

Mucinous Adenocarcinoma of the Gallbladder: A Case Report

Dr. Mohammed A. Abd Allah[†], Dr Mohammed H.M. Ali[‡], Dr Isamil .O.Khalid[‡], Dr Aamir Gazali[‡] and Dr Abd Allah.M.Allata[†]

[†]Department of Pathology, College of Medicine, Karary University, Sudan

[‡]Omdurman Military Hospital, Histopathology & Cytology Department, Sudan

[†]Omdurman Military Hospital, Department of Surgery, Sudan

Accepted 20 Jan 2016, Available online 28 Jan 2016, Vol.4 (Jan/Feb 2016 issue)

Abstract

Mucinous adenocarcinoma of the gall bladder are rare variant of gall bladder carcinoma. We report here a case of 61 years old Sudanese female, presented at Omdurman military hospital with non-specific symptoms of right upper abdominal pain. Ultrasonography revealed a chronic calculus cholecystitis. Then cholecystectomy was done and sent for histopathological examination which confirmed the diagnosis.

Keywords: Gall bladder, Mucinous cell carcinoma

Introduction

Gallbladder carcinoma is the fifth most common malignant tumor of the gastrointestinal tract and the most frequent malignant neoplasm of the biliary tract^[1].

Approximately 99% of gallbladder cancers are carcinomas including more than 90% of them were adenocarcinomas. Mucinous carcinomas constitute 2.5% of gall bladder carcinomas. Other histological subtypes such as papillary adenocarcinomas, squamous cell carcinomas^[1].

Gall bladder carcinoma is more common in females than males and its incidence grows with age^[2]. Risk factors of the gall bladder carcinoma are not known, but a close association between gallstones and the disease has been observed^[3].

Mucinous cell carcinoma is a very uncommon neoplasm of the Gallbladder, constituting 2.5%^[4] and most of them, displaying a mixed-mucinous, not pure colloid type.

Case Report

A 61 years old Sudanese female presented with recurrent right upper quadrant pain, nausea and dyspepsia. On examination, her vital parameters were within normal limits. Renal and liver function tests were within normal limits quadrant pain.

The ultrasonography showed thickened and irregular gall bladder wall, with multiple calculi in the lumen. (Figure: 1) A simple cholecystectomy was done. There was no evidence of regional metastasis, ascites, or lymph node in the porta, peri choledochal, retro-portal or celiac

area. The resected specimen of gall bladder measured 9.5x5 cm with wall thickness varies from 0.5 to 0.6 cm. There was a polypoidal mass measuring 6 x 5.5 cm. (Figure: 2&3) The cut surface of the mass was firm, solid, yellow with gelatinous texture with tan white to yellow, smooth and shiny mucosa. Multiples small stones of variable sizes were present in the lumen of gall bladder. (Figure:2& 3).

Histopathological examination of the specimen shows the sheets of pool of mucin, with variable amount of tumor cells floating in these mucin, a Signet-ringlike cells can be seen in clusters or lying individually within the mucin. Some of the mucin pools are devoid of any tumor cells. No definite lymphovascular emboli or perineural invasion could be detected. After that the patients discharged and sent to oncology department.

There were a few cases of mucinous gall bladder carcinoma have been reported, so information regarding the behavior and its outcome is limited.

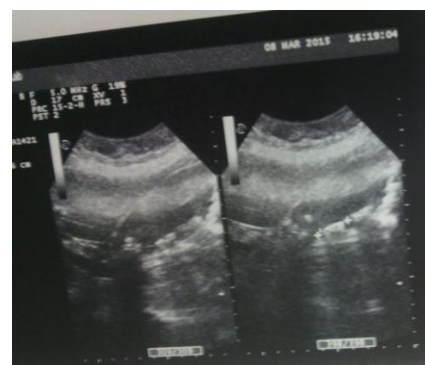


Figure 1: USG-Gall bladder with thickened wall and stone



Figure: 2&3 Gross examination of the specimen showing irregular thickened wall, gelatinous mass and yellowish stones

