Journal of Cancer Research and Practice 3 (2016) 54–57

Contents lists available at ScienceDirect

Journal of Cancer Research and Practice

journal homepage: http://www.journals.elsevier.com/journal-of-cancer-research-and-practice

Case report

Ampullary carcinoma with cutaneous metastasis

I-Ting Liu, Chia-Jui Yen*

Division of Hematology and Oncology, Department of Internal Medicine, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan

ARTICLE INFO

Article history:
Received 27 July 2015
Accepted 11 September 2015
Available online 19 March 2016

Keywords:
Ampullary carcinoma
Cutaneous metastasis
Chemotherapy

ABSTRACT

Carcinoma of the ampulla of Vater is a rare gastrointestinal tumor. Additionally, cutaneous metastasis from such an internal malignancy is also uncommon. We reported the case of a 55-year-old man afflicted with ampullary carcinoma with cutaneous metastasis. The patient did not undergo the standard Whipple procedure but received chemotherapy due to apparent left neck lymph node metastasis noted by initial PET/CT imaging. The skin metastasis presented as a left neck infiltrating purpuric lesion, which was confirmed by skin biopsy approximately one year after the patient's disease was first diagnosed. Thereafter, the patient received further chemotherapy pursuant to his course of medical management. Skin metastasis usually represents a poor patient prognosis. In these cases, treatment of cutaneous metastasis typically includes systemic chemotherapy and local management such as radiation therapy or tumor excision. And when choosing a chemotherapy regimen for the ampullary cancer, the histological subtypes (intestinal or pancreatobiliary) should be comprehensively considered. In our review of the literature, the intestinal type seems to have less distant lymph node metastasis, advanced local invasion, as well as recurrence than pancreatobiliary type of ampullary cancer.

1. Introduction

When carcinoma of the ampulla of Vater is diagnosed, it is generally recognized to be a rarely occurring tumor. The overall incidence rate of the ampulla of Vater cancer was around 0.49 per 100,000 individuals in the United States, and represents only 0.2–0.5% of all gastrointestinal malignancies.[1] Cutaneous metastasis from internal malignancy is also uncommon, and estimated to represent around 0.7%–9% of all patients with internal cancers.[2] Lookingbill et al found that only 367 (5%) of 7316 oncology patients developed cutaneous metastasis in the tumor registry as noted in the Milton S. Hershey Medical Center (Hershey, PA, USA). Of that final 367 patients, 59 (0.8%) had skin involvement as their first sign of undiagnosed cancer. Breast cancer was the most commonly reported primary cancer involving skin (64.6%). Rosen and Schwartz describe neoplasm of the breast, colon, kidney, lung and ovary relatively likely to have cutaneous metastasis.[3] Abdomen and chest were the most reported sites of skin metastasis.

In a Taiwanese report, Hu et al found 124 cases (1.02%) with cutaneous metastases from 12,146 patients with internal malignancies at Kaohsiung Medical University Hospital (Kaohsiung, Taiwan). The rate of skin metastasis was highest in patient with breast cancer (2.42%), followed by cancer of the lung (1.78%), oral mucosa (1.75%), colorectum (0.81%), stomach (0.80%) and esophagus (0.74%).[2] Compared to Caucasians, the overall rate of cutaneous metastasis appears to be lower in Taiwanese patient.

Here, we have presented a case of progressive ampullary cancer with cutaneous metastasis. Generally, pancreaticoduodenectomy (Whipple procedure) is the standard treatment for ampullary and periampullary adenocarcinoma.[4] If metastatic disease is noted, chemotherapy schemes generally recommended for pancreatic cancer or intestinal malignancy may be considered according to the histological type.[5]

2. Case report

In February 2012, a 55-year-old man without previous systemic disease suffered from abdominal pain radiating to the back, and yellowish skin color. Ampulla of Vater cancer, cT2N1M1, cstage IV, with local and left neck lymph node metastasis were formally diagnosed by esophagogastroduodenoscopic biopsy, magnetic

* Corresponding author. Division of Hematology and Oncology, Department of Internal Medicine, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, No.138, Sheng Li Road, Tainan 704, Taiwan.
E-mail address: yencj@mail.ncku.edu.tw (C.-J. Yen).
Peer review under responsibility of The Chinese Oncology Society.

http://dx.doi.org/10.1016/j.jcrpr.2015.09.003

resonance cholangiopancreatography (MRCP) and positron emission tomography and computerized tomography (PET/CT) (Fig. 1A–C). Plastic and metallic biliary stents were placed for obstructive jaundice. Due to the patient's metastatic disease, chemotherapy with high-dose fluorouracil was started. However, severe vomiting was noted after the first chemotherapy treatment. Therefore, the chemotherapy regimen was shifted to gemcitabine plus oxaliplatin. The patient's disease was deemed stabilized after 6 cycles of therapy, and he received uracil/tegafur (UFUR) as maintenance therapy.

