

*Utility of Endoscopic Ultra Sonography in
Evaluation of Dilated Common Bile Duct of
undetermined Etiology*

Thesis

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Utility of Endoscopic Ultrasonography in Evaluation of Dilated Common Bile Duct of Undetermined Etiology

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Abstract:

Background& Aim: Dilated common bile duct (CBD) is commonly seen in clinical practice and usually represents an obstructive lesion limiting the flow of bile, Generally, patients who present with cholestasis are evaluated with US or CT. However, these investigations are frequently inconclusive, and additional evaluation is required to establish the diagnosis. Over the last decade, several studies have demonstrated that EUS is effective in this setting. The aim of this study is to assess the value of EUS in identifying the cause of CBD dilatation undiagnosed by transabdominalultrasonography, CT or MRI.

Subjects & methods:The Present Study will be conducted on fifty patients with dilated common bile duct of undetermined etiology ,All patients were subjected to full history taking , clinical examination, laboratory investigations,trans Abdominal Ultrasound, either CT or MRI on the Abdomen, endoscopic Ultrasonography. EUS-FNA if needed will be performed by a single endoscopist. It will be done under deep sedation using a Pentax linear array Echoendoscope type EG-3870UTK attached to a high end Hitachi Ultrasound Avius machine. A detailed description of the biliary system, pancreatic head and duodenal papilla will be done, EUS-FNA will be done by an Echotip needles, 22G or 19G. Material will be spread over a glass slide and fixed by 95% alcohol, then sent to a single experienced cytologist. Immunohistochemistry will be done if needed. Statistical analysis will be done to determine the accuracy of EUS in evaluating the etiology of dilated Common Bile Duct of undetermined etiology.

Results: The final diagnosis of all the studied cases is 35 cases out of 50 were found to be malignant; 18 of the malignant cases were pancreatic head adenocarcinoma, 14 cases were cholangio-carcinoma, two cases were hepatocellular carcinoma with portahepatis lymphadenopathy and one case was with periampullaryadenocarcinoma 15 cases out of 50 were found to be benign; 12 cases were found to have CBD stone, two cases with enlarged papilla & one case with CBD stricture.

Conclusion: Endoscopic ultrasonography overcomes the limitation of evaluation of distal CBD by US or CT, It is very accurate in diagnosing small CBD calculi or calculi with non-dilated biliary system. It also picks up small resectable pancreatobiliary mass.

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List of Abbreviations

ALP	Alkaline Phosphatase
ALT	Alanine Aminotransferase
AST	Aspartate Aminotransferase
CBD	Common Bile Duct
CHD	Common Hepatic Duct
CI	Confidence Interval
CT	Computed Tomography
DA	Diagnostic Accuracy
ERCP	Endoscopic Retrograde Cholangio- pancreatography
EUS	Endoscopic Ultrasonography
FNA	Fine Needle Aspiration
FU	Follow Up
GGT	Gamma Glutamyl Transferase
HFL	Hepatic Focal Lesion
INR	International Normalized Ratio
LN	Lymph Node
LR-	Likelihood Ratio (negative)
LR+	Likelihood Ratio (positive)
Mm	Millie Meter
MRCP	Magnetic Resonance Cholangio- pancreatography
MRI	Magnetic Resonance Imaging

NPV	Negative Predictive Value
NS	Non Significant
P	Paired t-test
P*	Positive
PAUS	Pelvi Abdominal Ultrasound
PPV	Positive Predictive Value
PT	Prothrombin Time
PTC	Percutaneous Transhepatic Cholangio-pancreatography
PTT	Partial Thromboplastin Time
Sn	Sensitivity
Sp	Specificity
TN	True Negative
TP	True Positive

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Introduction



Introduction

Dilated common bile duct (CBD) is commonly seen in clinical practice and usually represents an obstructive lesion limiting the flow of bile (*Upadhyay et al., 2010*).

The common cause of dilated common bile duct are choledocholithiasis, passed common bile duct stone, post cholecystectomy state, ampullary neoplasia, cholangiocarcinoma and pancreatic head cancer (*Upadhyay et al., 2010*).

CBD dilatation can easily discovered by different imaging modalities but not infrequently, the usual imaging modalities fail to identify the cause and Endoscopic Ultrasonography become necessary (*Sotoudehmanesh et al., 2014*).

Endoscopic ultrasound (EUS) or echo-endoscopy is a medical procedure in which endoscopy is combined with ultrasound to obtain images of the internal organs in the chest, abdomen and colon. It can be used to visualize the walls of these organs, or to look at adjacent structures. Combined with Doppler imaging, nearby blood vessels can also be evaluated (*Yusuf et al., 2006*).

Aim of the Work

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Aim of the Study

The aim of the present study is to assess the value of EUS in identifying the cause of CBD dilatation undiagnosed by transabdominal ultrasonography, abdominal Computed Tomography (CT) or Magnetic resonance Imaging (MRI).