

Gall bladder carcinoid – a rare reportable case

P Bera, M Gangopadhyay, A De, S Ray

Citation

P Bera, M Gangopadhyay, A De, S Ray. *Gall bladder carcinoid – a rare reportable case*. The Internet Journal of Pathology. 2008 Volume 8 Number 2.

Abstract

Carcinoid of the gall- bladder and bile duct is a rare tumor. Primary gall bladder and biliary tract carcinoids constitute less than 1% of all carcinoids that may arise in different parts of our body, and usually occurs after sixth decade. We describe a case of carcinoid tumor of the gall-bladder with liver bed metastasis in a 35 year old woman who clinically presented with gall-bladder dyspepsia. The rarity of this entity particularly in this young age prompted us to present our patient as a case report which has been confirmed by immunochemistry demonstration of chromogranin A positivity. The patient is still surviving with appropriate management.

CASE REPORT

Carcinoids are neuroendocrine tumors that rarely originate in the gall bladder and biliary tract from the resident neuroendocrine cells in mucosal crypts, scatteringly [1]. Gall bladder carcinoids usually lack specific symptoms [2]. In most instances they are incidentally detected after cholecystectomy and rarely do they manifest with carcinoid syndrome [2]. There have been only 33 cases described in the literature [3].

CLINICAL SUMMARY

A 35 year old patient presented to the surgical OPD in February 2008 with chief complaint of recurrent pain in right hypochondrium radiating to the back and associated with dyspepsia. There was no history of jaundice, sweating or diarrhea, or any past surgical history. Routine investigations were within normal limits. Ultrasound showed multiple calculi and echogenic shadow in the gall bladder wall as well as the gall bladder fossa. The patient underwent cholecystectomy along with resection of the gall bladder bed as the gall bladder was adherent to the liver. No locoregional lymphadenopathy was seen. CBD was explored and abdomen closed with a drain. A histopathological diagnosis of carcinoid tumor was made following which the patient underwent chemotherapy.

PATHOLOGIC FINDINGS

On gross examination the gall bladder contained multiple stones. Wall was thickened and a firm yellow tan tumor was seen extending from the wall into the lumen (Fig.1). The tumor acquired characteristic yellow colour on formalin

fixation.

Figure 1

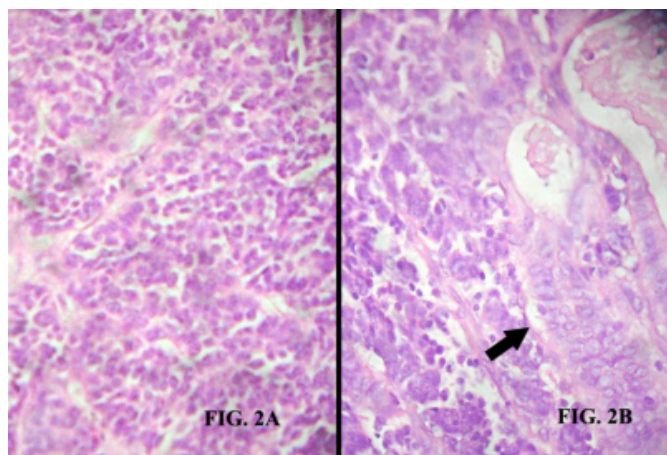
Figure 1: Gross appearance of the gall bladder showing thick wall and tumor extending into the lumen along with stones.



Microscopic examination revealed a normal mucosal lining beneath which lay solid nests of small monotonous cells with occasional acinar or rosette formation (Fig. 2A&B). Chromatin was salt pepper type and mitosis was rare.

Figure 2

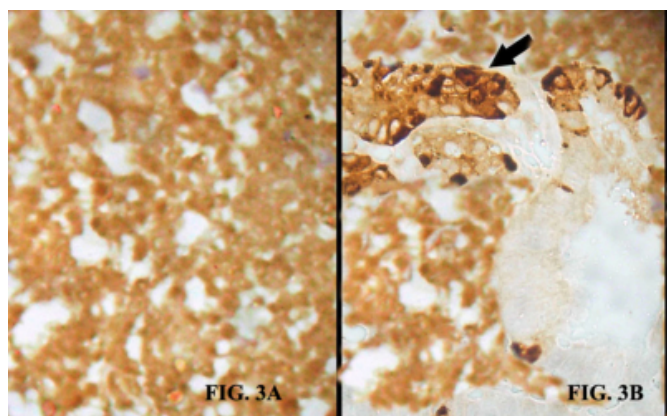
Figure 2ab: Section showing gall bladder mucosa(□, arrow) beneath which lie solid nests of small monotonous cells with salt pepper chromatin, ×40, H&E.



