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Case Report

Colloid Carcinoma of Gallbladder - Incidental Finding of a Rare Entity

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Abstract

Majority gall bladder carcinomas are conventional adenocarcinomas of pancreatobiliary type. Mucinous carcinomas in gall bladder constitutes 2.5% of all gallbladder carcinomas. Pure mucinous (colloid carcinomas) are even rarer. Its rarity deserves this case being highlighted. Less than twenty-five cases of mucinous carcinomas of the gallbladder have been reported so far. A 46-year-old female presented with recurrent right upper quadrant pain along with nausea and vomiting for last one year. Liver function tests & kidney function tests were within range. USG Abdomen revealed an enlarged gallbladder measuring 8x5 cm with no stones. No other abnormalities were found on USG. A simple cholecystectomy was performed for chronic cholecystitis. Gross examination of specimen showed glistening, globular, soft and cystic gall bladder filled with mucoid tenacious yellowish material. There was no discernible mass lesion. Microscopic examination revealed pools of extracellular mucinous material dissecting muscular wall containing few signet ring cells. A diagnosis of colloid or pure mucinous adenocarcinoma of the gallbladder was made. Pure mucinous carcinomas as seen in exocrine glands like breast, pancreas and skin are very uncommon in gall bladder. Mucinous variant (>50% stromal mucin) are most of the time admixed with conventional type. Mucinous carcinomas most of the time are large and advanced at the time of diagnosis and are aggressive in nature than conventional type. This case is presented owing to its extreme rarity.

Keywords: Colloid carcinoma, Gall bladder carcinoma, Pure mucinous carcinoma

Introduction

Amongst all gastrointestinal malignancies, gall bladder carcinomas occupy 5th position.[1] The gallbladder carcinoma has one of the highest reported incidence in Northern part of India.[2] The incidence of gallbladder carcinoma show variation according to geography and ethnicity.[2] The gall bladder carcinoma is twice as common in women than men and is the leading gastrointestinal cancer in women in northern India.[3] The registries of the Indian Council of Medical Research (1990-96) show higher incidence of gallbladder carcinoma in North India compared with the South.[4] Majority of the gall bladder carcinomas are conventional adenocarcinomas of pancreatobiliary type. Mucinous carcinomas of gall bladder constitute 2.5% of all gallbladder carcinomas.[5] Pure mucinous (colloid carcinomas) are even rarer. Its rarity deserves this case being highlighted. Less than twenty-five cases of mucinous carcinomas of the gallbladder have been reported so far.

Case Report

A 46-year-old female presented with recurrent right upper quadrant pain along with nausea and vomiting for last one year. On clinical examination, her parameters were within normal limits. Liver function tests (LFT) & kidney function tests (KFT) were within range. USG Abdomen revealed an enlarged gallbladder measuring 8x5 cm with no stones. No other abnormalities were found on USG. A simple cholecystectomy was performed for chronic cholecystitis.

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There was no evidence of adherence with liver or regional lymphadenopathy. Gross examination of specimen showed glistening, globular, soft and cystic gall bladder measuring 8x5 cm. On cut section lumen was filled with mucoid tenacious yellowish material, with wall thickness measuring 0.8-0.9 cm (Figure 1). There was no discernible mass lesion. Microscopic examination revealed pools of extracellular mucinous material dissecting muscular wall (Figure 2). Also, seen on microscopy are tumour cells floating in the pools of extracellular mucin (Figure 3). A diagnosis of colloid or pure mucinous adenocarcinoma of the gallbladder was made histopathological examination as no other abnormalities were seen on clinico - radiological findings.

Figure 1.Grossly, cut surface of gallbladder filled with glistening mucoid material (marked with white arrow)

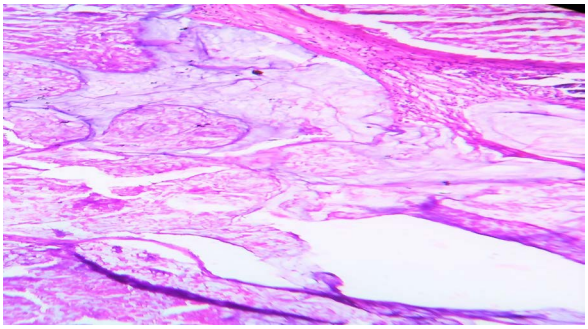

Figure 2.Tumor composed of predominantly pools of extracellular mucin dissecting the muscular wall (H & E 100X)

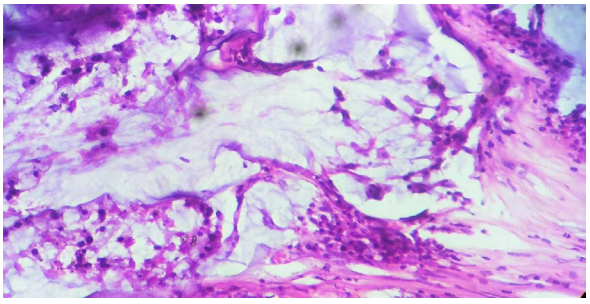

Figure 3.Tumour cells floating in pools of extracellular mucin (H&E 400X)

Discussion

Pure mucinous carcinomas as seen in exocrine glands like breast, pancreas and skin are very uncommon in gall bladder. Mucinous variant (>50% stromal mucin) are most of the time admixed with conventional type.[5] The incidence of incidental gallbladder carcinoma has been reported 0.2-3% of all cholecystectomies specimens. However, the incidence of incidental carcinoma gallbladder carcinoma has been declining due to better availability and more usage of radiological investigations in cases of abdominal pain in the right hypochondrium.[6] The predisposing risk factors for gallbladder carcinoma include cholelithiasis, choledochal cysts, porcelain gallbladder, sclerosing cholangitis, gallbladder polyps, etc.[7, 8]

However, the characteristics of pure mucinous gallbladder carcinoma like risk factors, natural history, associated features etc. are not clearly known due to limited number of cases of colloid carcinoma. The mucinous carcinoma gallbladder constitutes 2.5% of all gallbladder carcinomas (15/606) according to study conducted by Dursan et al.[5] Majority of the cases presented with clinical features of that of acute cholecystitis. The two cases were of pure mucinous type, eight were of mixed mucinous type and the remaining five had prominent Signet Ring cells in filtrating into the stroma as well as floating in pools of mucin out of the total fifteen cases of pure mucinous type. The female to male ratio of conventional pancreatobiliary type adenocarcinoma is 3.9:1 and that of pure mucinous is 1.1:1 as reported in the study conducted by Dursan et al.[5] The perineural invasion was not seen in this case but Dursan et al reported perineural invasion in 73% of the cases in their study. As immunohistochemistry facility is not available in our institute we could not perform that however, we ruled out metastatic mucinous carcinoma on clinic-radiological grounds.

The mucinous carcinoma gallbladder differs from conventional GB adenocarcinomas immunophenotypically by MUC2 positivity, from intestinal carcinomas by an often inverse CK7/20 profile, from pancreatic mucinous carcinomas by CDX2 negativity and from mammary colloid carcinomas by a lack of MUC6.[5]

The mucinous carcinoma of gallbladder is associated with an adverse prognosis and are of larger size with higher stage at the time of diagnosis in comparison to conventional gall bladder carcinoma.[5]

Conclusion

Mucinous carcinomas most of the time are large and advanced at the time of diagnosis and are aggressive in nature than conventional type. This case is presented owing to its extreme rarity, that demands its further study.

Conflict of Interest: None

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