DIAGNOSTIC ROLE OF CA19-9, CA19-9/CRP RATIO AND CA19-9/ TOTAL BILIRUBIN RATIO IN DIFFERENTIATING BENIGN AND MALIGNANT OBSTRUCTIVE JAUNDICE

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Background: Serum carbohydrate antigen (CA19-9) is a tumour marker which is significantly elevated in biliary and pancreatic malignancy. It is also increased in some benign conditions associated with jaundice. So many strategies have been recommended to improve the power of CA 19-9 to differentiate benign and malignant obstructive jaundice. Aims and objective: This study was carried out to explore the diagnostic role of CA19-9, CA19-9/CRP ratio and CA19-9/total bilirubin ratio in differentiating benign and malignant obstructive jaundice. **Methods:** The present cross sectional analytical study was conducted at Department of Gastrointestinal, Hepatobiliary and Pancreatic Disorders (GHPD), BIRDEM General Hospital, Bangladesh. It included 60 patients with obstructive jaundice diagnosed by clinical, laboratory and radiological investigations. They were divided into two groups; benign (n=29) and malignant (n=31). The nature of obstructive jaundice was obtained by ultrasonography, CT scan, MRCP, ERCP, tumour marker and histopathology. All patients were tested for CA19-9, CRP and serum bilirubin. Data were analyzed using SPSS version-25.0 software. **Results:** The mean±SD age (years) of the benign group was 56.90±15.80 and malignant group was 56.97±12.60. The ROC analysis for CA19-9 yielded sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV) and accuracy of CA19-9 at cut-off value 70 U/ml were 71%, 49%, 60%, 61% and 61% respectively and area under the curve (AUC) was 0.625. The CA19-9/CRP ratio showed sensitivity, specificity, PPV, NPV and accuracy at cutoff value 5.2 were 80%, 97%, 96%, 82% and 88% respectively and AUC was 0.910. The CA19-9/total bilirubin ratio showed sensitivity, specificity, PPV, NPV and accuracy of at cut-off value 17 were 58%, 51%, 56%, 53% and 55% respectively and AUC was 0.509. **Conclusion:** CA 19-9/CRP ratio had high diagnostic value in differentiating benign and malignant obstructive jaundice than CA19-9 alone and CA19-9/total bilirubin ratio.

Keywords: Diagnostic Role , CA19-9, CA19-9/CRP Ratio, CA19-9/Total Bilirubin Ratio, Benign and Malignant Obstructive Jaundice