LAPAROSCOPIC CHOLECYSTECTOMY WITH AND WITHOUT INDOCYANINE GREEN FLUOROSCOPY: A 5-YEAR RANDOMISED CONTROL TRIAL

Dr. Arti Mitra, Dr. Unmed Chandak, Dr. Prasad Y. Bansod, Dr. Pravin Bhingare, Dr. Manjusha Kanetkar*
Department of Surgery, Government medical college & Hospital, Nagpur, Maharashtra, INDIA

Introduction:

Laparoscopic Cholecystectomy is the most common surgical procedures carried out for the treatment of Cholelithiasis. Injury of 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 are compared.

Methods:

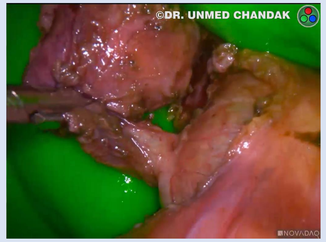
Outcomes of Laparoscopic Cholecystectomy with and without ICG were compared in a 5 year randomised control trial. Multiple parameters, chief among them being the time taken to reach the Critical View of Safety and the rate of bile duct injury were analysed. The intraoperative and postoperative complications, rate of conversion to open surgery and overall outcomes were seen.

Inclusion Criteria:

- Cases of Cholelithiasis with/without Cholecystitis (acute or chronic)
- Cases of Biliary Pancreatitis
- Post ERCP cases of Cholecystectomy

Exclusion Criteria:

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





Results:

A total of 127 patients underwent Laparoscopic Cholecystectomy, 63 with and 64 without the use of Indocyanine Green Fluoroscopy. The median time taken to reach the Critical View of Safety was 18 minutes with and 23.1 minute without ICG. The rate of bile duct injury, and therefore conversion to Open Surgery, was 2.33% 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	18 minutes	23.1 minutes
Bile duct injury	0	1
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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***- Junior resident, department of Ophthalmology, Rajiv Gendhi Medical college & Chhatrapati Shivaji Maharaj Hospital, Kalwa, Thane, Maharashtra, INDIA**