst Rev., 2006 Apr 19; (2): CD003327.
3. John Geibel, MD, Dsc and Walter Longo, MD, Series Editors Choledocholithiasis: Evolving standards for diagnosis and management.
4. Yi HJ, Hong G, Min SK, Lee HK, Long-term Outcome of Primary Closure After Laparoscopic Common Bile Duct Exploration Combined With Choledochoscopy.
5. Rojas Ortega S1, Arizpe Bravo D, Marín López E, Cesin Sánchez R, San Román GR, Exploration of biliary tracts for laparoscopy for treatment of choledocholithiasis.

6. Lyu Y et al doi: 10.1007/s00464-018-06613-w
7. Marwah S, Singh I, Godara R, Sen J, Marwah N, Karwaska RK. Evalution of primary duct closure vs T-tube drainage following choledochotomy. Indian J Gastroenterology, 2004; 23: 227-228.
8. Mamathal ballal, Padmaja Ananth Shenoy. Biliary tract infection and their Microbiology spectrum.