

## Risk Prediction of Pancreaticobiliary Maljunction (Pbm) in Gallbladder Carcinoma

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### 1. Abstract

**1.1. Aim:** To asses and compare abnormal pancreaticobiliary junction in gallbladdercancer patients and healthy matched. To find out odds ratio of abnormal pancreaticobiliary junction in gallbladder cancer patient.

### 1.2. Background

**1.2.1 Material and Method:** Study design:-Hospital based case-control study

**Study area:-**Proposed study will be conducted in the Upgraded department of general surgery of SMS Medical College, Jaipur.

**Study Period :-**starting from may 2016 to till sample size achieved.

**Sample size:-** was calculated 4 subjects for each of two groups at alpha error 0.05 and power 90% assuming 15.16 Odds Ratio for presence of pancreaticobiliary maljunction (PBM) in gallbladder carcinoma with 0.97% prevalence of PBM in controls (as per seed article). So for the study purpose 50 subjects will be taken for each of two groups.

### 1.3. Result

#### 1.3.1. Conclusion

PBM has strong association with GBC especially in patients who doesn't have gallstone disease. Hence the etiopathology is also different from the patients who had GBC with gallstone. So all the patients who found to have thickened gallbladder should be investigated for PBM to prevent GBC and if PBM is found then such patients should undergo prophylactic cholecystectomy. Some investigators even propose the resection of extra hepatic biliary tract. Though endoscopic sphinctrotomy also decrease reflex of pancreatic juice into bile duct. But role of endoscopic sphinctrotomy in prevention of cancerous changes remains conjectural and thus this is the area which requires further study and research.

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## 2. Introduction

Gallbladder carcinoma is the most common biliary tract cancer, accounting for 3% of all tumours. GBC is hard to detect and diagnose in its early stages because it usually has very slight symptoms or is asymptomatic. But once the diagnosis is confirmed, most of these patients often have metastasis and invasion. Furthermore, GBC is not sensitive to radiotherapy and chemotherapy. All of these characteristics make GBC a highly lethal tumour with a 5-year survival rate of less than 5% [1]. Therefore, prevention is necessary before the tumour forms, while the first and most important step is to identify which patients are at high risk for GBC. This is especially important in high-incidence countries such as Japan, Korea, India, Pakistan and China. One of the well-known risk factors is pancreaticobiliary maljunction (PBM), also known as anomalous pancreaticobiliary ductal junction or anomalous pancreaticobiliary ductal union [3-4]. PBM, a rare congenital anomaly. Abnormal pancreaticobiliary junction is defined as junction of the common bile duct and main pancreatic duct outside the wall of duodenum that forms a long common channel (more than 15 mm as per seed article) [5]. Abnormal pancreaticobiliary junction can also be found in association with various pancreaticobiliary disease including choledochal cyst, cholangiocarcinoma, gall bladder adenomyomatosis, pancreatitis [6]. The junction of common bile duct and pancreatic duct is crucial for sphincteric control of bile and pancreatic juice drainage with bi-directional regurgitation occurring if the union is above oddies sphincter.

## 3. Patients and Methods

Study design:-Hospital based case-control study

Study area:-Proposed study will be conducted in the Upgraded department of

general surgery of SMS Medical College, Jaipur.

Study Period:-starting from may 2016 to till sample size achieved.

Sample size:- was calculated 4 subjects for each of two groups at alpha error 0.05 and power 90% assuming 15.16 Odds Ratio for presence pancreaticobiliary maljunction (PBM) in gallbladder carcinoma with 0.97% prevalence of PBM in controls (as per seed article). So for the study purpose 50 subjects will be taken for each of two groups.

## 4. Summary

Gall bladder cancer found to affect predominantly older age group after 50 years but GBC with PBM found to affect predominantly younger age group before 50 year age. GBC was more prevalent

in female population male: female ratio 1:3.16. 62% of patients of gall bladder cancer were from lower socio-economic class and 60% patients were from rural area. . Most common presentation was lump right hypochondrium 78%, followed by pain right hypochondrium 66%, jaundice 52% and nausea vomiting 40%. . Anemia presents in 52% of GBC patients.

Significant association found between CA19, 9 and GBC. 80% patients of GBC had raised CA19, 9 (>125 u/ml) as compare to control had only 4%. Hence, CA19-9 may be the effective tumor marker of diagnosis of GBC. 70% patients of GBC had raised ALP as compare to control had only 18%. ALP have valuable prognostic role in GBC. Diagnosis of gall bladder cancer rested on USG/CT guided FNAC. 96% patients present in advance stage at diagnosis. Most common histopathological variety was adenocarcinoma.

PBM presents in 16% of gall bladder cancer patient. In control only 2% patients have PBM and had definite correlation with GBC and this is statistical significant ( $p=0.036$ ). P-B type (75%) of PBM is more common than B-P type (25%). GBC patients with PBM were younger mean age 45 years vs. 58 years for those without PBM. PBM was more common in female this is because of high incidence of GBC in female. The mean (SD) length of the common channel was 19.3 mm with a range of 12 to 35 mm in PBM patients. As compare to control was 5 mm. Gallstone disease was found in 48% of GBC without PBM cases. While Gallstone disease was absent in all the patients of GBC associated with PBM and this is statistical significant ( $p=0.033$ ). Majority of the patients were treated with palliative measures. Extended cholecystectomy was done in 4% cases

## 5. Conclusion

**5.1. PBM:** has strong association with GBC especially in patients who doesn't have gallstone disease. Hence the etiopathology is also different from the patients who had GBC with gallstone. So all the patients who found to have thickened gall bladder should be investigated for PBM to prevent GBC and if PBM is found then such patients should undergo prophylactic cholecystectomy.

Some investigators even propose the resection of extra hepatic biliary tract. Though endoscopic sphinctrotomy also decrease reflex of pancreatic juice into bile duct. But role of endoscopic sphinctrotomy in prevention of cancerous changes remains conjectural and thus this is the area which requires further study and research.

## 6. References

1. Dowling GP, Kelly JK. The histogenesis of adenocarcinoma of the gallbladder. *Cancer* 1986; 58: 1702-1708.
2. Goldin RD, Roa JC. Gallbladder cancer: a morphological and molecular update. *Histopathology* 2009; 55: 218-229.
3. Kamisawa T, Honda G, Kurata M, Tokura M, Tsuruta K. Pancreatobiliary disorders associated with pancreaticobiliary maljunction. *Dig Surg* 2010; 27: 100-104.
4. Kang CM, Kim KS, Choi JS, Lee WJ, Kim BR. Gallbladder carcinoma associated with anomalous pancreaticobiliary duct junction. *Can J Gastroenterol* 2007; 21: 383-387.
5. Strom BL. Carcinoma of the gall bladder. In Cohen S and Soloway RD, editors: *gallstones*, New York, Churchill Livingstone Inc.1985; 275-298.
6. Misra SP, Dwivedi Pancreticobiliary ductal union. *Gut*. 1990; 31: 1144-9.