



CASE SERIES OF INVASIVE MOLE - A LEARNING EXPERIENCE.

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ABSTRACT This case series is intended to study the earliest possible modes of diagnosis of invasive mole and its management. In this case series, three scenarios where invasive mole presenting as hypervascular retained products of conception, as acute abdomen due to a perforating lesion and as secondary postpartum hemorrhage following a full term normal vaginal delivery are described. Inferred from the case scenarios, ultrasound with color Doppler can be used as a first investigation to reduce the time to diagnose interval. Management includes medical treatment with intravenous methotrexate and surgical treatment with a fertility-preserving resection or hysterectomy. Strict β -HCG follow up is required to prevent missing the diagnosis of malignant transformation of mole.

KEYWORDS : Hydatidiform Mole, Invasive, Uterine perforation, Gestational Trophoblastic Disease.

INTRODUCTION:

An invasive mole is a molar trophoblastic neoplasm where the trophoblastic tissue invades the wall of the uterus up to the serosal layer resulting in internal hemorrhage (1). Invasive mole usually presents in patients with a history of hydatidiform mole, as persistent vaginal bleeding and, is usually diagnosed by serial biochemical testing of β -HCG (2). Here we present a case series of various presentations of invasive mole. This case series intends to describe the earliest possible investigations that could be done to diagnose invasive mole and its appropriate management.

CASE PRESENTATION:**CASE 1:**

A 34 years old female presented with the complaint of persistent vaginal bleeding for 2 weeks. She was P2L2A1 with history of two full-term normal vaginal deliveries followed by a spontaneous abortion at 8 weeks of gestation, for which she underwent suction and evacuation, four months before presentation. Her post-procedure histopathology report was unavailable.

On admission, her vitals were stable. Her trans-abdominal ultrasound showed retained products of conception of size 4.2 x 3.4 cm. Hence a diagnosis of incomplete evacuation was made and the patient was taken up for repeat curettage. Post-procedure, she had persistent bleeding per vagina over the next 24 hours. Her vitals started deteriorating and there was a fall in the hemoglobin, which was monitored 6th hourly. The patient was then evaluated again with trans-abdominal ultrasound with color Doppler which revealed an intrauterine lesion with vascularity. By that time the patient was bleeding profusely resulting in hypovolemic shock.

After proper resuscitation, the patient was taken up for emergency hysterectomy. Intraoperative specimen revealed a fleshy vascular mass of size 4 x 3 cm as in figure 1, which was sent for histopathological examination, revealing the diagnosis of an invasive mole. The postoperative period was uneventful and proper β -human chorionic gonadotropin levels (β -HCG) follow up was done, until negative levels.

**CASE 2:**

A 28 years old nulliparous female had presented in obstetric casualty with generalized abdominal pain for 6 hours and vaginal bleeding for 3 days. She had a history of suction and evacuation for molar pregnancy 8 months back and had lost follow up.

On examination, she was febrile with tachypnea and tachycardia. She had generalized abdominal tenderness with guarding and rigidity. Her trans-abdominal ultrasound revealed collection in the pouch of Douglas and culdocentesis was positive for hemoperitoneum. Hence the patient was taken up for emergency laparotomy.

Intraoperatively, there was hemoperitoneum with uterine perforation of size 0.5 x 0.5 cm caused by a perforating mass lesion. The lesion was excised en masse and the perforation was repaired. The sample was then sent for histopathological examination, which confirmed the diagnosis of an invasive mole.

Her postoperative period was uneventful. Chemotherapy with intravenous Methotrexate 1mg/kg/day on day 1,3,5,7 with intravenous Folinic acid 0.1 mg/kg/day on day 2,4,6,8 was given for 3 cycles and β -HCG follow up was done until negative levels.

CASE 3:

A 28 years old female presented with the complaint of persistent vaginal bleeding for 2 weeks. She was P1L1 with the history of a full-term normal vaginal delivery 4 weeks before the presentation.

Her vitals were stable and her trans-abdominal ultrasound revealed retained products of conception of size 4.6 x 3.8 cm. A diagnosis of secondary postpartum hemorrhage due to retained tissue was made and she was taken up for suction and evacuation.

Her post-procedure histopathology report revealed abnormal chorionic villi with atypia. Hence serial β -HCG monitoring was done which showed raised plateau levels over 3 weeks, supporting the diagnosis of an invasive mole. Hence chemotherapy was started with intravenous Methotrexate 1mg/kg/day on day 1,3,5,7 with intravenous Folinic acid 0.1 mg/kg/day on day 2,4,6,8. But, she suffered a fatal complication of refractory myelosuppression leading to death during the second cycle of chemotherapy.

DISCUSSION:

The present case series aim is to study the various presentations of invasive mole, possible earliest investigation, and the appropriate intervention that could be planned.

Mahajan A et al had reported about the curettage of retained products with undiagnosed vascularity which results in life-threatening hemorrhage and shock due to endovascular damage (3) as in case 1. Aoki et al had reported about the doppler color flow mapping of invasive mole which describes an abnormal vascular pattern in the echo-free myometrium and arterio-venous shunts (4).

Ultrasonographic evidence of retained products with abnormal vascularisation in those with the previous history of evacuation of hydatidiform mole usually points towards a diagnosis of invasive mole

(5). Hence ultrasound with colour Doppler should be done at the first attempt of evaluation in those with the previous history of suction and evacuation to reduce the time to diagnose interval as would have been done in case 1. These Doppler changes dissolve after chemotherapy (4). Hence Doppler can also be included as an index in the surveillance of invasive mole.

Mondal SC et al and few others had described a case of invasive mole presenting as an acute abdomen similar to case 2 which is a rare presentation (1, 4, 6–9). Hence in female patients presenting with acute abdomen without any history of trauma, with other surgical causes ruled out and positive past history of abortion or suction and evacuation should alert the clinician to suspect a perforating invasive mole as in cases 1 and 2.

Wang et al had described the oncological safety of fertility-sparing resection of uterine lesions in GTN (10). Grin et al had described the laparoscopic management of perforating invasive mole (11). Similarly, early diagnosis and identification of the extent invasive mole can help in a precise surgery where the lesion can be removed en masse, and the uterus is preserved as in case 2, in contrast to a routine hysterectomy. However, hysterectomy is the final choice in those with uncontrollable bleeding leading to shock (1) as in case 1.

Ghaemmaghami et al had described a case of the early development of choriocarcinoma following full-term pregnancy (12). There are also few studies supporting the development of placental site trophoblastic tumor and epithelioid trophoblastic tumor after an antecedent pregnancy (15–17). However, the development of invasive mole after a term normal vaginal delivery as in case 5 is one of the rarest requiring further researches.

Although chemotherapy with methotrexate is effective, it also results in acute and chronic side effects like gastrointestinal (48%), ophthalmic (16%), myelosuppression (48%), infection (20%) and neurological side effects (0.7%) which are sometimes fatal as in case 5 (8). Agents like dactinomycin can be used with 90% effectivity in those suffering side effects (9).

CONCLUSION:

As inferred from the above cases,

1. Ultrasound with Color Doppler should be advised as the first investigation in a woman presenting with vaginal bleeding, with an associated history of suction and evacuation to reduce the time to diagnose interval. It can also be included as a follow-up tool for invasive mole.
2. In cases of the acute abdomen without incidence of trauma, a perforating invasive mole should be included as a primary differential diagnosis, so that the appropriate fertility-preserving surgical management can be planned.

DISCLOSURE OF INTEREST:

The authors report no conflict of interest.

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FIGURE LEGENDS:

Figure 1: Hysterectomy specimen showing intrauterine vascular mass.

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