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Case Report

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Massive Lower Gastrointestinal Bleeding from Arterioenteric Fistula in Patient with Uterine Cancer: A Report of Rare Case

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ABSTRACT

Massive lower gastrointestinal bleeding commonly caused by colonic diverticula, angiodysplsia, and inflammatory bowel disease. Arterioenteric fistula an unusual cause of massive lower gastrointestinal bleeding, and potentially life-threating. Patient with advanced pelvic malignancy can develop hemorrhage from an arterioenteric fistula recent advanced in evaluation of the iliac arteries by computerized tomography scan (CT-Scan), selective mesenteric angiography is essential.

Herein we report a patient with recurrent cervical uterine cancer with massive lower gastrointestinal bleeding from a branch of internal iliac arterial fistula to the colon. Treatment of this condition carries high morbidity and mortality rate and clinicians should be alert to this rare cause of massive lower gastrointestinal bleeding especially in patients with pelvic malignancy.

Keywords- *Massive lower gastrointestinal bleeding; Unusual cause; Arterioenteric fistula.*

INTRODUCTION

Lower gastrointestinal bleeding is a common cause of hospital admission.[1] Massive lower gastrointestinal bleeding commonly caused by colonic diverticula, angiodysplsia, and inflammatory bowel disease.[1,2]Arterioenteric fistula is a rare cause of massive lower gastrointestinal bleeding.[3,4] The fatality rate due to GIT bleeding has remained unchanged at 7% to 10% despite the advances in the diagnosis and the therapy method[5]which might be due to more co-morbidity living age than in the past. [6] Massive lower gastrointestinal bleeding is a potentially life-threating condition, most bleeding from lower gastrointestinal tract stop spontaneously, however 10-15% of patient require urgent surgery.[7] Attempts to localize the site of acute lower gastrointestinal bleeding and diagnose the etiology can be challenging. The source of lower gastrointestinal bleeding is most often branches of the superior mesenteric artery or inferior mesenteric artery. Lower gastrointestinal bleeding arising from Arterio-enteric fistula is uncommon; Arterio-enteric fistula formation may be a complication of aneurismal disease of the aorta and iliac artery[8] or related to pelvic malignancy.[4]

Case Report

A 46 years old female patient with uterine cancer was admitted to the Gastroenterology department with altered mental status and massive bleeding from the anus for four days back. The patient had hysterectomy, oophorectomy one and a half years prior to the current admission and then she had concurrent chemo-radiotherapy. Right side hydronephrosis was detected where a stent was inserted for her one year back. In the Gastroenterology department the patient was pale, diaphoretic, cool and tachycardiac with hypotension. Her hematocrit was 14.4 L%. Hemoglobin was 4.6 g/dl, white blood cell was 11.000, with pulse rate of 100 beat per minute and diastolic blood pressure was 40 mmhg. The prothrombine time and partial thromboplastin time were both normal. Treatment began with intravenous fluid, resuscitation, transfusion of seven units of packed red blood cells ($PRBC_S$) and broad spectrum antibiotics. A nasogastric tube was inserted and bilious gastric content but no blood was aspirated. Digital rectal examination revealed normal sphincteric tone with large quantity of bright red blood and blood clots were found with no evidence of a rectal mass. An urgent colonoscopy was performed and was not diagnostic because of the large amount of blood in colon. Seventy two hours after admission and transfusion of a total of seven units of packed red blood cells ($PRBC_S$) the patient hemoglobin was 4g\dl, hematocrit was 23 L% and systolic blood pressure was 60mmhg. However she was subsequently referred for computerized tomography (CT) with contrast which showed a pelvic mass with arterio-enteric fistula and thrombosis of inferior vena cava (IVC) (Figure 1).

