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Ultrasound and MRI Findings in Invasive Molar Pregnancy.

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ABSTRACT

Invasive mole is a tumorous growth associated with gestation and falls under the spectrum of gestational trophoblastic disease. Due to their aggressive growth characteristics, invasive moles are considered locally invasive non-metastasizing neoplasms. Early diagnosis of gestational trophoblastic disease and its potential complications is important for timely and successful management of the condition with preservation of fertility. Initial diagnosis is based on a multimodality approach: encompassing clinical features, serial quantitative β -hCG titers, and pelvic ultrasonography. Pelvic magnetic resonance imaging (MRI) is used to assess the depth of myometrial invasion and extrauterine disease spread. Angiography has a role in management of disease complications.

Keywords: MRI, molar, ultrasound

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INTRODUCTION

An invasive mole develops in approximately 10-20% of patients after molar evacuation and infrequently after other gestations. It is defined as a mole that penetrates and may even perforate the uterine wall.

CASE REPORT

A 22 year old woman presented to casualty department with amenorrhea for 4 months with spotting for 2 days. Her urine pregnancy test was positive. She had never taken any previous antenatal ultrasounds. She had a history of previous abortion at 6 weeks. She was referred for ultrasound scan.

On ultrasound pelvis (fig 1a and 1b) enlarged uterus showed a large hyperechoic mass with multiple tiny cystic spaces and increased vascularity filling the endometrial cavity. Areas of hemorrhage was noted within the lesion. Both ovaries were normal. Features suggested complete hydatidiform mole.

MRI pelvis (fig 2a and 2b) impression was given as hydatidiform mole with intrauterine blood clots and possibly myometrial invasion in posterior and right lateral wall. Patient underwent suction evacuation and specimen was sent for biopsy. Biopsy report (fig 3) confirmed the diagnosis of molar pregnancy. Her Beta hcg level was monitored, which was 80,000 even after one week. Hence patient was put on methotrexate and suggested follow up.

DISCUSSION

Complete or partial hydatidiform mole invading the myometrium is called invasive mole [1]. Invasive mole is a tumorous growth associated with gestation and falls under the spectrum of gestational trophoblastic disease. Due to their aggressive growth characteristics, invasive moles are considered locally invasive non-metastasizing neoplasms. Ultrasound is usually the first modality followed by MRI for assessing myometrial invasion.

In contrast to a hydatidiform mole (an intracavitary uterine lesion), the invasive hydatidiform mole, the placental site trophoblastic tumor, and the choriocarcinoma either invade or may be located within the myometrium. An invasive hydatidiform mole is a form of GTN that occurs due to abnormal proliferation of placental trophoblast. It most commonly occurs after the evacuation of GTD. It is characterized by the presence of edematous chorionic villi with trophoblastic proliferation that invades into the myometrium of the uterus or to adjacent structures like the vagina, vulva, broad ligament, and can also invade into the uterine vessels. Invasive mole is unlike choriocarcinoma, the latter is without the presence of chorionic villi.

Invasive mole are seen on grey-scale ultrasound as nonspecific focal masses with myometrial epicenter and are sonographically indistinguishable from one another. The mass may be echogenic, hypoechoic, complex, or multicystic. It may show anechoic spaces which represent hemorrhage, necrosis, cysts, or vascular spaces. More extensive disease may appear as a heterogeneously enlarged uterus with lobulated contour or large pelvic mass which may extend to involve other pelvic organ [2].

On T1-weighted images, it is isointense or mildly hyperintense to the myometrium with areas of hemorrhage, seen as focal signal hyperintensity. Diffuse myometrial involvement by the tumor is seen as diffuse myometrial signal hyperintensity with obliteration of the normal zonal anatomy. Invasive GTN has a myometrial epicenter with invasion into parametrium and more frequent hemorrhage and necrosis. MRI is superior to ultrasound for identification of parametrial invasion, which is seen as heterogeneous T2 hyperintense masses beyond the confines of the uterus [3,4].

Although color Doppler ultrasound is the modality of choice for diagnosing uterine vascular malformations, angiography is the preferred method in patients who may potentially undergo embolization for management of the vascular malformations persisting despite complete response to chemotherapy and complicated by refractory, life threatening vaginal, or intraperitoneal hemorrhage [5].

