# Bile Duct Injuries In The Era Of Laparoscopic Surgery

***Essay***

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# EMBRYOLOGY AND ANATOMY

# MECHANISM OF BILE DUCT INJURY

# CLASSIFICATION OF COMMON BILE DUCT INJURIES

# DIAGNOSIS OF BILE DUCT INJURIES

# MANAGEMENT OF BILIARY INJURY

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# INTRODUCTION

Today the removal of the gall bladder is the safest, most effective and widely recommended treatment for gall stone disease. Three essential methods are used for the removal of the gall bladder: standard open cholecystectomy, laparoscopic cholecystectomy and minicholecystectomy.

The laparoscopic cholecystectomy has come close to replace open cholecystectomy as procedure of choice for the elective surgical management of gall stones.

Biliary injury is by far the most common serious complication of laparoscopic cholecystectomy. The incidence of biliary injury has increased since the introduction of laparoscopic cholecystectomy. Injury is largely preventable; a leading objective of the field of the laparoscopic hepatobiliary surgery is to reduce the incidence of these morbid and costly injuries to an absolutely minimum as soon as possible ***(Steven et al., ٢٠٠٠).***

Common bile duct injuries occur in ٠,٢٪ to ٠,٥٪ of open cholecystectomies. The incidence of injuries with laparoscopic cholecystectomy range from ٠,٢٪ to ٣٪ in the literature. It is felt that the higher incidence of bile duct injuries seen with laparoscopic cholecystectomy is related to the steep learning curve with the procedure ***(Karl et al., ٢٠٠١).***

Biliary injury after laparoscopic cholecystectomy is still a serious problem. Injury occurs as a result of technical errors or misidentification of ducts. Inexperience, inflammation and aberrant anatomy are the key risk factors ***(Strasberg, ٢٠٠٢).***

Bile duct injury should be regarded as preventable, but over ٧٠ % of surgeons regard it as unavoidable ***(Connor, ٢٠٠٦).***

A multidisciplinary approach (gastroenterologist, radiologist, and surgeon) is advocated not only for the diagnostic work-up, but also to decide on the optimal treatment modalities ***(Gouma et al., ٢٠٠٤).***