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

Thesis

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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 transabdominalultrasongraphy, 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 periampullaryadenocarcinom 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 smallCBD calculi or calculi with non-dilated biliary system. It also picks up small resectablepancreatobilary 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

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).