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Invasive molar pregnancy mimicking choriocarcinoma. A case

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Summary

Molar pregnancy, also known as hydatidiform mole, represents a figuration of noncancerous (benign) tumor, originating from uterus. After the fertilization instead of a viable and well-growing pregnancy, there is an increasing and pathologic production of placental cysts. According to the completion of the cysts, molar pregnancy can be divided into a complete and an incomplete (partial) form. Molar pregnancy can be located inside the uterine cavity or can be invasive with malignant complications. A small percentage can be malignant transformed, undergoing gestational trophoblastic neoplasias (GNT). GNT are classified histologically into three distinct subgroubs: choriocarcinoma destruens (invasive mole), choriocarcinoma(CC), and the very rare placental site trophoblastic tumor (PSTT). The authors present a case of a 27 year-old female patient in the 2nd trimester of gestation successfully diagnosed and treated as invasive molar pregnancy.

Key words: Molar pregnancy; Trophoblastic disease; Choriocarcinoma.

Introduction

The figuration of molar pregnancy and especially the hydatidform, consists an abnormal for of conception occurring in about one in 500-1000 pregnancies [1, 2]. The presentation of the disease can be divided in a complete and an incomplete forms.The complete hydatidiform mole is usually diploid and originates entirely as androgenetic. Most of the cases represent 46,XX karyotype. Only few cases consist of 46,XY karyotype. They are described as diffuse hydropic hyperplasia and histologically there is no sign of embryonic tissue.

The incomplete form is usually triploid as a result of one maternal and two paternal haploid sets, either from dispermic fertilization or from fertilization with an unreduced diploid sperm. The pathophysiologic mechanism results from an enormous production of the tissue, supposing to be developed into the placenta.

Apart from the abnormal increase of the hydatidiform mole, around 1.5% of the incomplete form can undergo malignant transformation into invasive forms, choriocarcinomas, or in rare cases placental-site trophoblastic tumors [3].

Gestational trophoblastic tumors increase rapidly with most frequent metastases the lung, liver, and less often the brain cavity. The gold standard remains surgical treatment, followed by combination treatments of chemotherapy and radiotherapy [4].

Case Report

The authors present a case of a 27-year-female patient (para 2, gravida 2) admitting to the present Department and complaining of diffuse abdominal pain and vaginal bleeding. A physical examination revealed severe abdominal sensibility and enlarged uterus, clinical sign of gestation.

According to the last menstrual period. the patient was in the 23.5th week of gestation. The assiduous laboratory examination revealed Hb 9.2, Hct 27.9, and WBC 4.600. SO2 was 97% and blood pressure was 130/70. The b-hCG levels were 60,000. After a while the patient's clinical condition worsened. The patient was immediately hydrated with crystalloid and colloid fluids.The patient underwent a abdominal ultrasound and following brain/ upper and lower abdominal CT. The ultrasound examination confirmed an enlarged uterus with an enormous mass in the uterine cavity (Figure 1a). It was in the form "grape-like" vesicles, characteristic mark of trophoblastic disease (hydatidiform mole) and presence of choriocarcinoma (Figure 1b). The ultrasound depiction was filled with the presence of increased vascularization at the posterior site of the mass probably due to invasive tissue (Figure 1c). The CT scan revealed during examination of the lesser pelvis, a marked swelling of the uterus with eccentric hypodense foci and hypervascular elements, with a strong contrast enhancement of vessels mostly related to gestational trophoblastic disease (Figure 2). These vessels had the tendency to invade outside the myometrium to the near anatomic organs. Remarkable sign of the above examination was the presence a minor high density area at the left cerebellar area. Differential diagnosis between artifact and choriocharcinoma. After the hemodynamic stabilization of the patient, the b-hCG level was 9,300. The patient automatically miscarried a large part of the uterine mass. The ultrasound examination reveled a large residual mass in the uterine cavity. The patient underwent therapeutic uterine evacuation through

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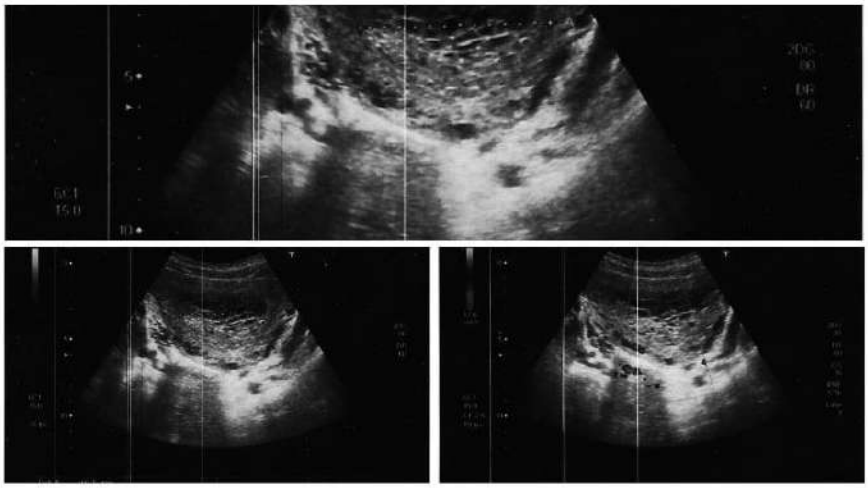

Figure 1. — a) Enlarged uterus with an enormous mass into the uterine cavity. b) Presence of "grape-like" vesicles (differential diagnosis: trophoblastic disease (hydatidiform mole, choriocarcinoma). c) Increased vascularisation at the posterior site of the mass probably due to invasive tissue.

