Unusual Presentation of Invasive Mole: A Case Report

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Abstract

Background: Invasive mole is responsible for most cases of localized gestational trophoblastic neoplasia. Gestational trophoblastic disease describes a number of gynecologic tumors that originate in trophoblastic layer including hydatidiform mole (complete or partial), invasive mole, choriocarcinoma, placental site trophoblastic tumor and epitheloid trophoblastic tumor. Invasive mole may arise from any pregnancy event although in most cases is diagnosed after molar pregnancy. Overall cure rate in low risk patients is nearly 100% and in high-risk patient 90%. In rare cases, molar tissue traverses thickness of myometrium and leads to perforation and acute abdomen and invasive mole infrequently metastasis. The best treatment option is chemotherapy (according to stage and score with single or multiple agent) and in patients that fertility is not the matter, hysterectomy can be done.

Case Presentation: A 41 years old G3P2ab1 woman referred to Firouzgar hospital 2 months after curettage of molar pregnancy with vaginal bleeding and acute abdomen. In workup, HCG 224000 mIU/ml and evidence of metastasis was detected. Chemotherapy due to stage 3 and score 9 and surgery due to acute abdomen was done. This case was reported for its rarity.

Discussion: This case reported about ovarian metastasis and uterine rupture with acute abdomen and involvement of omentum in metastatic invasive mole. Lack of surveillance led to extensive morbidity. Management of this patient was successful. In follow up, she was free of disease without sequel of any kind for five years now.

Key words: Complete mole, Gestational trophoblastic neoplasm, Haemoperitoneum, Invasive mole, Trophoblast.

sites. However, metastasis to ovary from invasive mole is rare. About 5% to 6% of ovarian tumors come from metastasis of other organs. Metastasis can occur from direct extension of another pelvic neoplasm or by hematogenous or lymphatic spread or by transcelomic dissemination. Possibility of metastasis to ovary is extremely rare which is even much lower than that of nongestational primary ovary choriocarcinoma with an incidence of 1 in $3.7 \times 10^7$ (5). Ovarian non gestational choriocarcinoma is a major differential diagnosis. Metastasis to the omentum is very rare in invasive mole. Invasive mole is curable with chemotherapy but hysterectomy decreases the need for multiple courses of chemotherapy and in patients with heavy bleeding or sepsis for control of complication and stabilization, chemotherapy is needed (6, 11).

Here a case with invasive mole after evacuation of molar pregnancy, presented with acute abdomen and in surgery metastasis to ovary and omentum and parametrium was detected. Management and treatment with hysterectomy and chemotherapy in this case was successful.

**Case Presentation**

A 41- year- old housewife woman, gravid 3 para 2 live child 2 (all NVD) with a last 10 years old child referred to Firouzgar hospital on 24 August 2010 with a history of a dilation and curettage and 2 months of cough. On examination, she was febrile (38°C, tachycardia, leukocytosis (16000) and uterus was tender and enlarged. Primary management of her problem was carried out in another hospital. Vaginal bleeding persisted and second curettage was done in another hospital. At that time, chest x-ray was normal. In our hospital, report of sample pathology given from first and second curettage was complete mole. After molar evacuation, the patient was not monitored for weekly determination of βHCG level. She received antibiotics (due to fever) and work up for malignant trophoblastic disease or persistent GTN was done because of high βHCG level (224000 mIU/ml) and much too enlarged uterus and involvement of the whole uterus parenchyma, which was detected on sonography (largest tumor size in uterus was 6 cm). The liver and renal function tests were also normal. Thyroid function test demonstrated hyperthyroidism. In the metastatic work up, CT scan of chest and abdomen and brain was carried out. CT scan of the abdomen and pelvis showed involvement of the left adnexa and pelvic lymphadenopathy.

The patient’s chest CT scan showed multiple bilateral round pulmonary metastatic lesions that were 2 cm in diameter, illustrated in figure 1. The liver and brain scans were both normal.

Once the disease was diagnosed, the patient chemotherapy with EMA started (Table 1). Because of acute abdomen and severe abdominal pain and unstable vital signs with diagnosis of perforative peritonitis, the patient was taken up for emergency laparotomy. Due to hyperthyroid state, in induction of anesthesia, β blocker agent was administered. In this patient, subtotal hysterectomy and left salpingo oophorectomy and resection of omentum were done. In gross uterus, chorionic villus was seen. Uterine wall was perforated by tumoral invasion on the left side of posterior wall (Figure 2).

