Management of life-threatening uterine hemorrhage in a young patient with choriocarcinoma

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ABSTRACT

A 22-year-old primigravida who underwent medical abortion at 45 days of amenorrhea was diagnosed to have choriocarcinoma by histopathological examination after dilatation and curettage (D and C) for persistent bleeding per vaginum. Her serum β human chorionic gonadotropin values were less than 1 lakh and she was treated initially with methotrexate monotherapy elsewhere. She needed 10 units of packed cell transfusion for persistent hemorrhage and she was referred to our Institute because of persistent gestational trophoblastic neoplasia and intractable hemorrhage. She needed multiple transfusions and underwent laparotomy and bilateral internal iliac artery ligation with intrauterine packing as she had a severe bout of bleeding resulting in hemorrhagic shock. Post-operatively she was managed with chemotherapy employing EMACO (etoposide, methotrexate, actinomycin D, cyclophosphamide, vincristine/oncovine) and EMA (etoposide, methotrexate, actinomycin D) and thus her fertility was preserved.

Key words: Choriocarcinoma, medical abortion, post-abortion bleeding
to 818 mIU/ml in 4 weeks and then subsequently increased to 57,219 mIU/ml after a week of stopping methotrexate. She was diagnosed with persistent gestational trophoblastic neoplasia (GTN) and was referred to us. CT abdomen and thorax did not show any evidence of metastasis.

When she presented to us she was having persistent bleeding on and off and was suffering from vomiting and giddiness. She had moderate pallor clinically and received 3 units of packed cells over 2 days. Her serum β hCG was >2 lakhs and she was being evaluated for methotrexate toxicity. On ultrasound (USG), there was a diffuse echogenic area in the endometrial cavity and myometrium appeared normal except for hyperplasia [Figure 1].

She had a large bout of hemorrhage and went into shock on fifth day of admission and her Hb fell to 6 gm%. She was resuscitated and an emergency laparotomy and bilateral internal iliac artery ligation was performed as facilities for embolization were unavailable. Uterus appeared normal size and there were no theca lutein cysts. At the end of laparotomy, persistent bleeding was seen through cervical os and the uterine cavity and vagina were packed with acriflavin-soaked ribbon gauze which was removed after 24 hours. She was given 4 units of packed cells, 4 fresh-frozen plasma (FFP) and tranexamic acid during the perioperative period. There was no bleeding after 24 hours and she was started on EMACO regimen on the seventh day and her β hCG fell to 1.5 lakhs after one course and 37.9 mIU/ml after the second course. But she developed high grade fever and neutropenia and hence she was started on GCF (granulocyte colony stimulating factor) and later she was treated with EMA regimen. Her β hCG was 0.6 mIU/L after one course of EMA and she received one more course after this and she is on follow up, and she has been clinically and radiologically normal for the last 6 months and her β hCG was within normal limits at the last follow up 2 months ago.

**DISCUSSION**

Hemorrhage in choriocarcinoma can occur from the primary site or from the site of metastasis. The tumor bleeds heavily because of its high vascularity and as the vessels are highly fragile. Hemorrhage can be very severe requiring massive transfusion at times more than 20 units. [4] The present case already received 10 units of blood transfusion before she presented to us. The management options to control hemorrhage in choriocarcinoma include balloon tamponade like Bakri balloon, uterine artery embolization, radiotherapy, chemotherapy and hysterectomy. Hysterectomy was necessary to save life due to hemorrhage in almost 40% of patients in the Sheffield’s group. [3] Hysterectomy is the last option especially in young women who desire fertility but it may have to be undertaken to save life. [4] Conservative myometrial resection with uterine reconstruction may be undertaken in selective cases with localized disease without any metastasis. [3] In the present case, the lesion was in diffuse state involving the entire cavity. Uterine artery embolization followed by chemotherapy [6] is a good option but because of lack of facilities she was managed by bilateral internal iliac artery ligation when she had a severe bout of hemorrhage leading to shock. Radiotherapy can be employed to minimize hemorrhagic complications especially when brain and liver metastases are present and chemoradiation is both hemostatic and tumoricidal. [3] Radiation is not an option in young patients who desire fertility preservation as it affects the ovarian function. Chemotherapy could not be started immediately as her hematological parameters were not optimum for the same. The cure rate for choriocarcinoma even in the presence of metastasis is 80-90% with chemotherapy. Perforation and hemorrhage are the main reasons for hysterectomy and also for mortality. [4] Selective arterial embolization is the method of choice in cases of hemorrhage as it is found to be successful in 79% of cases as reported by Lim and colleagues. [8] Only 2 out of 14 patients required laparotomy for control of hemorrhage in this series. In the absence of facilities for embolization, internal iliac artery ligation and tamponade are the alternatives to control hemorrhage before deciding to do hysterectomy to save the life of the patient.

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