The tumor extended upto serosa and there was also florid hepatic invasion. Islands of squamous metaplasia were also seen. Immunohistochemical studies showed the tumor islands to be strongly positive for chromogranin A (fig 3A&B). Thus the diagnosis of carcinoid tumor of gall bladder was made.

Figure 3

Figure 3ab: Strong immunostaining for Chromogranin A, ×40. Arrow(□) indicating gall bladder mucosa showing neuroendocrine cell rests.



DISCUSSION

Carcinoid of gall bladder and bile duct is a rare tumor [3]. Primary gall bladder and biliary duct system carcinoids constitute less than 1% of all carcinoid tumors arising from different parts of the body [3]. Most cases occur after sixth decade though no age is exempted. This prompted us to present our case which has presented in fourth decade. Total of 33 cases have been reported in literature. They are an incidental finding as was in our case too. These tumors are

unassociated with carcinoid syndrome despite hepatic spread [4] and so was in our case. Carcinoids tumor of either insular or tubular types can occur in the gall bladder or extra hepatic duct [6]. In our patient the predominant microscopic pattern was insular type with occasional areas of acini formation. Necrosis and mitosis is uncommon in pure carcinoid tumor of gall bladder. If present they are categorized as neuroendocrine tumors [7]. Our case did not show any area of necrosis or mitotic activity. But there were areas of squamous metaplasia which can be correlated with the presence of multiple stones in the gall bladder. Gall bladder carcinoid has been reported where the patient had undergone hemicolectomy for rectal carcinoid ten years back [2]. But our patient had no such past surgical history. In routine histological sections stained with hematoxylin & eosin, the neuroendocrine tumors often mimic other poorly differentiated small cell carcinomas and it becomes difficult to confirm it as carcinoid tumor. Even though the cellular arrangements or architectural patterns and typical nuclear features are more or less confirmatory, immunohistochemical demonstration of chromogranin A positivity in tumor cells is conclusive [8]. Tumor was positive for chromogranin A in this case also. Increasing tumor size and depth of invasion may compromise survival [4]. However our case has been referred to oncology department for appropriate management.

References

1. Angelini C, Mussi C, Crippa S, Sartori P, Isimbaldi G, Bonardi C, Uggeri F. Gallbladder carcinoid: a case report. *Chir Ital.* 2003; 55(4):571-3.
2. Geo SK, Harikumar R, Kumar S, Kumar B, Gopinath A. Gall bladder carcinoid: a case report and review of literature *Trop Gastroenterol.* 2007; 28(2):72-3.
3. Anjaneyulu V, Shankar-Swarnalatha G, Rao SC. Carcinoid tumor of the gall bladder. *Ann Diagn Pathol.* 2007;11(2):113-6.
4. Yokoyama Y, Fujioka S, Kato K, Tomono H, Yoshida K, Nimura Y. Primary carcinoid tumor of the gallbladder: resection of a case metastasizing to the liver and analysis of outcomes. *Hepatogastroenterology.* 2000; 47(31):135-9.
5. Soga J. Primary endocrinomas (carcinoids and variant neoplasms) of the gallbladder. A statistical evaluation of 138 reported cases. *J Exp Clin Cancer Res.* 2003;22(1):5-15.
6. Chamberlain RS, Blumgart LH. Carcinoid tumors of the extrahepatic bile duct. A rare cause of malignant biliary obstruction. *Cancer* 1999; 86: 1959-65.
7. Olinici CD, Vasile R. Composite endocrine cell, typical adenocarcinoma and signet ring carcinoma of the gall bladder. *Rom J Morphol Embryol.* 1991; 37:171-73.
8. Angeles-Angeles A, Quintanilla L, Larriva J. Primary carcinoid of the common bile duct. Immunohistochemical characterization of a case and

review of literature. Am J Clin

Pathol 1991; 96:3341-44.

Author Information

Pranati Bera, MD

Assistant Professor, Dept. of Pathology, North Bengal Medical College & Hospital

Mimi Gangopadhyay, MD

Assistant Professor, Dept. of Pathology, North Bengal Medical College & Hospital

Anuradha De, DCP, MD

Assistant Professor, Dept. of Pathology, North Bengal Medical College & Hospital

Sailesh Ray

Medical Officer, West Bengal Health Service, Naxalbari Rural Hospital, Darjeeling