LAPAROSCOPIC CHOLECYSTECTOMY WITH AND WITHOUT INDOCYANINE GREEN FLUOROSCOPY: A PROSPECTIVE RANDOMISED COMPARATIVE STUDY

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Introduction:

Laparoscopic Cholecystectomy is one of the most common surgical procedures carried out for the treatment of Cholelithiasis. Injury of the biliary tract, especially the common bile duct is one the feared complications that occurs intra-operatively. Indocyanine Green dye, a fluorescent dye injected intravenously is excreted in the biliary tree. Real time imaging using infra-red light enables clear visualization of the biliary tract. The outcomes of Laparoscopic Cholecystectomy with and without the use of ICG were compared.

Methods:

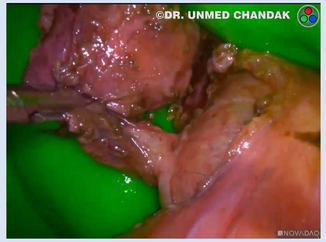
Outcomes of Laparoscopic Cholecystectomy with and without ICG were compared in a prospective comparative study. Multiple parameters, chief among them being the time taken to reach the Critical View of Safety and the rate of bile duct injury were analysed. The intraoperative and postoperative complications, rate of conversion to open surgery and overall outcomes were seen. ICG dye was injected intravenously one hour before surgery.

- **Inclusion Criteria:**

Cases of Cholelithiasis with/without Cholecystitis (acute or chronic)
Cases of Biliary Pancreatitis

- **Exclusion Criteria:**

Cases with end stage liver disease
Portal Hypertension
COPD
Cases unfit for General Anaesthesia





Results:

A total of 74 patients underwent Laparoscopic Cholecystectomy, 38 with and 38 without the use of Indocyanine Green Fluoroscopy. The median time taken to reach the Critical View of Safety was 20 minutes with and 28 minutes without ICG. The rate of conversion to Open Surgery, was 3.03% in the group without ICG and none in the group with ICG.

Laparoscopic Cholecystectomy	With ICG (38)	Without ICG (38)
Median time taken to reach CVS	20 minutes	28 minutes
Conversion to Open Surgery	0	1

Conclusion:

Laparoscopic Cholecystectomy with the use of Indocyanine green dye enables better & easy visualization of the Biliary tree anatomy and reduces the chances of Common Bile Duct injury.

References:

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