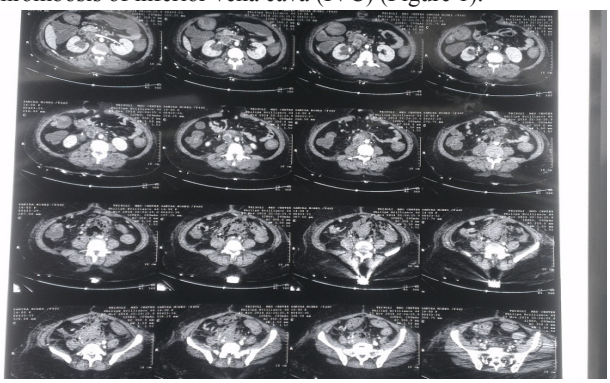

Figure 1: There is a pelvic mass with arterio-enteric fistula and thrombosis of inferior vena cava.

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The patient remained unstable hemodynamically after massive transfusion and continued resuscitation. Consequently an emergency exploratory laparotomy was done, on opening the abdomen an indurated fixed mass involving the sigmoid colon. Right ureter with fistula between one of the branches of internal iliac arterial and sigmoid colon. With thrombosis of inferior vena cava, and the right ureter had been invaded by the recurrent tumor resulting a segmental necrosis with exposure of stent in the ureter. Hartman procedure was done and right side nephrostomy with ligation of both stump of ureter. There is a thrombosis of the right external iliac artery, arteriotomy with fog artycatheterization was tried but failed (Figures 2 - A and B) and there is complete thrombosis of right external iliac artery and inferior vena cava.