After completion of chemotherapy and normalization of β -hCG levels, patients are followed up with serial β -hCG levels for one year, although follow-up protocols vary at different institutes [6].

CONCLUSION

As with other form of gestational trophoblastic disease, maternal serum beta HCG values are markedly elevated. Elevated β -HCG levels even after expulsion, indicates invasiveness and warrants the use of methotrexate and follow up with a high degree of suspicion to be held in subsequent pregnancies as in this case.

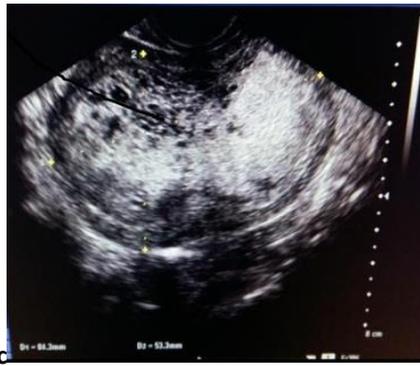


Figure 1

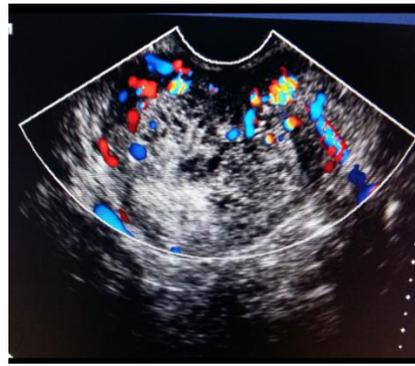


Figure 1b

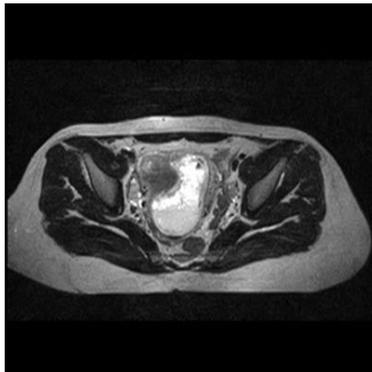


Figure 2a

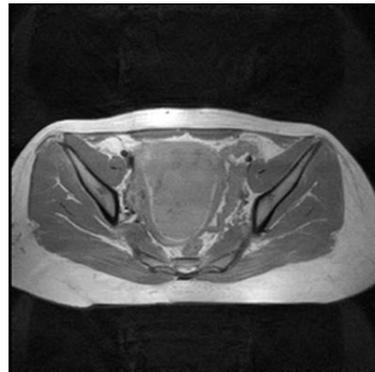


Figure 2b

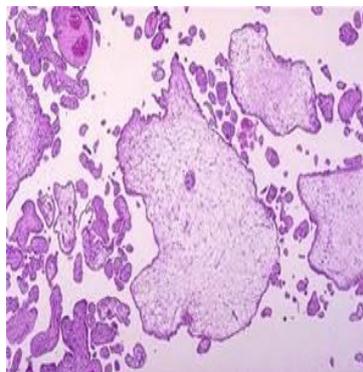


Figure 3



REFERENCES

- [1] BJ Wagner, PJ Woodward, and GE Dickey. Radiographics 1996;16(1):131–148.
- [2] KK Kani, JH Lee, M Dighe, M Moshiri, O Kolokythas, and T Dubinsky. Current Problems in Diagnostic Radiology 2012;41(1):1–10.
- [3] M Nagayama, Y Watanabe, A Okumura, Y Amoh, S Nakashita, and Y Dodo. Radiographics 2002;22(3): 563–580.
- [4] H Hricak, BE Demas, CA Braga, MR Fisher, and ML Winkler. Radiology 1986;161(1):11–16.
- [5] AKP Lim, R Agarwal, MJ Seckl, ES Newlands, NK Barrett, and AWM Mitchell. Radiology 2002;222(3): 640–644.
- [6] TY Ng and LC Wong. Bailliere's Best Practice and Research in Clinical Obstetrics and Gynecology 2003;17(6):893–903.