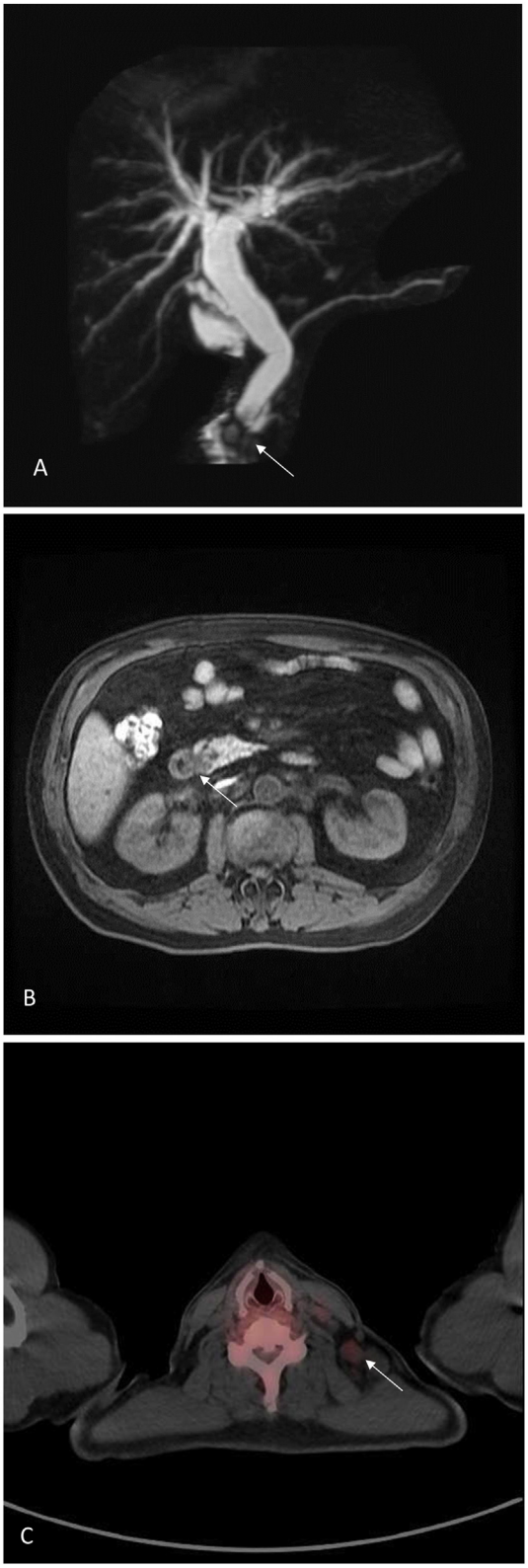

Fig. 1. (A–B) A low signal intensity soft tissue mass (arrow) in the ampulla of Vater with dilatation of common bile duct as seen on MRCP. (C) P PET/CT showed FDG uptake metastatic lymph nodes over left neck (arrow).

In February 2013, a left neck infiltrating purpuric lesion around a previous surgical scar (lymph node biopsy) with mild pain was noted. A subsequent skin biopsy revealed metastatic adenocarcinoma, compatible with ampulla of Vater primary, thereby confirming disease progression with skin metastasis. Consequently, chemotherapy with gemcitabine, oxaliplatin plus UFUR and local radiation therapy were administered. However, the lesion progressed with local itching, and chemotherapy with gemcitabine, oxaliplatin plus cetuximab was prescribed from Nov. 2013 to Feb. 2014. Unfortunately, the disease continued to progress and extended to his left chest wall, flank and back (Fig. 2A–B), so he received palliative chemotherapy with docetaxel, followed by cisplatin plus high-dose fluorouracil and FOLFIRI (last cycle on June 17 2015). Palliative radiation therapy for skin and lymph node metastasis was also performed. Gram negative bacteremia and neutropenic fever were noted after recent chemotherapy. After further discussion with the patient about reasonable options, the patient opted to receive palliative care due to poor response to chemotherapy as well as multiple comorbidities. Presently, he remains under outpatient follow-up for palliative care.

3. Discussion

Cutaneous metastases can occur due to direct invasion of the tumor to the surrounding tissue, by hematogenous spread, or through lymphatic drainage. Particular sites of metastasis are seen in specific primary malignancies, but the pathogenesis is still unclear. It has been observed that skin metastasis is a poor prognostic feature. Some reports showed that skin metastasis from breast cancer had a median survival of 31–42 months, yet patient survival was less than 6 months among those from other primary cancers.[3]

According to our search of the literature, there have been only two cases of cutaneous metastasis from ampullary cancer previously reported.[6,7] The ampulla of Vater is a vital structure traversed by important ducts and surrounded by the pancreas and duodenum. Preoperative staging may include such imaging and diagnostic tools as necessary, including extracorporeal ultrasonography (US), CT, MRCP, esophagogastroduodenoscopic biopsy, endoscopic US (EUS), and endoscopic retrograde cholangiopancreatography (ERCP). For non-metastatic disease, pancreaticoduodenectomy (Whipple procedure) is the gold standard treatment. Local resection or endoscopic papillectomy are also recognized as treatments of choice for selected early stage cases.[5] Recent studies revealed that adequate regional lymph node dissection provided a survival benefit for T1 stage ampullary cancer (hazard ratio 0.19), compared with local resection/ampullectomy without regional lymphadenectomy.[8,9] Our patient was diagnosed with ampullary cancer with distant lymph node metastasis by PET/CT, so he did not undergo surgical intervention but instead received biliary stenting by ERCP followed by chemotherapy.

Ampullary cancer may arise either from the intestinal epithelium or the epithelium covering the pancreatobiliary ducts. Ninety percent of all ampullary malignancies are adenocarcinoma, which consist of two main histological subtypes: intestinal and pancreatobiliary.[1] The two histological subtypes tend to have different clinical characteristics. The incidence of histological lymph node metastasis is much higher in cases of the pancreatobiliary type than in those of the intestinal type (50.0% versus 23.8%). Pancreatobiliary