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Case Report

Gestational choriocarcinoma presenting with uterine rupture and shock: a case report

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ABSTRACT

The aim of the study was to report an extremely rare case of gestational choriocarcinoma with a ruptured uterus, its early manifestations and management. With the patient's consent, her medical records were accessed, and older records, whichever were available, were retrieved from the hospital archives. A 24-year-old female presented with acute abdominal pain, distension and dyspnoea to the emergency department. The CT scan showed a massive haemoperitoneum of 1.5 l and a hyperechoic lesion in the fundus of the uterus. Given the previous history of complete molar pregnancy, gestational choriocarcinoma was suspected, and she was taken for an emergency laparotomy with hysterectomy. On opening the abdomen, a ruptured uterus with a dark brown exfoliative mass arising from the fundus of the uterus was found, and the whole specimen was sent for histopathologic examination. HPE confirmed that the tumour was choriocarcinoma, and based on the staging, the patient is being managed by gynaecology and medical oncology teams. Choriocarcinoma presenting as uterine rupture and shock is very rarely seen. Timely surgical intervention, transfusion of blood and blood products, followed by chemotherapy, can save a life.

Keywords: Gestational choriocarcinoma, Rupture uterus, Hysterectomy, Haemoperitoneum

INTRODUCTION

Gestational choriocarcinoma is a rare entity of gestational trophoblastic neoplasm (GTN), with an estimated incidence of 9.2 per 40,000 pregnancies in southeast Asia.[1] It accounts for 5% of gestational trophoblastic neoplasms and <1% of neoplasms arising from the female genital tract. It is a malignant epithelial tumour characterized by the invasion of trophoblastic tissue into the myometrium and has a high propensity for distant metastasis.[2] The risk of gestational choriocarcinoma increases progressively with age. The relative risk of incidence rapidly rises from 1.4 in women older than 25 years to 10.8 in women older than 39 years.[3] Although the majority (about 70%) of gestational choriocarcinomas are detected in the early stages due to vaginal bleeding and marked elevation of serum human chorionic gonadotropin (β-hCG), about 30% of patients are diagnosed late with metastatic disease at presentation.[4-7]

Approximately 25% of gestational choriocarcinomas present after term pregnancies, 50% after molar pregnancies, and the remainder after other gestational events (including ectopic pregnancy.[4,5,8] Per-vaginal bleeding is the most common presentation by the patient. Here, we reported an unusual case of uterine rupture due to gestational choriocarcinoma, with a history of complete molar pregnancy 3 years back mimicking leiomyoma of uterus on initial scans.

CASE REPORT

A 24-year-old woman presented to the outpatient department with complaints of spotting pervaginum for 15 days. Spotting was only a few drops per day and was not associated with pain in the abdomen. The maternal history of the patient is G3P2L2A1, with the last childbirth being 4 months back. She had a complete molar pregnancy 3

years back, for which she gives a history of undergoing suction evacuation.

Now, her ultrasound report revealed a hypoechoic mass over the anterior uterine wall of size 7×6 cm, diagnosed as intramural fibroid, with an endometrial thickness of 10 mm. She was given progesterone tablets and tranexamic acid to stop her bleeding and was called for a review in a week. She turned up at our emergency department 9 days later with complaints of severe acute lower abdominal pain, epigastric pain and dyspnea. Her blood investigations showed haemoglobin of 6 g/dl. Her CT scan showed a large volume of free fluid (hemoperitoneum) in the peritoneal cavity, attenuated in the suprapubic region. It was diagnosed as possibly a malignant trophoblastic disease with full-thickness uterine invasion and uterine perforation. Her β-hcg level was >1,50,000 mIU/ml. She was posted for emergency laparotomy, and a total abdominal hysterectomy was done under general anaesthesia.

A tumour of around 8×8 cm protruding out of the fundus of the uterus was seen with acute bleeding from it. Hemoperitoneum of around 1500 ml was drained. The cut section of the uterus showed dark brown growth perforating the uterine wall. On HPE, tumour cells were seen to invade the entire myometrium and breach the serosal layer.

