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Article

# Invasive Mole With Impending Uterine Rupture : A Case Report

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**A B S T R A C T**

Gestational Trophoblastic Disease (GTD) is an abnormal placenta, composed of a spectrum of premalignant to malignant disorders. In Indonesia, GTD incidence is particularly challenging to estimate, since not all cases will be reported or recognized. It classified into hydatidose mole and gestational trophoblastic neoplasia (GTN). One of those clinicopathological classification of GTN is malignant invasive mole. It is likely to be the cause of increased maternal mortality in Indonesia if the disease is not well diagnosed and treated.

We reported the case, a 28 years old woman who had a invasive mole with impending uterine rupture. She had a pervaginam bleeding symptoms since 3 weeks after post curetase due to hydatidose mole indication. She also had multiple abortus history.

## I. INTRODUCTION

Gestational Trophoblastic Disease (GTD) is an abnormal placenta, composed of a spectrum of premalignant to malignant disorders. Its classified into hydatidiform mole (complete and partial) and gestational trophoblastic neoplasia (GTN). (Ngan *et al.*, 2021) In Indonesia, the incidence of GTD is particularly challenging to quantify, since not all cases are likely to be reported or recognized, and there is currently no central database that records the number of pregnancies in the Indonesian population. Dr. Hasan Sadikin Hospital Bandung reported that there were approximately 1172 cases of GTD diagnosed in the period 2012 to 2016.(Friadi, 2019). Gestational trophoblastic neoplasia (GTN) is part of GTD which developed into malignant sequele.(Amelia *et al.*, 2020) GTN formed clinicopathological classification such as malignant invasive mole, choriocarcinoma, and placental tumor trophoblastic tumor / epithelioid site trophoblastic tumor (PSTT).(Ngan *et al.*, 2021; Octiara and Sari, 2021) Invasive moles also known as malignant hydatidiform moles because they are capable of metastasizing and invasively damaging the myometrium. Choriocarcinoma is a malignancy originating from placental tropoblasts, which is very aggressive. About 50% of choriocarcinomas originate from complete hydatidiform mole. Choriocarcinoma is common in reproductive age women. (Biscaro, Braga and Berkowitz, 2015)The most common symptoms are abnormal vaginal bleeding, occasionally with passage of hydropic villi, then metastasis is the initial symptom of the disease.(Soper, 2021). In the early 1960s, the prognosis of posthysterectomy invasive moles was very poor with a survival rate of 41% in cases without metastasis and 19% with metastasis. Currently, GTN is a curable disease with remission rates up to 90%. Identification of prognostic scores and measurement of hCG as a monitor have shown effective management.(Lurain, 2011; Eysbouts *et al.*, 2017; Soper, 2021). Despite of the remarkable chemotherapy success in most GTN cases, chemotherapy resistance and toxicity have led to reconsideration of hysterectomy in certain cases. Hysterectomy with or without lymph node dissection remains the selected treatment for PSTT.(Eysbouts *et al.*, 2017). This case is interesting to discuss because invasive mole that occurs along with impending uterine rupture may pose a difficult problem to the clinician both for diagnosis and management..

## II. CASE REPORT

A 28 years-old woman, visited the Oncology Clinic of Dr. M. Djamil Hospital Padang on August 8, 2022, referred from RSUD M. Zein Painan with a diagnosis of Suspected Hydatidose Mole. The patient complained of blood discharge from the perineum since 3 weeks after curettage for indications of Hydatidose Mole at 3 months of gestation. The patient had 5 pregnancies history during 2017-2022 which 4 abortions and 1 live birth.

On local physical examination during genitalia inspection, positive vaginal bleeding with inactive condition was found. On vaginal inspection, positive flux was found in the form of blackish red blood accumulating in the posterior diaphragm. The portion of the vagina was found to be multiparous as big as an adult's big toe, positive flux seeping. During bimanual vaginal tourche (VT) examination, no mass was found. Then we suggest the patient to do laboratory examination with B-hcg levels obtained 4801 miU/mL. Ultrasound examination of the patient to confirm the findings of the physical examination. Ultrasoonography test results were found in the picture below (**figure 1.)**

