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Case Report

Pseudoaneurysm of Internal Iliac Artery Causing Hematuria in a Case of Metastatic Choriocarcinoma

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Introduction

Choriocarcinoma is a rare malignant trophoblastic tumor. One of the complications of metastatic choriocarcinoma is hematuria, which may occur due to metastases or due to metastatic invasion of the urinary bladder. Rarely an intrarenal pseudoaneurysm complicating renal metastases resulting from choriocarcinoma may cause hematuria. We report an internal iliac artery pseudoaneurysm as an unusual cause of hematuria in a case of metastatic choriocarcinoma, which has not been reported earlier in literature.

Case Report

A 48-year-old unsterilized multigravida (para 4) patient was admitted with hematuria for 1 week. She underwent dilatation and curettage at a peripheral institution for molar pregnancy 9 months ago. Due to recurrence of bleeding per vaginum after 15 days, she underwent a repeat dilatation and curettage procedure. She remained asymptomatic for 6 months post procedure, following which she complained of pain in abdomen and bleeding per vaginum again. An ultrasound examination at this time showed a bulky uterus with heterogenous echotexture and multiple cystic areas in the uterine cavity with the endometrial echo not being visualized. A right ovarian hemorrhagic cyst of 8×8 cm was also reported. Her serum B-HCG level at the time was 2,666 IU/L. Dilatation and curettage showed choriodecidual tissue with degenerated chorionic villi. However, bleeding per vaginum continued. Chest CT showed three enhancing lung nodules while cranial CT was normal. Hospitalization for 2 months stopped her bleeding, but her B-HCG level was 6,772 IU/L.

The patient underwent an exploratory laparotomy, which showed a multiparous size uterus, a retention cyst of 3×3 cm in the left ovary, and a normal right ovary. A hypervascular mass of 10×12 cm was seen anterior to the uterus, probably arising from the urinary bladder. A biopsy could not be done as the mass was very vascular. Aspiration cytology revealed no malignant cells. Following laparotomy the patient suffered from gross hematuria and was referred to our institution after administration of one dose of methotrexate.

On examination there was a midline, fixed, cystic, tender mass arising from the pelvis. The mass was inseparable

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Fig. 1 Contrast-enhanced CT scan of the pelvis showing a large contrast-filled pseudoaneurysm of the right internal iliac artery with a beak-like projection into the posterior wall of the urinary bladder overdistended with clots.

from the uterus and reaching up to the umbilicus. The clinical impression was metastatic choriocarcinoma. Laboratory investigations revealed anemia (hemoglobin 7.6 gm/dl) and leucocytosis (TLC16, 300 cells/cu mm). Coagulation profile was normal. Serum B-HCG level was 1,844 IU/L. Urine analysis showed >100 RBCs/hpf. Contrast CT of the abdomen was done on a four-detector multislice scanner. It revealed a large pseudoaneurysm of 10×8×7 cm arising from the right internal iliac artery, anterior to the right side of the uterus and inseparable from the urinary bladder. The pseudoaneurysm showed a beak-like projection toward the mid portion of the posterior wall of the urinary bladder, raising the possibility of a leaking pseudoaneurysm being the cause of gross hematuria in this patient (Fig. 1). The pseudo-aneurysm also showed a peripheral thrombus posteriorly. The bladder was overdistended with a whorled, soft tissue density mass suggestive of a hematoma. The uterus was bulky and multiple tortuous vessels were seen along the right pelvic wall. Rest of the abdomen and solid viscera, including the kidneys, were unremarkable. Cystoscopy confirmed the presence of blood clots, which were removed. No mass or growth was seen in the bladder wall. Chemotherapy and supportive therapy were started but the patient continued to have hematuria, developed fever, respiratory distress, and hypotension. Her general health condition was very low and she expired due to septicemia and multisystem failure, before any therapeutic intervention could be given for the hematuria.

Discussion

Choriocarcinoma is a highly vascularized tumor, and because of the affinity of trophoblast cells for blood vessels hematogenous metastases develop early[1]. In choriocarcinoma the predisposition of normal trophoblast to invasive growth and erosion of blood vessels is greatly exaggerated[2,3]. Single and multiple pseudoaneurysms have been reported in patients of choriocarcinoma with cerebral metastases. Such aneurysms are postulated to occur because of partial destruction of the vessel wall, as a result of necrotic tumor thrombus lodging[3]. Histology of brain sections from a metastatic choriocarcinoma patient presenting with multiple cerebral hemorrhages showed numerous clumps of anaplastic malignant cells in cerebral vessels with intramural thrombus and tumor cells outside the endothelial surface. Immunocyto-chemical stains in this patient were strongly positive for placental alkaline phosphatase and B-HCG[3].

Unique angiographic findings of liver metastatic choriocarcinoma include saccular aneurysmal dilatation of the peripheral hepatic arteries (grape-like appearance) at the arterial phase and persistent bilobar vascular lakes at the venous phase[1]. Regression of the primary chorio-carcinoma after it has metastasized is not uncommon and one third of cases manifest as complications of metastatic disease[1]. Hematuria is one of the complications of metastatic choriocarcinoma. Intrarenal pseudoaneurysm complicating renal metastases resulting from a chorio-carcinoma causes hematuria which can be treated with coil embolization.

Our patient with metastatic choriocarcinoma started having hematuria immediately after an exploratory laprotomy. Her B-HCG levels were declining. No growth was identified in the urinary bladder on

cystoscopy. No renal pseudoaneurysms were identified on CT scan of the abdomen. However, CT scan revealed a large pseudoaneurysm of the right internal iliac artery with a beak-like projection into the posterior wall of the urinary bladder. Hence it is postulated that leaking from the right internal iliac artery pseudoaneurysm was responsible for the gross hematuria in this case. We suggest that internal iliac artery pseudoaneurysm should be considered in the differential diagnosis as the cause of hematuria in a case of metastatic choriocarcinoma. Hematuria in these patients will not respond to standard therapy and will require surgical or angiographic intervention.

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