



# DCDA Twins Complicated by Molar Pregnancy: A Rare Cause of Hyperemesis Gravidarum

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## Background

The differential diagnosis of a nausea and vomiting in pregnancy is long, including multiple pregnancy and gestational trophoblastic disease (GTD). A multiple pregnancy consisting of one normal fetus and a coexisting hydatiform mole is 1 in 22000 – 100000 <sup>(1)</sup>. Limited data currently exists surrounding these rare pregnancies, however case and series reports suggest that they are associated with high maternal morbidity, and the risk of development of persistent GTD or neoplasia<sup>(2)</sup>. Therefore, early detection of such cases is important.

We present here a case of a DCDA twin pregnancy with a live fetus and a complete hydatiform mole which was ultimately terminated after counselling about maternal risk. We will highlight various ultrasound and biochemical markers that could raise suspicion of this abnormality in early first trimester.

## Discussion

1. Nausea and vomiting in pregnancy, particularly when persistent, warrants consideration of other underlying pathology. Potential differential diagnoses that need to be excluded include multiple pregnancy, hyperthyroidism, urinary tract infection and molar pregnancy.
2. Abnormally high beta-hCG in early pregnancy should raise the suspicion of a possible molar pregnancy. However in some occasion serum beta-hCG may be falsely reported as normal due to oversaturation of the signaling antibodies used to detect presence of beta-hCG. This is known as the "hook effect" <sup>(5)</sup>. Therefore proper serum dilution of 1:1000 is important when molar pregnancy is suspected.
3. Ultrasound demonstrating an appearance of snowstorm, bunch of grapes, multi cystic or enlarged placenta are typical sonographic features of a molar pregnancy. However, recognition of such ultrasound features requires experience and is often misinterpreted as sub-chorionic haematoma.

## Case

A 30 year old primigravida presented at 14 weeks of gestation with persistent nausea, vomiting and per-vaginal bleeding in second trimester of pregnancy. This was on a background of an abnormal maternal beta-hCG of 14.89 MoM at first trimester screening, and two prior formal early pregnancy ultrasound demonstrating a singleton pregnancy with a "sub-chorionic haematoma". This was her third presentation with nausea and vomiting in early pregnancy.

A quantitative beta-hCG was measured on admission which returned as 561,888. Subsequent pelvic ultrasound demonstrated a multi cystic placenta consistent with a molar pregnancy, and a coexistent live fetus with a separate and apparently normal placenta.

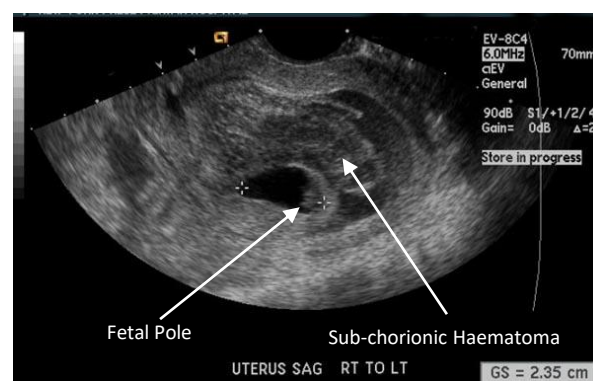


Figure 1: Sonographic appearance of sub-chorionic haematoma in a singleton pregnancy <sup>(3)</sup>

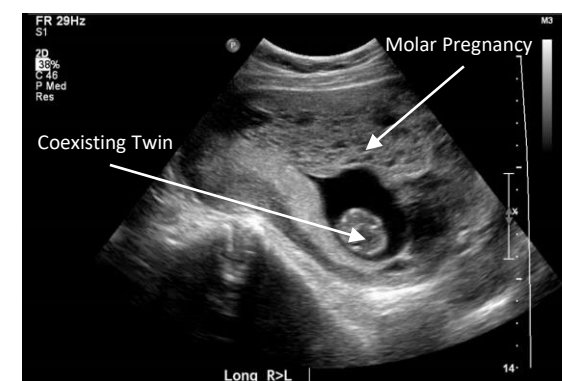


Figure 2: Ultrasound at 11 weeks: molar pregnancy being mistaken for a sub-chorionic haematoma

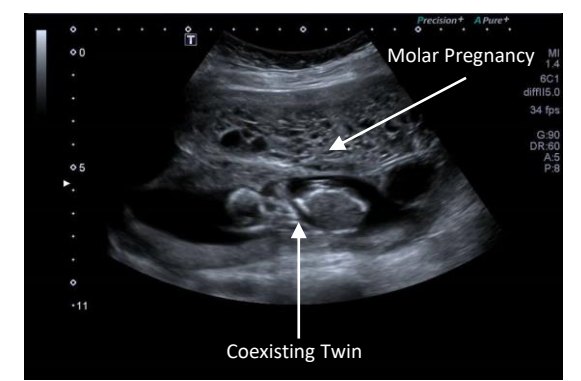


Figure 3: Ultrasound at 14 weeks: Placenta with multiple cystic spaces consistent with molar pregnancy

Following extensive counselling and worsening of maternal hyperemesis, our patient decided to undergo surgical termination of her pregnancy. Histopathology and karyotyping from products of conception was consistent with a complete hydatiform mole (46 XX) with a co-existing normal twin (46 XX). This was also confirmed with p57 immunohistochemically positivity. Post molar surveillance with weekly beta-hCG demonstrated rapid regression immediately following termination and finally reached normal values within 13 weeks.