The bilateral uterine parameters, the external

| Table 1. The patient was III:9 according to FIGO staging and WHO scoring (7) |
|--------------------------|------------------|-----------------|-----------------|------------------|
| Age (year)               | 0                | 1               | 2               | 4                |
| Antecedent pregnancy     | mole             | abortion        | Term            |                  |
| Interval months from index pregnancy | <4               | 4-7             | 7-13            | ≥13              |
| Pretreatment HCG serum (mIU/ml) | <1000            | 1000-10000      | 10000-100000    | ≥100000          |
| Largest tumor size (cm)  | <3               | 3-5             | >5              |                  |
| Site of metastasis       | lung             | Kidney/spleen   | GI              | Liver/brain      |
| Number of metastasis     | -                | 1-4             | 5-8             | >8               |
| Previous failed chemotherapy | -                | -               | Single drug     | Two or more drugs |

Figure 1. Pulmonary Metastasis in invasive mole
surface of the endocervical canal and the omen-
tum were invaded by tumors. A hemorrhagic lute-
al cyst was seen in the right ovary. The left ovary 
was totally invaded by tumors. Final diagnosis 
was invasive mole (Figures 3 and 4).

This patient was treated with 4 courses of 
chemotherapy with EMA-CO. After negative 
βHCG (<5), she received an additional 3 courses 
of chemotherapy to reduce the relapse.

βHCG titer was later tested monthly for 1 year. 
When the first year of testing βHCG terminated, 
HCG testing on a bimonthly basis for 2 years was 
done. The patient was followed up to 5 years and 
after that the patient was free of tumor and the 
βHCG was negative.

Discussion

Invasive mole with rupture of uterus and metas-
tasis to ovary and omentum and manifestation of 
acute abdomen was rare (5). According to epide-
miological retrospective survey, invasive mole 
secondary to hydatidiform mole occurred in six 
months after evacuation (5, 3). Local invasion in 
the uterus occurred in about 15% of cases (12). 
Overall invasive mole occurred in 1/15000 preg-
nancies (12).

Partial and complete hydatidiform mole are dis-
tinct disease processes with characteristic cytoge-
netic, histologic, and clinical features (8).

Kumar et al. in 2014 (13) reported a case of in-
vasive mole presenting as acute hemoperitoneum 
that was similar to the present case. In invasive 
mole, proliferation of trophoblast in stroma was 
seen. Molar tissue can penetrate myometrium (9) 
and lead to uterine perforation (13) and cause vag-
inial bleeding due to erosion of uterine vessels (14, 
15).

Similar to Atala et al.’s case report in 1991(14), 
in our case, uterine perforation with acute intra 
peritoneal hemorrhage was seen. Due to ease of 
entry of molar tissue into large venous lake pre-
sent in myometrium and pelvis in pregnancy or 
trophoblastic disease metastasis of invasive mole 
commonly in lungs and after lungs in vagina, cerv-
ix, broad ligament (16, 19), in our case metasta-
sis to lung and ovary and omentum was seen. Alt-
ough theca lutein cysts in high-risk mole due to 
high serum HCG level are seen normally, they 
regress spontaneously within 2-4 months (17).

Non gestational choriocarcinoma of ovary is dif-
ferential diagnosis (5) but due to occurrence of 
metastasis to ovary in our case after molar preg-
nancy, this differential diagnosis was not a matter.

As in a report of invasive mole in fallopian tube 
(21), the first misdiagnosis of our case in another 
hospital, repeat curettage was done, although the 
first diagnosis could be persistent GTN.

In another case report (15) from Bruner, similari-
ity with our case was seen.

Invasive mole is highly sensitive to chemothera-
py (11). Combination chemotherapy should be 
continued in such cases as far as toxicity permits 
until the patient achieves 3 consecutive normal 
HCG levels (9, 18). As normal HCG levels are 
attained, 3 additional courses of chemotherapy are 
administered to reduce the risk of relapse. In low
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risk patients, one or two courses are adequate (19).

In our case, 3 courses of chemotherapy after nor-
malization of βHCG were done.

Hysterectomy may be required in invasive mole
in order to control vaginal bleeding and in unstable
patient or in sepsis (6, 20). Hysterectomy is a rea-
sonable option for patients who do not wish to
preserve their fertility, but it does not prevent me-
tastasis (20). Furthermore, in patients with exten-
sive uterine tumor, hysterectomy may substan-
tially reduce the trophoblastic tumor burden (20) and
thereby limit the need for multiple courses of che-
motherapy.

In our case, due to unstable and uterine rupture,
hysterectomy was done but the need for chemo-
therapy courses was not removed and after several
courses of chemotherapy with EMA-CO courses,
it was cured.

However, final diagnosis of our patient was in-
vasive mole with metastasis to ovary and omen-
tum and lung (stage 3) and uterine rupture.

The patient responded to the treatment well and
in follow up this patient was still fine for 5 years
after definite care for metastasis invasive mole with surgery and chemotherapy.

**Conclusion**

An invasive mole in uterus with ovarian and
omental metastasis was diagnosed and the patient
was successfully treated by hysterectomy and che-
motherapy and she was fine for 5 years in follow
up.

**Conflict of Interest**

Authors declare no conflict of interest

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