

presence of thrombocytopenia splenectomy can be performed with packing of the raw surface as a temporary hemostatic measure. Gauze packing has been used successfully to achieve hemostasis during splenic rupture in the presence of coagulopathy.¹³ Its noteworthy that the removal of the ruptured spleen not only stopped the bleeding but also afforded a remarkable rise in the platelet count postoperatively, thereby facilitating safe removal of the hemostatic packs 2 days later.

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A rare case of gallbladder carcinoma metastases to the breast treated with curative intent

Introduction

Carcinoma of the gallbladder is one of the most common malignancies in north India, particularly in females.¹ Majority of them are metastatic or unresectable at the time of presentation. The modes of dissemination in metastatic gallbladder carcinoma are lymphatic, vascular, neural, intraperitoneal and intraductal. Liver and lymph nodes are the two most common sites of dissemination.² To our knowledge, solitary breast metastasis is an unusual site of dissemination and till date only two cases have been reported in the literature. Given the unusual nature of these metastases of gallbladder cancer, diverse management strategies have been employed without any proper consensus guidelines.

Case report

A 35-year-old female had undergone laparoscopic cholecystectomy for gallstones in January 2007 in a private hospital. The histopathology showed an incidental gallbladder adenocarcinoma stage T2N0M0. The patient defaulted further treatment for the cancer. Subsequently she noticed an abdominal wall subcostal port site lump in June 2008. The incisional biopsy showed metastatic adenocarcinoma. The patient was referred to our institution at this juncture, for further management. On evaluation contrast enhanced tomography showed a 3×3 cm mass at the epigastric port site with no evidence of metastasis elsewhere. The patient underwent explorative laparotomy with wide excision of the port site recurrence. The intra-operative findings showed neither recurrence in the gallbladder fossa nor any regional lymphadenopathy or associated metastasis. Histopathology of the specimen showed an infiltrating adenocarcinoma with

excisional margins being negative. The patient was then planned for adjuvant chemoradiotherapy but she defaulted. She again noticed 2 lumps by October 2010; one at site of abdominal scar and other in the right breast (**Figure 1**). Mammographic evaluation of the breast showed a well-circumscribed, non-calcified dense mass with no spiculations. Contrast tomography and PET-CT showed no metastasis other than the two nodules. Trucut biopsy of both lumps revealed adenocarcinoma and immunohistochemistry was positive for cytokeratin 20 and 7, and negative for estrogen and progesterone receptors, which was compatible with metastatic gallbladder cancer. She was diagnosed as a case of metastatic gallbladder cancer and was planned for surgery and adjuvant chemoradiotherapy. She was planned for curative surgery in view of her young age, good performance status, long disease free interval and solitary metastasis to the breast. She underwent wide local excision of the metastasis at the abdominal scar site and the breast lump. The intra-operative findings showed a scar site metastasis of 2×2 cm size, infiltrating the capsule of liver in segment IVb and the anterior wall of duodenum at the junction of 1st and 2nd part. Radical resection of the scar site metastasis was done which included a 2 cm wedge resection of the liver and wedge resection of anterior wall of duodenum. Histopathologically both lumps were compatible for metastatic gallbladder adenocarcinoma which was positive for cytokeratin 20 and 7 and negative for



Figure 1: The area of port site recurrence in the right upper abdomen (arrow facing left) and the breast nodule in the upper outer quadrant of the right breast (arrow facing right) is shown in the area encircled by dotted line

estrogen and progesterone receptors. The tumor was infiltrating the liver and duodenum and all excised margins were negative. The patient was further planned for Gemcitabine based adjuvant chemotherapy and concurrent 45 grays of radiotherapy. She has received two cycles of chemotherapy till date and is free of disease at three months of follow up.

Discussion

Early carcinoma of the gallbladder is more often insidious and causes no specific signs or symptoms. Most patients with this disease are thus diagnosed at AJCC stage IV. Currently, most surgeons remain pessimistic about radical resection of gallbladder cancer or metastasectomy. Metastasis from gallbladder carcinoma spreads usually through lymphatics or via transcoelomic and hematogenous spread to various distant organs. Gall bladder cancer spreads to distant organs in 40% of patients.¹ It usually spreads to the regional lymph nodes and liver, while other organs commonly affected are bile ducts, duodenum, stomach, colon, omentum, abdominal wall, pancreas and portal vein. Rare sites include heart,² orbit,³ central nervous system,⁴ skin,⁵ bone,⁶ and scalp.⁷

The incidence of metastasis from various solid organ cancers to the breast is only 0.5% to 0.6%, among which metastasis from gallbladder carcinoma is extremely rare.⁸ The most common primary tumors with breast metastasis include contra lateral breast cancers, lymphomas, melanomas, rhabdomyosarcomas, lung cancers and ovarian tumors. Though there are several case reports of breast carcinoma metastasizing to the gallbladder the reverse is extremely rare.⁹⁻¹⁰ There are only few published articles in the literature (**Table 1**) which have reported spread of gallbladder carcinoma to the breast.¹¹⁻¹³ Metastasis to the breast unlike primary breast cancer generally consists of firm, well-circumscribed, multinodular masses. In addition, the masses are usually superficial and less fixed to surrounding tissues, with the overlying skin uninvolved. The most common form of clinical presentation as seen in 85% of patients was a solitary tumor; only 4% of patients had diffuse involvement.¹⁴ Furthermore, the most common location was the upper outer quadrant in 62% of patients.¹⁵ Radiographically, mammographic evaluation can provide additional information. Metastatic tumors to the breast more frequently present as well-circumscribed, non-calcified dense masses. They generally lack spiculation and microcalcifications as well as architectural distortion and other skin changes.

