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INTERESTING IMAGE

Catheter Tract Implantation Metastasis Diagnosed by F-18 FDG PET/CT After Percutaneous Transhepatic Biliary Drainage for Hilar Cholangiocarcinoma

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We present a case of catheter tract implantation metastasis of hilar cholangiocarcinoma after preoperative percutaneous transhepatic biliary drainage (PTBD) on F-18 FDG PET/CT. A 65-year-old woman had received preoperative PTBD before a left hemihepatectomy due to hilar cholangiocarcinoma 17 months ago. Recently, the patient complained of pain in the right flank. Serum CEA and CA 19–9 levels were within the normal range. Contrast-enhanced abdominal CT was done and interpreted as no definite abnormality, so F-18 FDG PET/CT was undertaken and showed metastatic implantation on the right flank. On a retrospective review of the previous CT, a small nodule was noted at the corresponding site of the lesion on FDG PET/CT (Fig. 1). CT-guided biopsy was done and pathologic finding revealed metastasis from hilar cholangiocarcinoma (Fig. 2).

PTBD has been widely employed as a biliary decompression procedure for malignant biliary obstruction [1]. However, major complications, such as bleeding, cholangitis, biliary leak, duodenal perforation and death may occur because PTBD is an invasive technique [2]. Metastatic tumor seeding along the PTBD sinus tract is another possible serious complication, and the incidence of this complication is unclear [3, 4]. Its incidence might be underestimated since it can occur at any sites along its path and its early diagnosis is not easy [5]. The role of F-18 FDG-PET in detecting cholangiocarcinoma recurrence after curative resection has as yet not been established [6]. In this case, F-18 FDG PET/CT could assist in diagnosis of catheter tract implantation metastasis of a hilar cholangiocarcinoma after preoperative PTBD.

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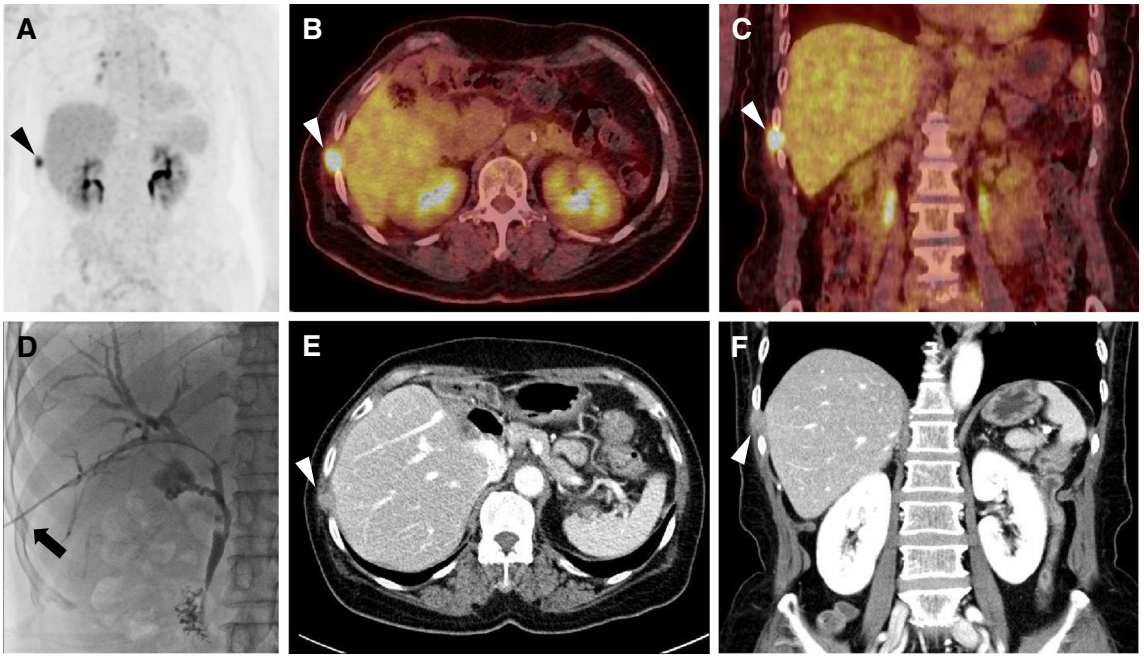

Fig. 1 A 65-year-old woman, who had undergone preoperative PTBD before left hemihepatectomy due to hilar cholangiocarcinoma, was troubled with right flank pain. Serum CEA and CA 19–9 levels were within the normal range. Contrast-enhanced abdominal CT was done and interpreted as no definite abnormality at the time. Following F-18 FDG PET/CT revealed a small focal hypermetabolic lesion (SUVmax 10.4) in the right ninth intercostal space (**a**, **b**, **c**), where PTBD catheter had been inserted (**d**) 17 months earlier. On a retrospective review of the previous CT (**e**, **f**), a small enhancing nodule was noted at the corresponding site of the hypermetabolic lesion on F-18 FDG PET/CT. CT-guided biopsy was performed on this site

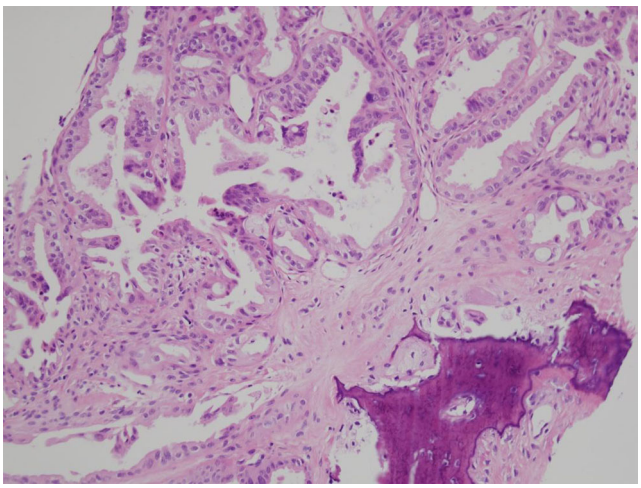

Fig. 2 A CT-guided biopsy of the right ninth intercostal space nodule showed complex irregular-shaped anaplastic glands in a dense fibrous background with bony destruction (×200, H&E), consistent with metastatic carcinoma, primary in cholangiocarcinoma. Thus, this nodule was confirmed as a catheter tract implantation metastasis and radiation therapy was undergone

Conflict of Interest Il Jo, Kyoung Sook Won, Sung Hoon Kim, Bong-Il Song, Yu Na Kang and Jin Young Kim declare that they have no conflict of interest.

Ethics Statement This study was approved by the ethics committee in our hospital and was performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments.

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