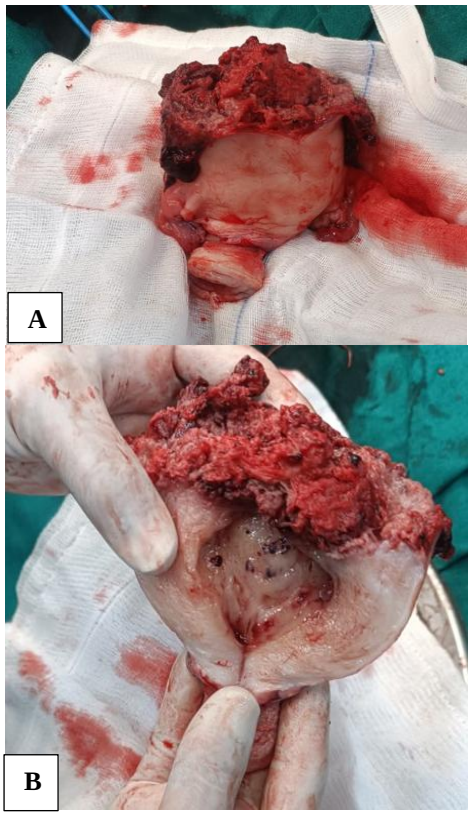

Figure 1: (A) The ruptured uterus with an exfoliating mass arising from the fundus; and (b) The cut section of the uterus and the mass in the fundus.

However, the peritoneal fluid sent for malignant cytology was negative for malignant cells. The patient was haemodynamically stabilised with one unit of packed cells transfused intra-operatively, and two units of packed cells, 3 units of fresh frozen plasma and 3 units of cryoprecipitate were transfused post-operatively. Her haemoglobin progressively increased from 6.8 g/dl on day 1 to 9 g/dl on day 3 and 12.5 g/dl on day 9 post-op. With a clean suture line and stable vitals, the patient was discharged on day 5 of post-op.

A follow-up PET scan on day 10 of post-op showed a sub-pleural nodule in the posterior basal segment of the lower lobe in the right lung and no other metabolically active disease elsewhere in the body. Repeat β-HCG on day 15 post-op was 7500 miu/ml. As our patient comes under the high-risk category with a score of 7 (according to the FIGO prognostic score), she was referred to a medical oncologist to start the EMACo regimen.

DISCUSSION

Although choriocarcinoma is an aggressive neoplasm, a through-and-through rupture of the uterine wall is extremely rare. The exact pathogenesis of rupture of the uterus in choriocarcinoma is not known. However, few theories have been proposed to explain this. Malignant trophoblastic cells invade the uterine veins and damage the blood vessels. Subsequently, multiple infarctions occur due to thrombosis, vascular aneurysms and intramural bleeding.[9] Hence, it is also characterized by early vascular invasion and distant metastasis.[10] Regarding management, patients presenting with acute abdomen from uterine perforation and shock should be managed aggressively. Securing IV lines, blood and blood product transfusions, and surgical intervention is necessary on an emergency basis. Total abdominal hysterectomy (TAH) is the preferred approach. Patients who are operated on with explorative laparotomy due to severe acute and active intra-abdominal bleeding require TAH as an emergency and lifesaving procedure. In the case of a woman who wants to preserve her fertility, and if it's not a case of a ruptured uterus, the uterus can be spared by providing chemotherapy followed by strict and vigilant follow-up.

Chemotherapy is the mainstay of treatment in the case of gestational choriocarcinoma[11]. Even in the absence of metastases, chemotherapy allows the eradication of gestational choriocarcinoma and is associated with a favourable prognosis and preservation of fertility[11]. Single-agent chemotherapy with injectable Methotrexate is used in non-metastatic and low-risk choriocarcinomas (score≤6). Multi-agent chemotherapy and radiotherapy are used for high-risk, metastatic choriocarcinomas (score>6).[12,13]

CONCLUSION

Choriocarcinoma presenting as uterine rupture and shock is very rarely seen. Timely surgical intervention,

transfusion of blood and blood products, followed by chemotherapy, can save a life. A high degree of clinical suspicion is required by the treating doctor for the early diagnosis and proper management of such cases.

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