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Case Report

Incidental identification of intra-cholecystic papillary neoplasm from a gall bladder polyp mass: a case report

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ABSTRACT

Intra cholecystic papillary neoplasm of the gallbladder is a recently established neoplasm among gallbladder tumours by the world health organization in the year 2010. Since it is recently enlisted and rare type of tumour, not much knowledge is available about it in the public domain, intra cholecystic papillary neoplasm of the gallbladder is more common in women than men, and about half of the cases, are incidentally diagnosed, it could be invasive or non-invasive and is histopathologically diagnosed, determines the prognosis and survival rates of the patients. It is closely related to mucinous cystic neoplasm of the pancreas, as it is newly enlisted no defined guidelines to distinguish gall bladder polypoidal mass from adenocarcinoma/adenoma/papillary neoplasm is available, whether a simple cholecystectomy or an extended cholecystectomy would suffice as in our case is to be debated.

Keywords: Intra cholecystic papillary neoplasm, Gall bladder polypoidal mass, Laparoscopic extended cholecystectomy, Simple cholecystectomy

INTRODUCTION

The intra-cholecystic papillary neoplasm has been regarded as a preinvasive neoplastic lesion. It has been established as a new disease concept in recent times. The intra-cholecystic papillary neoplasm is characterized by a pre-invasive papillary growth in the gall bladder.[1] It is established histopathological like pancreatic intraductal papillary mucinous neoplasm. The World Health Organization, in the year 2010 suggested the terms such as adenoma, papillary neoplasm, mucinous cystic neoplasm, and biliary intraepithelial neoplasia for premalignant lesions in the gallbladder.[2] However, there are no clear guidelines to distinguish simple gall bladder adenomas from papillary neoplasms, and it has been reported that both adenoma and papillary neoplasm have variable cellular origins and may have a mixed type of tubular growth.[3]

The intra-cholecystic papillary neoplasm is reported twice more common in females than in male patients aged more than 60 years of age. Half of those patients diagnosed with intra-cholecystic papillary neoplasm present with upper abdominal pain while the other half of patients are asymptomatic and incidentally found to have polypoidal growth in the gall bladder.[4] More often intra-cholecystic papillary neoplasm is detected macro and microscopically, rarely also identified on radiological imaging. Very limited knowledge is available on patients presenting with intra-cholecystic papillary neoplasm; hence, morphological characteristics become rare. The differentials of intra-cholecystic papillary neoplasm are gall bladder malignancies and xantho-granulomatous cholecystitis, which makes it difficult to plan whether for simple or extended cholecystectomy.[5] We report a case of incidentally detected intra-cholecystic papillary neoplasm for its rarity and its laparoscopic management.

CASE REPORT

We present a case report of a 50-year-old gentleman, who was seeking treatment in the medicine department of our

tertiary care hospital with symptoms of severe gastritis and reflux, he had undergone an upper gastrointestinal (GI) endoscopy which suggested a grade D oesophagitis and got an ultrasound done, which incidentally reported a gall bladder polyp of size 15×11 mm arising from the medial wall of body region with no significant internal vascularity and another polypoidal lesion in gallbladder neck of size 7.3 mm. This patient was admitted to our surgical unit and further evaluated, he was normotensive and non-diabetic, the *H. pylori* test of gastric aspirate was negative, the routine blood investigations were within normal range and the contrast enhanced computed tomography (CECT) abdomen done suggested a mild enhancing polypoidal lesion of the gall bladder from the anteromedial wall with mild irregularity of its wall with cholelithiasis, likely neoplastic.

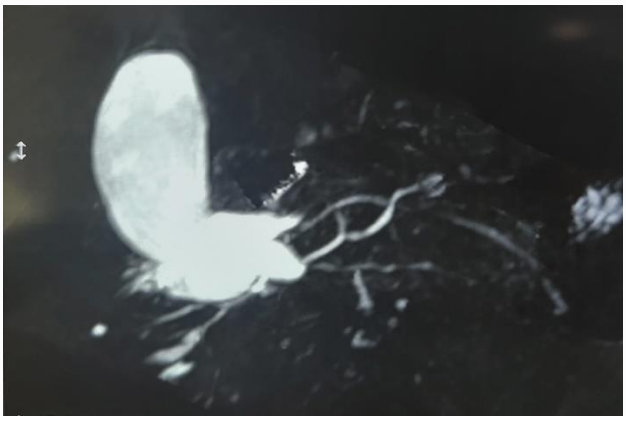

Figure 1: MRCP showing T1 hyperintense gall bladder polyp in the anteromedial wall of size 14×8 mm.

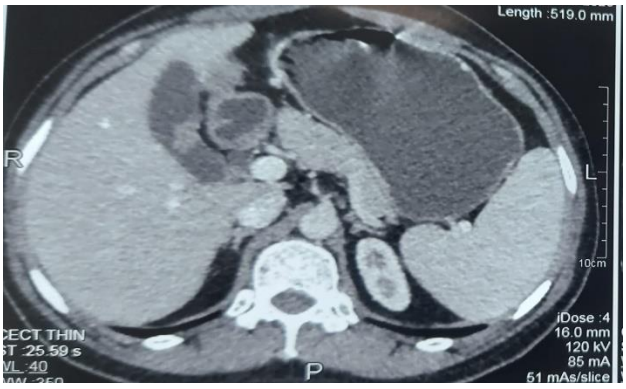

Figure 2: CECT abdomen showing mildly enhancing gall bladder polypoidal lesion 10×15×14 mm arising from the anteromedial wall with mild irregularity of gall bladder wall.

