

**A COMPARATIVE STUDY OF SINGLE INCISION
LAPAROSCOPIC CHOLECYSTECTOMY WITH
CONVENTIONAL LAPAROSCOPIC INSTRUMENTS VERSUS
MULTIPLE PORT LAPAROSCOPIC CHOLECYSTECTOMY**

By

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ABSTRACT

Background

Treatment of gall stones have evolved markedly since open cholecystectomy was first described by Langenbuch in 1881. Management has progressed through eras of nonsurgical management, laparotomy, minilaparotomy and now laparoscopic cholecystectomy which is the gold standard for the treatment of gall stone disease today. Laparoscopic surgery is the procedure of choice for most benign gall bladder diseases unless obvious contraindication exists. There has been a trend toward minimizing the required number and size of ports to reduce postoperative pain with better cosmetic results.

OBJECTIVES

To study the merits and demerits of single incision laparoscopic cholecystectomy using conventional laparoscopic instruments versus multiple port laparoscopic cholecystectomy with respect to:

- Operating time
- Post operative pain
- Morbidity and complications
- Conversion rates

Methods

This comparative randomised study was conducted in Department of Surgery, SDM College of Medical Sciences and Hospital between Dec 2014 to Jul 2016.

Study design:

60 consecutive patients who fit into the inclusion criteria were included in the

study. 30 patients were included in the multiport cholecystectomy arm and 30 in the single port cholecystectomy arm. Random allocation of patients presenting with symptoms suggestive of gall bladder disease with confirmatory USG study was done to the two groups using the sealed envelope technique which was opened just before the skin incision.

The two groups were as follows

Group1: SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY ARM

Group2: MULTIPLE PORT LAPAROSCOPIC CHOLECYSTECTOMY ARM

The details of preoperative assessment, intraoperative observation, postoperative course and postoperative follow up with reference to following points were recorded in a proforma (Annexure) Statistical analysis was carried out and all the observations and results were evaluated to arrive at a conclusion.

Results

Majority of presenting patients were in age group 41-50 years. There was no significant difference in the mean age of patients operated by the two techniques. 43.33% of the operated patients were males and 56.67% females and there was no significant difference among the two groups.

There was no significant difference in the conversion rate among the the two groups. The conversion rate for single incision laparoscopic cholecystectomy was 13.3%. No statistically significant rise in surgical complications occurred in the patients operated by SILC technique as compared to multiport surgery.

Median time required to complete cholecystectomy by SILC technique was not significantly higher than that required for multiport cholecystectomy. Statistically significant lower postoperative pain score were seen in patients with SILC compared to Multiport laparoscopic cholecystectomy.

Patients operated by SILC technique had a postoperative hospital stay of mean 4.04 days, almost same as for patients operated by multiport technique.

No significant increase in incidence of postoperative port site infections was observed with the Single Incision Laparoscopic Cholecystectomy compared to Multiport Laparoscopic Cholecystectomy.

Interpretation & Conclusion

Difference of Conversion rates between SILC group and Multiport group is not statistically significant. No rise in intra and post operative complications occurred in the single port surgery even with the technical drawbacks of the procedure. Time required for SILC is not significantly higher than that required for multiport cholecystectomy. Degree of postoperative pain is significantly lower in patients undergoing Single incision laparoscopic cholecystectomy compared to patients undergoing Multiport laparoscopic cholecystectomy. Length of postoperative hospital stay for single port cholecystectomy is same as for multiport cholecystectomy.

Incidence of postoperative port site infection was not significantly higher in single port cholecystectomy as compared to multiple port cholecystectomy.

The sample size in our study is small to make solid conclusion. The procedure can be selectively and judiciously performed by surgeons trained in regular laparoscopic surgery. Also the threshold for conversion should be low in learning phase.

Widespread application must await results obtained from level 1 trials.

KEYWORDS: Single port laparoscopic Cholecystectomy. Multi port laparoscopic Cholecystectomy.