Table 1: Representation of the patient and treatment profile of gallbladder carcinoma with breast metastasis by various authors

Author and year of publication	Age of patient	Treatment of gallbladder carcinoma	Stage as per AJCC 6 th edition when treating gallbladder cancer	Site of metastasis	Duration between primary surgery and development of metastasis	Treatment offered to the metastasis	Status of the patient of last visit
P Shukla et al 2007 ¹¹	50 years	Laparoscopy cholecystectomy	Stage Ib	Bilateral axillary nodal metastasis	10 months	Palliative chemotherapy	Not available
Garg et al 2009 ¹²	42 years	Palliative chemotherapy (gemcitabine and carboplatin)	Stage IV	Multiple subcutaneous nodules over abdomen and chest, bilateral breast	Synchronous	Palliative chemotherapy (gemcitabine and carboplatin)	Death at 3 weeks of diagnosis
S Singh et al 2010 ¹³	50 years	Radical cholecystectomy	Stage Ila	Breast and ovary	1 month	Simple mastectomy and salphingo-oophorectomy followed by chemotherapy (Gemcitabine)	Alive and disease free
Current Case	35 years	Laparoscopy cholecystectomy	Stage Ib	Breast and port site	46 months	Wide local excision of breast and port site metastasis followed by 5FU based chemotherapy	Alive and disease free at 3 months of follow up

Due to the rarity of breast metastasis from gallbladder carcinoma, there are no consensus guidelines for its management. The outcome of metastasis including the port site recurrence from gallbladder carcinoma is poor. Most survey report a mean survival of 10-12 months with a mortality rate of 100% within 3 years.¹⁶ The general approach towards metastasis from gallbladder carcinoma is palliative. But in exceptional cases such as this, curative treatment can be offered especially when the malignancy exhibits good biological behavior. Though the patient in our case had port site recurrence after 18 months of surgery, she was offered curative surgery. But she again developed metastasis to the abdominal scar site and breast after 46 months of cholecystectomy. The long disease free survival before developing distant metastasis, easily accessible site, acceptable morbidity of the surgery and the young age of the patient made surgery with adjuvant treatment with a curative intention as the best option.

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Adenoendocrinecarcinoma of gallbladder in a patient with primary sclerosing cholangitis and ulcerative colitis

Introduction

It is well known that patients suffering from primary sclerosing cholangitis (PSC) and ulcerative colitis (UC) are at high risk for cholangiocarcinoma. In addition, it has also been reported that the prevalence of gallbladder carcinomas is around 14% in PSC and UC patients.¹ Earlier reports draw correlations not only between patients of PSC and UC with cholangiocarcinoma but also with carcinoma of the gallbladder.^{1–3} Regular follow-up of these patients for suspicious gallbladder lesions is thus pertinent.⁴

Adenoendocrinecarcinoma of gallbladder is a rare histological type. Prognostic importance of this subtype is yet

to be evaluated. The adenocarcinomatous and neuroendocrine components often exist in varying proportions in this malignancy and can vary from well differentiated to poorly differentiated histopathology. In this report, we present the clinicopathological features of an adenoendocrine carcinoma of the gallbladder associated with PSC and UC. To the best of our knowledge this is the first report in literature of an adenoendocrine carcinoma of the gallbladder associated with PSC and UC.

Case report

A 48-year-old female was diagnosed with UC (pancolitis) 20 years back. She had been treated with steroids and azathioprine and the disease was in resolving phase. Later she had developed PSC with features of chronic liver disease and portal hypertension since last 7 years. Four months back she was found to have a mass lesion in the gallbladder fossa. Her liver function tests, CA19.9 and CEA were normal. CECT abdomen was performed and showed uniform mural enhancement of biliary ductal system, heterogeneous ill-defined soft tissue enhancement along the gallbladder fossa and features of secondary biliary cirrhosis. MR Imaging showed a contracted gallbladder with a small non-enhancing focal area of altered signal intensity possibly indicating a small cyst. Subsequently she was subjected to endoscopic ultrasound guided FNA. Endoscopic ultrasound demonstrated a localized complex gallbladder mass lesion and thick walled bile duct. EUS guided FNA was done and the on-site cytopathology report revealed a neuroendocrine carcinoma with xanthogranulomatous inflammation, which was subsequently confirmed on examination of all the aspiration smears. PET-CT was done to detect the status of lesion which showed FDG avid heterogeneously enhancing mass in the gallbladder fossa with contiguous infiltration of adjacent IVB and V segments of the liver with an absence of FDG avid regional lymphadenopathy or distant metastatic disease (**Figure 1**).

Extended cholecystectomy with segmentectomy was performed and the specimen was sent for histopathology examination. Gross examination showed a contracted gallbladder adherent to the liver. Its lumen was obscured by a grey white mural thickening of the fundus, body and neck region and a focal cyst like area was noticed in the fundus area which was pushing into the liver. The growth was well marginated to the liver parenchyma. The liver parenchyma and liver resection margins were grossly free of the tumor. Microscopically neck,