The MRCP was done and it reported an intraluminal polypoidal lesion in the gall bladder which was hyperintense on T1 and hypointense on T2 of sizes 14×8 mm and another lesion on its neck of size 8×7.7 mm and not showing any diffuse restriction and suggested histopathological requirement to rule out malignancy.

With the provisional diagnosis of papillary neoplasm of the gallbladder, this patient was planned for diagnostic laparoscopy and extended cholecystectomy to proceed. The patient was placed in a supine position on the operating table and general anaesthesia was administered, 5 laparoscopic ports were placed for this surgery after initial negative diagnostic laparoscopy and duodenal kocherisation was done with mobilizing of hepatic flexure, sampling of the aorto-caval lymph nodes, retro pancreatic and retro duodenal lymph nodes sent for frozen section biopsy, after obtaining a negative frozen section reports, extended cholecystectomy was proceeded, with the clearing of fibrofatty tissues with lymph nodes from the hepatoduodenal region, periportal and peri choledochal regions, the calot's triangle was opened and cystic duct and artery were clipped with Liga clips and resected, the wedge of liver tissue to be resected with the gall bladder around 2 cm margins was tattooed and marked with harmonic dissectors active limb, Wedge resection of the marked liver parenchyma was done with harmonic with ligation of any significant vessels/ segmental ducts of liver parenchyma with Liga clips, the gallbladder specimen with liver parenchyma specimen was delivered outside with an endo bag and the liver bed was examined for haemostasis, a 28 French drain was placed in subhepatic region and the ports withdrawn and closed. The patient was shifted to high dependency surgical ward and managed, the patient complained of severe abdominal pain on day 1 of surgery which was managed with a buprenorphine patch, he was orally allowed on day 1 of surgery, also drain output was minimal on day 1 and 2 of surgery, the patient drain was removed on day 3 of surgery. The patient passed stools on day 3 and the patient was discharged on day 5 without any complications, the patient presented for follow-up on opd days and had recovered from surgery fully, the awaited histopathology report suggested an intra-cystic papillary neoplasm of the gall bladder with low-grade intraepithelial neoplasia with zero reactive lymph nodes. Post-surgery this patient's gastritis symptoms also improved and asked to continue PPIs for 8-10 weeks, this patient was asked for routine follow-up on OPD days.

Figure 3: Extended cholecystectomy specimen of the cut open gall bladder with part of liver parenchyma, showing a gall bladder polypoidal mass in its medial wall.

Figure 4: Intra-operative image of laparoscopic extended cholecystectomy, the screen still showing post inter aortocaval lymph nodes dissection after duodenal kocherisation and hepatic flexure mobilization.

DISCUSSION

Malignant polyps account for 5% of gall bladder tumours. The intra-cholecystic papillary tumours have malignant potential, this intra-cholecystic papillary neoplasm was first described by the world health organization in the year 2010, it was described as a non-invasive premalignant lesion of the gall bladder. It was reported twice more common in women as compared to males, with asymptomatic patients detected incidentally in 50% of the reported cases.[3]

Gallstones were reported to be associated with only 20% of intra-cystic papillary neoplasms only. The asymptomatic cases of intra-cystic papillary neoplasms are identified mainly on histopathological bases, and few are identified on radiological imaging. These tumours are closely identified with pancreatic papillary neoplasms.[6] The intra-cholecystic papillary neoplasm can have both invasive and non-invasive components and the prognosis of the tumours with the non-invasive component is much better, with 5-year survival rates of these cases at >90% and 60% respectively. Usually, this type of tumour is slow growing, however with invasiveness, rapid growth can occur, with the rarity of these tumours, no definite gold-standard management has been described, and the prognosis of these patients finally depends on the histological clearance and staging.[7]

Adenocarcinoma of gall bladder limited intra-cystically usually treated with simple cholecystectomy and rest T stages treated with extended cholecystectomies, whether a simple cholecystectomy would suffice or an extended cholecystectomy would be required, pre-surgery, this doubt will be there without final histopathology report, as in our case, laparoscopic extended cholecystectomy was done since an initial imaging report suggested malignancy, it was better to proceed with caution and an extended cholecystectomy was chosen to proceed.[8]

CONCLUSION

Intra cholecystic papillary neoplasm is a recently enlisted rare type of gall bladder malignancy.[9] We report a case of a 50-year-old gentleman with intra-cholecystic papillary neoplasm incidentally diagnosed with gall bladder polyp size >10 mm, diagnostic laparoscopy with extended cholecystectomy was done for this patient, all gall bladder polyps likely malignant >10 mm should be ideally treated as malignant and appropriate surgery must be done.

However, whether a simple cholecystectomy or an extended cholecystectomy would suffice as in our case is to be debated.

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