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Case Report

A vulvar mass as the first presentation in colorectal carcinoma: An unusual site of metastasis masquerading a primary cancer

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ABSTRACT

Objective: To demonstrate a case with a vulvar metastasis masquerading a primary vulvar malignancy. The clinical and histological features, mechanism, and impact to the prognosis are discussed.
Case report: A 58-year-old woman presented to gynecologist for abnormal vaginal discharge. A vulvar nodule was noticed during physical examination. Biopsy showed adenocarcinoma (ADC) and she was referred for further survey under the impression of Bartholin duct ADC. Later she was further found to also have a colorectal tumor with liver metastasis and subsequently received surgery under the suspicion of a double primary cancer involving the colon and vulva. The pathology revealed colorectal ADC with both hepatic and vulvar metastasis.
Conclusion: Secondary tumor in female genital tract is unusual and vulvar metastasis is the rarest kind. The clinical manifestation may be perplexing especially if a patient is presented with a nonspecific gynecological symptom such as abnormal vaginal discharge without any past history.

Introduction

Aside from the ovary, secondary tumor in the female genital system is unusual. Vulva is the rarest site of metastasis in the entire female genital tract [1]. Common malignancies, gynecological or non-gynecological, can be the source of metastasis in vulva [2]. Presence of vulvar metastasis may initially be mistaken as a primary vulvar malignancy when common gynecological complaints are presented [3]. Differentiating primary and secondary vulvar malignancy is crucial because vulvar metastasis is often a pre-terminal phenomenon [4].

As the incidence of colorectal carcinoma in Taiwan is rising, this common malignancy with metastasis at an unusual site may be encountered increasingly more. Here we describe a 58-year-old female with abnormal vaginal discharge and a vulvar mass as clinical presentations and was later diagnosed with colorectal adenocarcinoma (ADC) and metastases to both liver and vulva. This is a case with an unusual site of metastasis mimicking primary vulvar tumor.

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Case presentation

A 58-year-old para 2 postmenopausal woman with previous negative PAP smear results sought help at a district hospital for white and blood-tinged vaginal discharge lasting for a month. Rectal bleeding was also complained. She had neither abdominal discomfort nor any recent body weight loss. A fungating, immobile and ulcerative vulvar mass measuring 2.5 cm in greatest dimension was found near the left Bartholin duct. Initial biopsy revealed adenocarcinoma. She was therefore referred to our institution for further survey, under the impression of Bartholin duct ADC.

Series of blood tests showed that serum CA125 was 12.48 U/mL (normal <35 U/mL) and serum CEA was 3.54 ng/mL (normal <5 ng/mL). Both transvaginal sonography and pelvic examination revealed no abnormality except for the vulvar mass. Pelvic computed tomography (CT) revealed an ill-defined vulvar mass, compatible with the initial diagnosis of Bartholin duct ADC (Fig. 1A and B). A stricture lesion in the sigmoid colon was also noted (Fig. 1C). Colorectal tumor was therefore suspected. Multiple nodular lesions in the liver suggested liver metastasis (Fig. 1D). Flexible colonoscopy confirmed the presence of a sigmoid colon carcinoma.

Left radical vulvectomy with left inguinofemoral lymphadenectomy, sigmoid colectomy with radical lymph node dissection and partial hepatectomy were performed for the vulvar, intestinal

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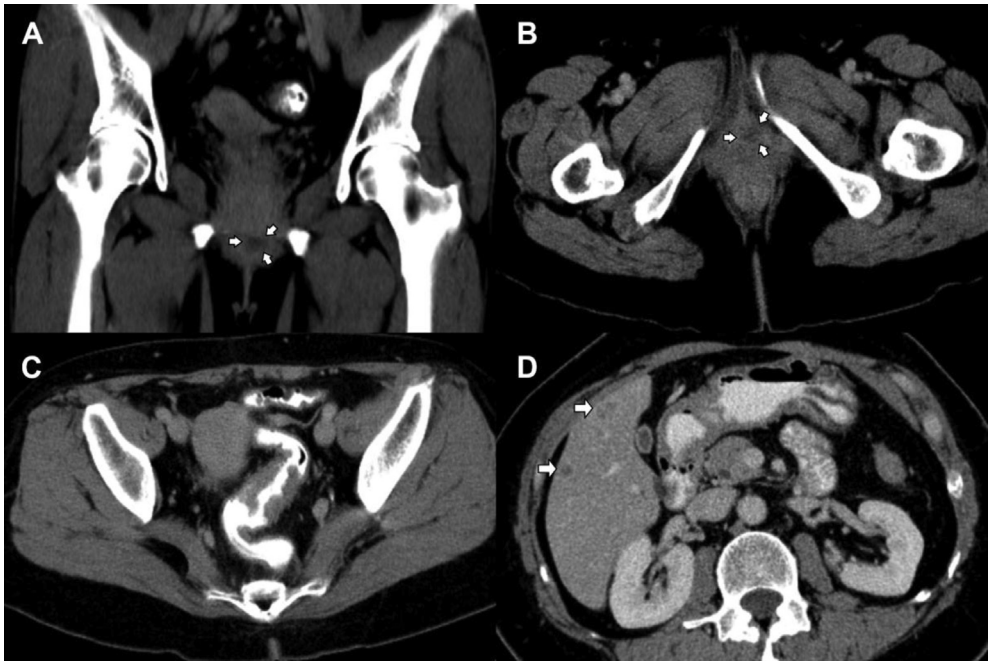

