Unusual presentation of more common disease/injury

FNAC site metastasis in gall bladder cancer – a rare presentation

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Gall bladder malignancy is very common in northern part of India. The diseases can virtually metastasise to every organ of the body however; skin metastasis from gall bladder cancer is extremely rare. The authors report, probably the first case of fine needle aspiration cytology site metastasis on anterior abdominal wall skin from adenocarcinoma of the gall bladder.

BACKGROUND

Gall bladder cancer is very common in northern India females with an incidence of 5–7 per 100 000 women.¹ In USA, it is the most common biliary cancer as per 1992–2000 data from the Surveillance, Epidemiology and End Results program and accounts for 46% of the biliary tract cancers.² The metastases from gall bladder cancer are mainly to liver and only 20% are in other sites. The most common site of extra-abdominal metastasis is the lung followed by the brain. Skin metastases in carcinoma gall bladder are very rare and till to date there have only been a few case reports published. We report a case of adenocarcinoma gall bladder that developed skin metastasis at the fine needle aspiration cytology (FNAC) site.

CASE PRESENTATION

A 45-year-old male patient presented to us with pain, heaviness and dyspepsia from past 9 months. An ultra sonogram of abdomen advised by some local surgeon showed a soft tissue mass inside the gall bladder lumen. For these complaints he consulted at Tata Memorial Hospital,

Bombay where a routine blood examination and contrast enhanced CT (CECT) abdomen was done which showed non-resectable gall bladder mass and therefore the patient was considered for palliative chemotherapy. The FNAC was done for histological confirmation of the diseases and came out to be adenocarcinoma. The patient returned to his native place without taking any further treatment there. Unfortunately, he lost his CECT report along with films in the way. After 1 month of FNAC, the patient developed a nodule at the site of FNAC. The nodule started growing rapidly and within a time period of one and half months it increased to the present size. After 20 days, the skin over the lump got ulcerated (figure 1). On examination, the patient was anaemic with no lymphadenopathy and icterus. Local examination showed a mildly tender, hard lump of size 6×5 centimetres with 2×2 cm ulcerated area over it. In addition to the above described lump local examination revealed a firm to hard intra-abdominal 10×8 cm lump in right hypochondrium. The incisional biopsy from the lump confirmed the diagnosis of metastasis from adenocarcinoma (figure 2).

Figure 1 Metastatic lesion at FNAC site. **Figure 2** Biopsy showing skin metastasis from gall bladder cancer.

INVESTIGATIONS

A 64 slice CECT abdomen done in our institute showed 7.5×7.2×9.6 cm heterogeneously enhancing soft tissue mass in gall bladder fossa infiltrating into segment V and IV of liver as well as hepato-duodenal ligament and 1st and 2nd part of duodenum with compression over portal vein. Hepatic metastases were noted in segment II and IV and pulmonary metastases in left lower lobe. A heterogeneously enhancing lesion of 6.9×4.5×4.5 cm with areas of necrosis was seen involving the subcutaneous and anterior abdominal wall muscles in the region of right hypochondrium. Incisional biopsy from the skin lesion confirmed the diagnosis of metastasis from adenocarcinoma of gall bladder.

TREATMENT

The patient was placed on palliative combination chemotherapy involving gemcitabine and cisplatin. Unfortunately, the patient did not respond to three cycles of chemotherapy and developed jaundice. The chemotherapy was discontinued and the patient was advised symptomatic and supportive care.

OUTCOME AND FOLLOW-UP

Surprisingly, the patient is still alive and regularly visit outdoor and is currently receiving supportive care.

DISCUSSION

The carcinoma of gall bladder is the fifth most common malignancy of gastrointestinal tract.³ Despite of improved diagnostic techniques it is discovered at an advanced stage with approximately one third of all patients having widespread metastases at the time of diagnosis with liver being the most common site.⁴ Rarely, it metastasise to extra abdominal organs like skin, breast, iliac crest, femur and orbit.^{5–8} Besides various radiological investigations FNAC is a well established and useful procedure in the diagnosis of gall bladder cancer. However, the possibility of tumour cell seeding along the needle track is a recognised complication and a cause of worry especially in some aggressive tumour.

Similarly, the port site metastasis following laparoscopic cholecystectomy is again a matter of growing concern as the spread of cancer is aggressive and widespread. The exact pathogenesis has still not found but it is believed to be due to implantation of tumour cells from instruments, turbulent gas flow and pressure gradient particularly during deflation of pneumoperitoneum.⁹ Therefore, laparoscopic cholecystectomy should be considered a strict contraindication in gall bladder malignancy.

Tumour cell dissemination along the FNAC tract has been reported for malignancies such as pleural mesothelioma,

liver, testicular tumours and prostate cancer etc. The exact incidence of malignant seedlings resulting from needle biopsies is difficult to calculate because it is rather challenging to trace biopsy induced tumour cell dissemination in surgically removed organs or excised tissue containing the entire or only part of the needle tracks. In addition, it is difficult to differentiate biopsy induced local/systemic recurrence.

In an English language medline search of past 40 years no case of malignant seedlings from needle biopsies has been reported in gall bladder. This can in part be explained by the fact that most of the cases are diagnosed at advanced stages that expire within 6 months. Moreover, it may take several years for the dissemination and surviving tumour cells to reach the size of clinically detectable or palpable growth.

Learning points

- ▶ FNAC has a potential risk of tumour implantation along the needle track and can convert a resectable disease to an unresectable one.
- ▶ In case of gall bladder cancer, FNAC should not be used to confirm the diagnosis in resectable diseases rather an exploration and peroperative biopsy technique (frozen section) followed by surgery is a better approach.
- ▶ To prevent the tumour cell dissemination an effective technique like radiofrequency pulses which denatures the tumour cell should be used to sterilise the needle track.

Competing interests None.

Patient consent Obtained.

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