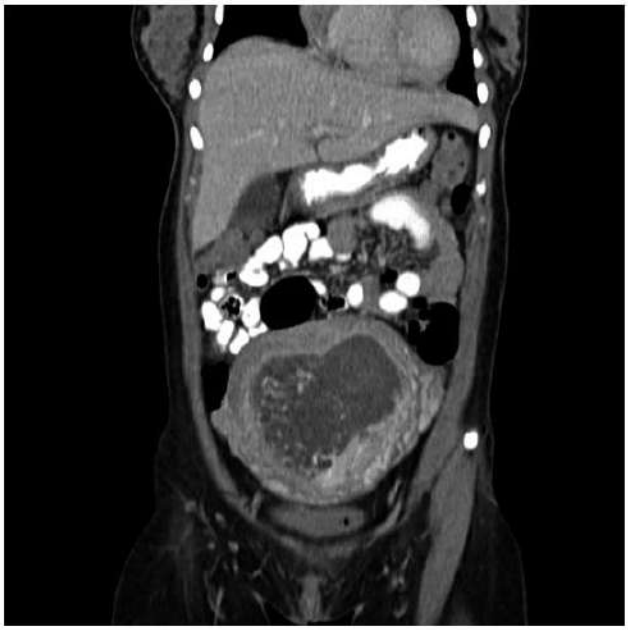

Figure 2. — By controlling the lesser pelvis , there is a marked swelling of the uterus with eccentric hypodense foci and hypervascular elements, with strong contrast enhancement of vessels mostly relative to gestational trophoblastic disease.

curettage. This procedure was mandatory in order to establish the final diagnosis. All specimens were sent to histologic evaluation. The following day the b-hCG level was 406, which smoothly reduced. The histologic examination revealed diffuse type of trophoblastic disease with clear signs of uterine invasion. The patient was discharged from the hospital in good clinical condition. After a week the b-hCG levels were nullified. According to b-hCG levels there was no need to use methotrexate agents. The multidisciplinary council consisted of follow ups on a regular basis.

Discussion

Molar pregnancy can be differentiated through various clinical findings.The most common presentation consists of abnormal vaginal bleeding in cases of early pregnancy. Other clinical features represent uterus enlargement, pain arising from large benign theca-lutein cysts, vaginal passage of grape-like vesicles, exaggerated pregnancy symptoms including hyperemesis, hyperthyroidism, and lesser symptoms of early preeclampsia [5].

The diagnosis of molar pregnancy reflects the evaluation of physical examination, imaging findings, and laboratory examinations. The ultrasound evolution depicts the uterus enlargement without embryonic sac and the appearance of fine vascularisation, with well-organized invasive tissue [6].

The management of molar pregnancy consists of assiduous blood and hCG measurement, transvaginal ultrasound, chest X-ray and MRI in order to investigate the depth of invasion.

The differential diagnosis between molar pregnancy and gestational trophoblastic neoplasia (GNT) is strongly accompanied with survival rate and quality of life of the patient. In comparison to a hydatidiform mole, the invasive form as part of GNT, together with the placental site trophoblastic tumor, and the choriocarcinoma invade and diffuse inside the myometrium cavity. GNT is characterized by the presence of edematous villi with enormous trophoblastic proliferation located at the myometrium cavity or emigrate to adjacent organs like the vagina, vulva, or into the uterine vessels.

According to FIGO guidelines and the current literature, the management of GNT includes a chest X-ray, thoraxabdominal and pelvic CT (diagnosis of liver or lung metastases) and brain CT (diagnosis of cerebral metastases) [7].

The use of color Doppler flow imaging in myometrium represents a focal point honeycomb area filled with enor-

mous blood flow, abnormal formation, and intensive mosaic sphere with bright depictions.

Ultrasound imaging has the tendency for early diagnosis and late findings. Use of color Doppler can diagnose and certify formations of vascularisation and angiogenesis of these tumors. Ultimate goal consists the diagnosis of invasions depth, integral part of early diagnosis of GTN [8].

Methotrexate as example of chemotherapy use is strongly connected with the hCG blood levels.

Total hysterectomy reflects a surgery option for women who did not want to preserve their fertility and for those >40-years-old with a great risk of developing GNT [9].

Choriocarcinoma, a pathologic entity of GNT, after the invasion of the myometrium cavity metastasizes to the lower genital tract, brain, liver, lung, and kidneys. Possible absence of the above metastatic lesions, can influence and regulate the therapeutic mapping [10].

Conclusion

Despite the decreased percentage, GTNs as result of an invasive mole can metastasize to extragenital areas as lung, liver, and less frequently in the brain cavity. Prognostic factors are definitely age and reproductive capacity of the patient. Therapeutic mapping consists of multidisciplinary cooperation, with the ultimate goal to increase the survival rate and quality of life of the patient.

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