Fig. 1. CT scan images for the lesions. (A) (B) Pelvic computed tomography (CT) revealing an ill-defined soft tissue mass (arrows), compatible with the initial diagnosis of Bartholin duct ADC. (C) A stricture lesion in the sigmoid colon. (D) Multiple nodular lesions (arrows) in random distribution in the liver suggesting metastasis.

and hepatic lesions, respectively. Final pathology confirmed an ADC arising from tubular adenoma in the sigmoid colon (Fig. 2A and B) with metastases to both vulva and liver (Fig. 2C and D). Microscopically, glands composed of pseudostratified columnar cells with abundant dirty necrosis observed in the vulvar tumor (Fig. 2D, left), resembling the primary sigmoid lesion. Immunohistochemical (IHC) stains demonstrated identical profile between the primary sigmoid tumor and its vulvar counterpart: CK7(−)/CK20(+)/CDX2(+)/focal p16(+) (Fig. 3). Pathologic staging was pT3N1bM1a, stage IVa. Molecular study showed negative HPV screening and a missense mutation (c.35 G > A, p.G12D) in exon 2 of K-ras gene. Expression of EGFR was proved by Dako EGFR pharmDx™ system (Agilent technologies, Santa Clara, CA, USA) using IHC stain.

After surgery, the patient received adjuvant chemotherapy using FOLFOX regimen for six courses and later shifted to oral Capecitabine (Xeloda®) for eight weeks due to poor tolerance. The

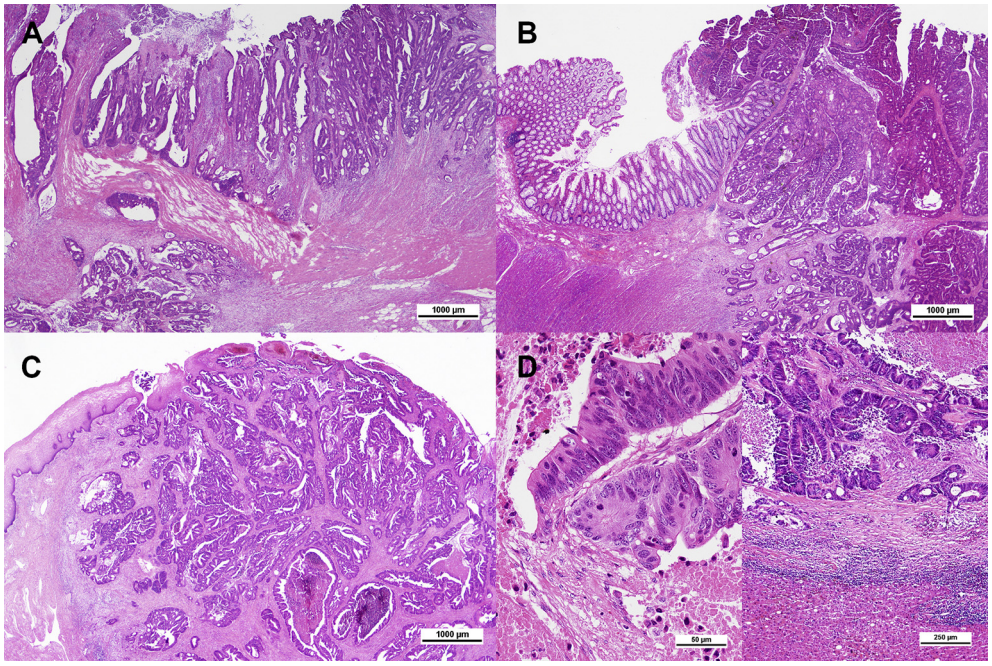

Fig. 2. Moderately-differentiated colorectal adenocarcinoma and its vulvar metastasis. (A) Main tumor in the sigmoid colon with deepest invasion to pericolic fat. (B) The sigmoid adenocarcinoma (right lower) is arisen from a tubular adenoma with high grade dysplasia (right upper). (C) Vulvar metastasis with surface ulceration. (C) Left: malignant glands composed of pseudostratified columnar cells with abundant dirty necrosis observed in the vulvar tumor resembling the primary sigmoid lesion. Right: Liver metastasis.