

## COMPARATIVE EVALUATION OF COSMETIC OUTCOME BETWEEN CONVENTIONAL LAPAROSCOPIC CHOLECYSTECTOMY & SINGLE INCISION LAPAROSCOPIC CHOLECYSTECTOMY

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### Abstract

**Aim:** Comparative analysis of cosmetic outcome between Single Incision Laparoscopic Cholecystectomy and conventional Laparoscopic Cholecystectomy.

**Method:** Patients suffering from symptomatic cholelithiasis were randomly subjected to Single Incision Laparoscopic Cholecystectomy (SILC) and conventional four ports Laparoscopic Cholecystectomy (cLC). Data analyzed included cosmetic outcome,

**Results:** The body image score for SILC group ranged from 30 to 44 with mean score of  $40.76 \pm 2.773$  while that for cLC group ranged from 33 to 42 with mean score of  $38.28 \pm 1.969$ . p-value for the comparison stands 0.001 which shows that patients undergoing SILC had better cosmetic perception of their body image compared to cLC group

**Conclusion:** SILC is better cosmetic perception as compare to cLC

**Keywords:** SILC, cLC, Cosmetic outcome

### Introduction

Laparoscopic cholecystectomy is a minimally invasive surgery for the treatment of benign gallbladder disease compared to the open cholecystectomy and has been established as a gold standard because of its advantages such as less postoperative pain, better cosmetics, and shorter length of hospital stay.<sup>1</sup> Subsequently, a minimally invasive surgery has emerged, and many attempts have been made to reduce the number of ports and incision size following the trend of Natural Orifice Transluminal Endoscopy Surgery (NOTES). Then, in 1997, single incision laparoscopic cholecystectomy (SILC) was first performed by Navarra et al.<sup>2</sup> Compared to the conventional 4-port surgery that used one instrument per port, this is a multiport method using a transumbilical trocar.

Since then, interest in SILC has increased among many surgeons, and various attempts have been made.<sup>3</sup> However, even though the feasibility and safety of SILC have been demonstrated in many studies comparing SILC and CLC,<sup>4</sup> the feasibility and safety of SILC compared to CLC remains controversial because no clear indications or standard methods have been established due to the technical difficulty of SILC. In the midst of this controversy, our center has developed and implemented a procedure called the Konyang Standard Method (KSM) as a surgical technique for SILC since 2010,<sup>5</sup> and KSM has been consistently progressed.

### Material and methods

The present prospective study included ultrasonographically proved 50 patients of symptomatic cholelithiasis posted for elective cholecystectomy. These patients were admitted in Surgical Wards of Indira Gandhi Medical College, Shimla. SILC was performed on 25 (50% of patients) and conventional laparoscopic cholecystectomy conducted in rest of 25 (50%) patients. The patients were selected randomly. All the patients were subjected to same general anesthesia, antibiotics, perioperative analgesics and intravenous fluids. SILC was done by infra-umbilical incision and conventional LC done by four Trocars Technique.

Patients having following conditions were excluded from the study.

1. Acute Cholecystitis /Pancreatitis.
2. Choledocholithiasis
3. Jaundice /Hypoproteinemia /Malignancy
4. History of Allergy , taking Steroids and Chemotherapy
5. Patients on Oral Contraceptive Pills or pregnant.
6. Patients requiring intra-operative blood transfusion.
7. Conversion of conventional LC to OC.

8 Intra operative injury to adjacent organs/structures.

9 Cholecystoenteric fistulae

### Results

The cosmetic end point between SILC & cLC is compared using a validated Cosmesis and Body Image Score that was previously used in surgery for Crohn's disease and donor nephrectomy. The score is calculated on an eight item multiple choice type questionnaire ranging between

8 to 48 points. On follow up patients were asked to fill the questionnaire following twelve weeks of surgery. For comparison between two groups the body image score is sub-grouped into five categories. The body image score for SILC group ranged from 30 to 44 with mean score of  $40.76 \pm 2.773$  while that for cLC group ranged from 33 to 42 with mean score of  $38.28 \pm 1.969$ . p-value for the comparison stands 0.001 which shows that patients undergoing SILC had better cosmetic perception of their body image compared to cLC group.

**Table 1: Cosmetic Comparison Between Silc & Clc**

Cosmesis and body image score	SILC		cLC	
	N=25	%age	n=25	%age
8-16	0	0	0	0
17-24	0	0	0	0
25-32	1	4	0	0
33-40	9	36	24	96
41-48	15	60	1	4
Mean	$40.76 \pm 2.773$		$38.28 \pm 1.969$	

p-value = 0.0001 (value <0.05 ; significant)

### Discussion

Cosmesis and body image score was evaluated following 12 weeks after surgery. Majority of patients 15(60%) in SILC group had score in range 41 to 48 on the other hand majority of patients 24(96%) in cLC group had score in range 33 to 40. Mean score in for SILC patients was 40.76 while that for cLC group was 38.28. p-value for the comparison is < 0.0001 which shows that patients undergoing SILC perceived their body image significantly better than those patients undergoing cLC

### Conclusion

SILC is better cosmetic perception as compare to cLC

### References

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