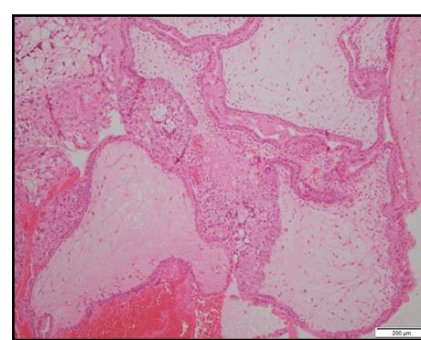


Figure 4: Molar villi showing stromal oedema and circumferential trophoblast proliferation <sup>(4)</sup>

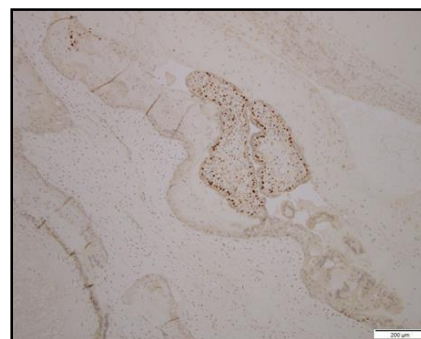


Figure 5: p57 immunochemistry showing normal pattern of staining in normal villi adjacent to molar villi which are negative <sup>(4)</sup>

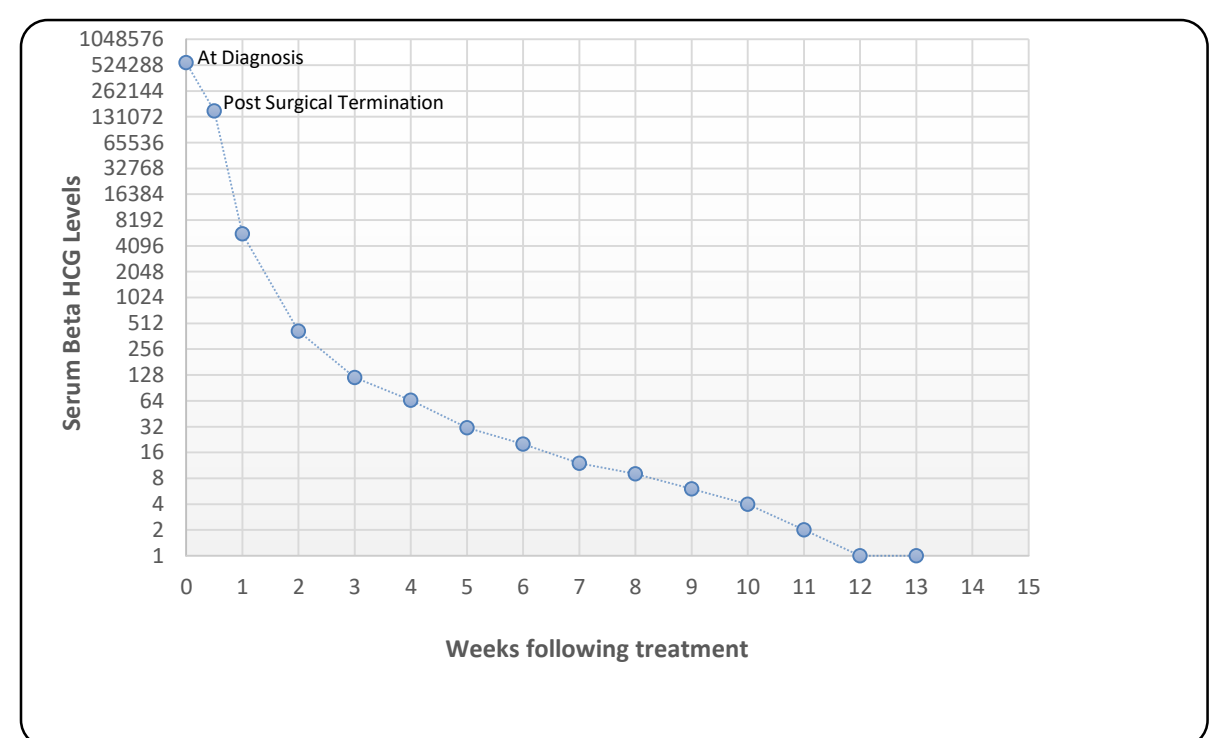


Figure 6: Post molar beta-hCG surveillance regression curve

## References

1. Lin LH, Maesta I, Braga A, Sun SY, Fushida K, Francisco RPV et al. Multiple pregnancies with complete mole and coexisting normal fetus in North and South America: A retrospective multicentre cohort and literature review. *Gynecologic Oncology* 2017; 145: 88-95
2. Braga A, Obeica B, Werner H, Sun SY, Amim JJ, Filho JR, et al. A Twin pregnancy with hydatiform mole and a coexisting live fetus: prenatal diagnosis, treatment, and follow up. *J Ultrason* 2017; 17: 299-305
3. Radiopaedia.org. Subchorionic Haematoma. Available from: <https://radiopaedia.org/cases/11975>
4. Special thanks to Manton N, Consultant Pathologist, SA Pathology for providing histopathology images
5. Nodler JL, Kim KH, Alvarez RD. Abnormally low hCG in a complete hydatiform molar pregnancy: The hook effect. *Gynecologic Oncology Reports* 2011; 1: 6-7