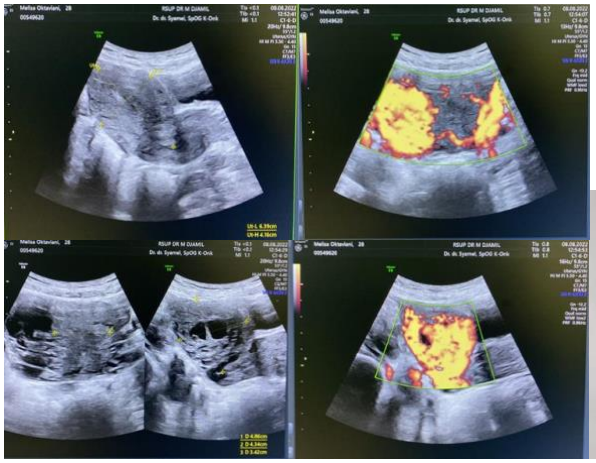

**Fig 1: USG Examination**

**Fig 2: Post Total Hysterectomy Finding**

In fig 1, Uterus anteflexion with size 6.39 x 4.16 cm (left side), and hyperechoic picture with size 4.86 x 4.34 x 3.42 cm with positive vascularity (right side). The impression of ultrasound examination is suspected choriocarsinoma. Based on the results of the above examination, the patient was planned for laparotomy. The patient was also assessed prognostically through the WHO prognostic index score, within a score of 5 (low risk). Laparotomy was performed, we found the invasive mola accompanied by left ovarian metastasis. Then the patient was managed in the form of total hysterectomy along with SOS. The patient had ± 310 cc of blood loss during the operation procedure. The operator's consideration of performing total hysterectomy was due to the invasive molar condition accompanied by impending rupture and SOS action on indications of left ovarian metastasis. The post-operation findings in this below picture (fig 2.). After total hysterectomy procedure, the tissue's sample was examined by Anatomy Pathology (AP) as gold standard. The results of the AP examination found invasive moles, endometrial polyps with decidual reaction, adenomyosis, Nabothian cyst, follicular cysts, luteal cysts. We do follow up after 6 hours post op, the patient was found to be in moderate anemia (Hb 8.4 gr/dl), then we transfused 2 units of PRC. After that the Hb condition was stable. However, the patient was discharged 4 days after post op. The procedure was well tolerated, the patient's general condition and complaints are controlled, also the patient is allowed to be outpatient.

## III. DISCUSSION

Gestational Throphoblasts disease (GTD) is a spectrum of cellular proliferations that develop from placental villous trophoblasts. GTD is classified as hydatidiform mole and gestational trophoblastic neoplasia (GTN). Invasive mola is one of the main clinicopathologic forms of GTN. Invasive molar is referred to as malignant molar hydatidosa, due to its metastasizing and myometrium-invasive characteristics.(Ngan *et al.*, 2021) About 10-15% of complete moles and 0.5% of partial moles developed into invasive moles. (Ronnett, 2019) If this disease is not well diagnosed and treated properly, it will likely become one of the causes of increased maternal mortality in Indonesia. (Kusuma and Pramono, 2017).

In our case, a 28 years-old woman was diagnosed by Invasive Mole with impending rupture. The diagnosis is made through history taking, physical examination, laboratory examination, and ultrasonography (USG). It also proven by intraoperative tissue findings through laparotomy procedure. The laboratory test includes an ß-hCG level examination, also the gold standard, which is histological examination. (Friadi, 2019).

Invasive mole is a condition where the molar pregnancy infiltrates the uterine wall. It most frequently occurs after evacuation of a molar pregnancy and is characterized by the presence of edematous chorionic villi with trophoblast proliferation invading the myometrium or adjacent structures such as the parametrium, vagina, and ligament. Invasive moles have histopathologic characteristics of trophoblast infiltration into the myometrium and associated necrotic changes. As of now, the pathogenesis of invasive moles remains unknown. (Ngan *et al.*, 2021) The age factor affected this pathogenesis, which pregnant woman in a young age were more likely to have a complete hydatidiform mole. This theory is relevant to our case, the patient was in a young age. (Amelia *et al.*, 2020) Oncogene and anti-oncogene dysfunction may contribute to the malignant transformation of trophoblasts in invasive moles, as in other malignancies. (Ngan *et al.*, 2021). In this case, we found an invasive mole condition that had metastasized to the left ovary. Based on the literature, invasive moles have a high potential to metastasize and their local invasion can cause hemoperitoneum. Invasive moles are generally limited to invasion of the uterine myometrium and extra-uterine metastasis occurs in only 5% (mostly to the lung) via hematogenous metastasis. (Ngan *et al.*, 2021). Chemotherapy is the first line treatment for sensitive invasive moles or low risk groups. We do assesement for the patient using The WHO prognostic index score assessment to determine the risk group category in this patient. In this case, in the WHO scoring system, the patient received a score of 5, so she belongs the low risk category (range 0-6) so that it is likely to be sensitive to chemotherapeutic agents. (Ngan *et al.*, 2021) Meanwhile, high-risk GTN cases should be treated with combination chemotherapy with or without adjuvant surgery and radiotherapy. Repeated dilatation curettage is strictly avoided due to the high morbidity and mortality rates caused by uterine perforation, bleeding, infection, and anesthetic complications. (Biscaro, Braga and Berkowitz, 2015). After we do curettage for the patient, β-hCG levels was being monitored. After being monitored for 3 weeks post curettage based on the β-hCG regression curve tend to be persistently high. ß-hCG levels can be used to diagnose gestational trophoblastic disease post hydatidiform mole suggestive of malignancy i.e. ß-hCG levels plateau for 4 measurements over a period of 3 weeks or longer, for days 1, 7, 14, and 21. Elevated ß-hCG levels for 3 consecutive examinations or longer over a period of at least ≥ 2 weeks, for days 1, 7 and 14. Histological diagnosis of choriocarcinoma can elevated ß-hCG levels for 6 months or longer after therapy. However, ß-hCG levels can also be negative in women with molar ectopic pregnancies for longer periods than in ectopic pregnancies without moles.(Olivia, 2016). Based on the theory in this case requires chemotherapy management can be done as the main therapy, but in patients we performed surgery with total hysterectomy as the main therapy. Hysterectomy is considered to reduce the duration of treatment and the number of chemotherapy cycles required to achieve complete remission. (Ngan *et al.*, 2021) In metastatic disease patients, primary hysterectomy is less effective and always indicates an adjuvant chemotherapy treatment. Hysterectomy is an option for perimenopausal patients who are considered not to want reproductive function anymore and is most effective in patients with GTN localized to the uterus. Also, early hysterectomy will shorten the duration and amount of chemotherapy required to produce remission in low-risk disease.(Soper, 2021) In addition, hysterectomy was chosen in this case because it was life-threatening due to intra-abdominal bleeding.