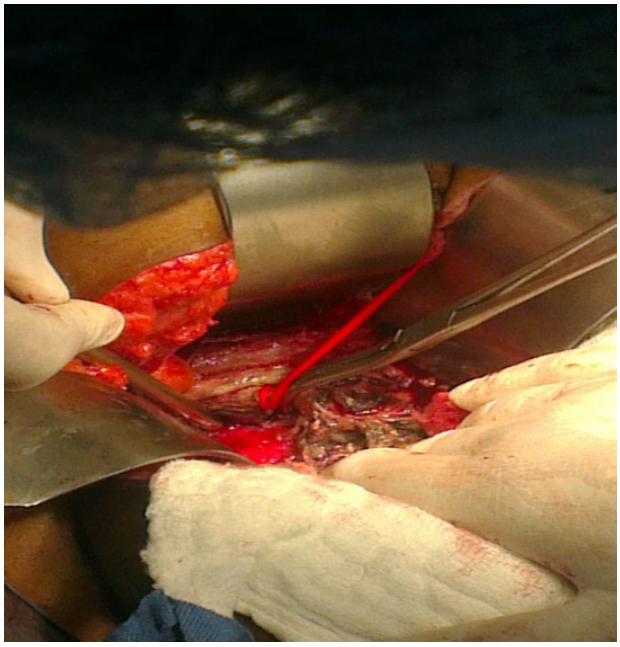

Figure 2(A): Trial of fog arty catheterization

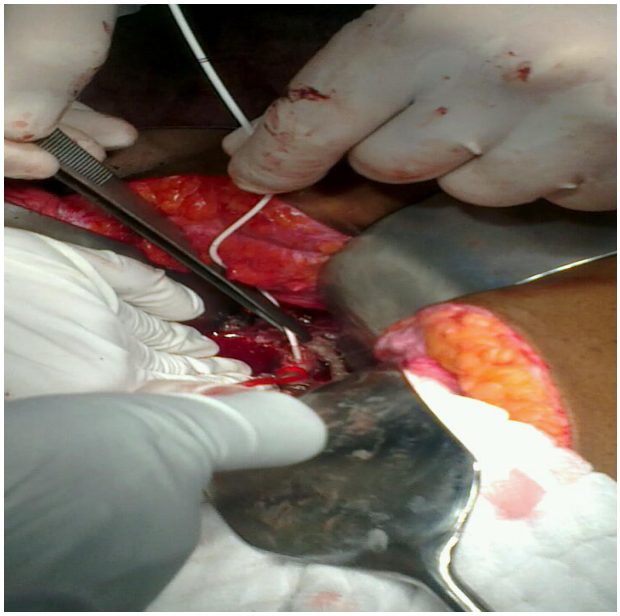

Figure 2(B): Trial of fog arty catheterization

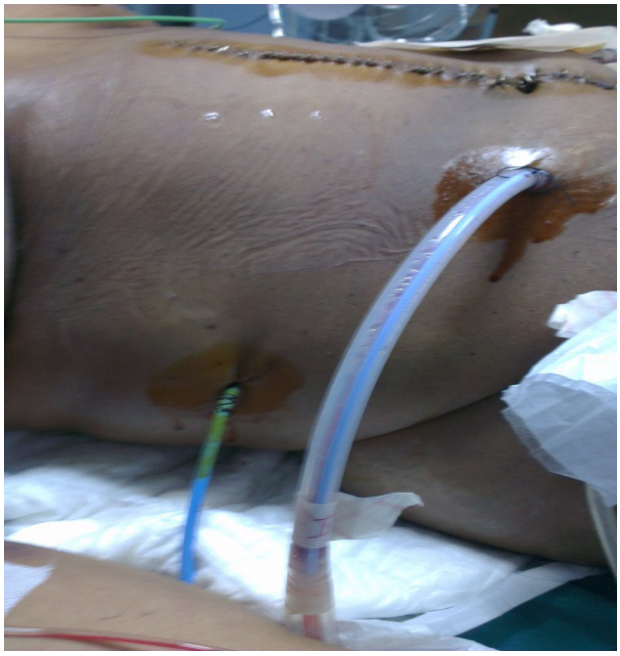

Figure 3: Right side nephrostomy

On the third post-operative day patient develop gangrene of right lower limb (Figures 4-A and B). Above knee amputation was done for her on the fifth post-operative days.

On sixth post-operative days, the patient became stable hemodynamically were she had been transferred to the ward from the ICU with moderate general condition and postoperative wound infections of abdominal wound and stump of amputated limb. Histopathology study revealed metastatic poorly differentiated squamous cell carcinoma. On 46th postoperative day patient develop hypotension, tachycardia, tachypnea, electrolytes disturbance and she died because of pulmonary embolism.

Figure 4(A): Gangrene of right lower limb

Figure 4(B): Gangrene of right lower limb

DISCUSSION

The initial management of massive lower gastrointestinal bleeding consists of resuscitation and stabilization, insertion of naso-gastric tube, urinary catheterization, digital rectal examination and colonoscopy. The main investigation for lower gastrointestinal bleeding is colonoscopy, radionuclide scintigraphy and mesenteric angiography.[7-9] Other investigation tools include helical CT.[9-10] Angiography, wireless capsule endoscopy angiography is a well-accepted investigation tool for massive and life-threating of lower gastrointestinal bleeding.[9-11] A bleeding rate of at least 0.5 ml per minute is required for angiography to detect a hemorrhage.[9] Surgical intervention for lower gastrointestinal bleeding is required when hemodynamic instability persists despite aggressive resuscitation. Surgical access of lower gastrointestinal bleeding resulting from an arterio-enteric fistula related to an advanced pelvic malignancy is difficult, very risky and always non curative. At laparotomy the common iliac artery and its branches should be explored and looped to provide a method of bleeding control during operation and then closure of arterio-enteric fistula carried out. Successful treatment of these cases with percutaneous trans catheter emoblotherapy has been reported if the bleeding source can be demonstrated by angiography.[3-12] In our case computerized tomography (CT) with contrast was the diagnostic tool of investigation which shows a pelvic mass with arterio-enteric fistula and thrombosis of inferior vena cava, closure of fistula with Hartman procedure was done for her.

CONCLUSION

Arterio-enteric fistula is a fatal condition and needs sophisticated tool of investigation with well experienced radiologist for the diagnosis. Treatment of this condition carries high morbidity and mortality rate and clinicians should be alert to this rare cause of massive lower gastrointestinal bleeding especially in-patient with pelvic malignancy.

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