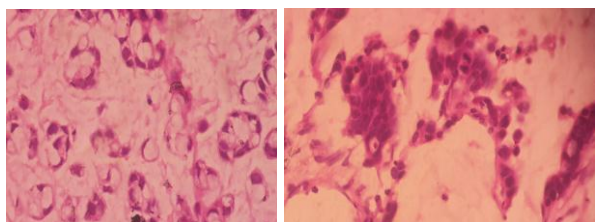


Figure: 4&5. Sheets of mucinous carcinoma, characterized by pools of stromal mucin predominating the picture, with variable amount of tumor cells floating in these mucin, signet ring cells with eccentric nuclei were seen

Discussion

Gall bladder cancer is the 5th most common gastrointestinal malignancy.^[1] It is a disease of elderly with a peak incidence around 70-80 years, more common in females^[2] than males (3:1). In a study done by Nevra Dursun et al^[4] found that mean age of presentations is 65 years, which almost similar to our case.

The presence of gall stone is one of the major risk factor of gallbladder adenocarcinomas^[3], but 10-25% of patients of gall bladder carcinoma, they do not have an associated cholelithiasis^[5].

Many histological types of gallbladder tumour identified, the mucinous adenocarcinoma accounts for 2, 5% of all carcinomas in gall bladder meeting the criteria of more than 50% of extracellular mucin (WHO). Tumors with less than 50% stromal mucin were regarded as adenocarcinoma with focal mucinous differentiation, and finally those tumors in which the mucin was intraglandular (confined to the lumen of well-formed ductular elements), were designated well-differentiated adenocarcinoma with intraglandular mucin^[4].

In majority of cases mucinous adenocarcinoma is frequently well differentiated and admixed with conventional adenocarcinoma but poorly differentiated mucinous adenocarcinoma with distant metastasis can be found.

Concerning the Immunohistochemistry, which we could not do it, due to lack the markers. We can differentiating the mucinous carcinoma from conventional GB adenocarcinomas by MUC2 positivity and 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^[4]

Primary carcinoma of the gall bladder is an unexpected histopathological finding in an elective cholecystectomy specimen done for benign gall bladder diseases. In spite of the modern diagnostic procedures, early diagnosis of gall bladder carcinoma is rare therefore a routine histopathological examination of all cholecystectomy specimens is a must^[7] Histological type, grade and stage of the disease are the predictors of prognosis with highest postoperative survival in patients with early carcinoma and lowest in high grade and inoperable carcinoma.

Overall survival of MCs was significantly worse than that of conventional adenocarcinomas^[4]

Conclusion

This a rare type of histological variant of well differentiated mucinous adencarcinoma of the gall bladder .

References

- [1]. Misra S, Charturvedi A, Misra NC, Sharma ID. Carcinoma of the gallbladder. *LancetOncol*. 2003;4:167-176.
- [2]. Goldberg RM. Gallbladder cancer. In:Casciato DA, Lowitz BB, eds. *Gastrointestinal Tumors*. 4th edition. Philadelphia: Lipincott Williams & Wilkins; 2000:210-214.
- [3]. Diehl AK. Gall stone size and risk of the gallbladder cancer. *JAMA*. 1983;250:2323-2326
- [4]. Nevra Dursun, Oscar Tapia Escalona, Juan Carlos Roa, Olca Basturk, Pelin Bagci, Asli Cakir, Jeanette Cheng, Juan Sarmiento, Hector Losada, So Yeon Kong, Leslie Ducato, BS; Michael Goodman, N. Volkan Adsay, Mucinous Carcinomas of the Gallbladder Clinicopathologic Analysis of 15 Cases Identified in 606 Carcinomas,) *Arch Pathol Lab Med*. 2012;136:1347-1358; doi: 10.5858/arpa.2011-0447-OA.
- [5]. Singh S, Ansari MA, Narayan G. Pathobiology of gall bladder cancer. *J Sci Res*. 2012; 56: 35-45.
- [6]. Paul W. Brandt-Rauf and A. Whitley Branwood. An Unusual Case of Gallbladder Cancer in an Automotive Worker. *CA Cancer J Clin*1980;30:333-336 .
- [7]. Pudasainin S, Subedi N, Prasad KB, et al. Signet ring cell carcinoma of the gall bladder: A case report. *Nepal Med Coll J* 2011;13(4):308