## IV. CONCLUSION

According to the findings of the invasive mole, accurate diagnose is required to identify this cases in order to prevent more serious complication. Antenatal care is needed as early detection to prevent recurrent abortion. The main therapy of invasive mole is chemotherapy, because most cases of invasive mole are sensitive to chemotherapy, but in this patient's case,
operative action was performed as the main therapy, which is total hysterectomy, based on various considerations that have been described.

## REFERENCES

Amelia, V. *et al.* (2020) 'Penyakit Trofoblastik Gestasional : Varian Histopatologi Mola Hidatidosa Gestational Trophoblastic Disease : Mola Hydatidiform Histopatholgy Variance', *Medula*, 10(3), pp. 514–519.

Biscaro, A., Braga, A. and Berkowitz, R. S. (2015) 'Diagnosis, classification and treatment of gestational trophoblastic neoplasia', *Rev Bras Ginecol Obstet.*, 37(1), pp. 42–51. doi: 10.1590/SO100-720320140005198.

Eysbouts, Y. K. *et al.* (2017) 'The added value of hysterectomy in the management of gestational trophoblastic neoplasia', *Gynecologic Oncology*, 145(3). doi: 10.1016/j.ygyno.2017.03.018.

Friadi, A. (2019) 'Update on the Diagnosis of Gestational Trophoblastic Disease', *UMI Medical Journal*, 4(2), pp. 20–30.

Kusuma, A. I. and Pramono, B. A. (2017) 'Karakteristik Mola Hidatidosa Di Rsup Dr. Kariadi Semarang', *Jurnal Kedokteran Diponegoro*, 6(2), pp. 319–327. Available at: http://ejournal-s1.undip.ac.id/index.php/medico.

Lurain, J. R. (2011) 'Gestational trophoblastic disease II: Classification and management of gestational trophoblastic neoplasia', *American Journal of Obstetrics and Gynecology*. Elsevier Inc., 204(1), pp. 11–18. doi: 10.1016/j.ajog.2010.06.072.

Ngan, H. Y. S. *et al.* (2021) 'Diagnosis and management of gestational trophoblastic disease: 2021 update', *International Journal of Gynecology and Obstetrics*, 155(S1), pp. 86–93. doi: 10.1002/ijgo.13877.

Octiara, D. L. and Sari, R. D. P. (2021) 'Hydatidiform Moles', *JK Unila*, 5(1), pp. 50–3. doi: 10.1016/B978-0-12-374984-0.00760-9.

Olivia, F. C. (2016) 'A 30 Years Old Woman with Complete Hydatidiform Mole', *Majority*, 5(April), p. 142.

Ronnett, B. M. (2019) 'Hydatidiform moles: differential diagnosis, diagnostic reproducibility, genetics and ancillary techniques to refine diagnosis', *Diagnostic Histopathology*. doi: 10.1016/j.mpdhp.2018.12.003.

Soper, J. T. (2021) 'Gestational Trophoblastic Disease: Current Evaluation and Management', *Obstetrics and gynecology*, 137(2), pp. 355–370. doi: 10.1097/AOG.0000000000004240.

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