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BUSINESS RULE

Health
South Eastern Sydney
Local Health District

Gestational Trophoblastic Disease: Diagnosis and Management

RHW CLIN073

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AUTHOR	Dr King Man Wan, Head of Gynae-oncology department Dr Jane McDonnell, obstetrics & gynaecology registrar
SUMMARY	Explanation and guidance for the diagnosis and management of gestational trophoblastic disease including partial and complete molar pregnancies
Key Words	Gestational trophoblastic disease, Molar Pregnancy

Gestational Trophoblastic Disease: Diagnosis and Management

RHW CLIN073

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Within this document we will use the term woman, this is not to exclude those who give birth and do not identify as female. It is crucial to use the preferred language and terminology as described and guided by each individual person when providing care.

1 BACKGROUND

Gestational trophoblastic disease (GTD) includes a number of pregnancy-related diseases derived from trophoblastic cells of placental tissue including complete and partial hydatiform moles, gestational choriocarcinoma, placental site trophpoblastic tumours and epithelioid trophoblast tumours.[1] Detection and appropriate management of gestational trophoblastic disease is crucial in preventing gestational trophoblastic neoplasia.

The aim of this CBR is to:

- Provide information and guidance on the diagnosis of gestational trophoblastic disease including women with a pregnancy demonstrating microscopic or macroscopic changes suggestive of possible partial or early complete molar change
- Provide information and guidance on the management of gestational trophoblastic disease, including patient counselling

Definitions:

Term	Definition
Complete mole	A type of gestational trophoblastic disease in which the pregnancy is characterised by exclusively paternal DNA following either - fertilisation of an ovum containing no maternal genetic material by one sperm which then replicates - fertilisation of an ovum containing no maternal genetic material by two sperm There is no fetal or embryonic tissue.[1]
Gestational trophoblastic disease (GTD)	A group of tumours derived from placental tissue including - Complete and incomplete molar pregnancies - Invasive moles - Gestational choriocarcinoma - Placental site trophoblastic tumour (PSTT) and - Epithelioid Trophoblast Tumour (ETT)[1]

Gestational trophoblastic neoplasia (GTN)	Gestational trophoblastic neoplasia (GTN) is a term used to describe GTD requiring chemotherapy or excisional treatment because of persistence of βhCG or presence of metastases.[1,2]
Partial mole	A type of gestational trophoblastic disease in which the pregnancy is characterised by two sperm fertilising an ovum, which usually leads to a triploid embryo. They may also be tetraploid or mosaic. Partial moles are usually triploid (dispermy), but may be tetraploid or mosaic. There is usually fetal or embryonic tissue present.[1,2]
Persistent GTD	Persistence of βhCG elevation despite primary treatment of gestational trophoblastic disease including - A rise (>10% rise in βhCG value over 2 weeks (i.e.; three consecutive results) - A plateau (<10% fall in βhCG values over three weeks (i.e. 4 consecutive results) - Persistence of βhCG elevation at 6 months after surgical management[1]
EPAS	Early Pregnancy Assessment Service

2 RESPONSIBILITIES

2.1 Medical staff – recognise and assess women with suspected gestational trophoblastic disease (partial or complete molar pregnancies) and organise appropriate counselling, management and follow up

2.2 Midwifery and nursing staff (working in EPAS) - facilitate medical review for women with suspected gestational trophoblastic disease and organise follow up for serum βhCG monitoring

3 PROCEDURE

3.1 Clinical Practice

Diagnosis

- Undertake a complete medical assessment of all women referred to Early Pregnancy Assessment Service (EPAS) with sonographic or histopathological findings suggestive of gestational trophoblastic disease
    - Including Rhesus status, previous pregnancy history and previous ultrasound results
- If gestational trophoblastic disease is unexpectedly first identified on histopathology following surgical management, the patient should be notified and asked to present to EPAS for review and management
- Discuss the findings with the gynaecologist on-call to determine the need for either surgical management or further investigations

Management

- Counselling
  - Counsel the patient regarding the need to obtain histological diagnosis by a suction dilatation and curettage of the uterus (D&C) for both diagnostic and primary treatment purposes
  - Discuss risks of the procedure including bleeding, infection, uterine perforation, retained products of conception and Asherman syndrome.
  - Explain the need for reliable contraception until βhCG has returned to zero and the patient has been discharged; this may be either barrier contraception, the Implanon device or oral contraceptive pill (combined or progesterone only). The Mirena IUCD should be avoided until completion of management.[1]
  - Explain the increased risk of a further molar or partial molar pregnancy (approximately 0.5-2%)[3]
  - Discuss recommended management of **subsequent pregnancies** including early ultrasound, sending the placental for histopathology to exclude molar pregnancies and a serum βhCG level six weeks after the completion of any future pregnancy regardless of the outcome of that pregnancy
  - Provide patient information leaflet (see Appendix A) and offer social work review
- Organise FBC, βhCG quantitation, Group & Hold and assess the need for a Cross match, bearing in mind the risk of significant bleeding increases with increasing uterine size[2]
- Complete a consent form for a suction dilatation of the cervix and curettage of the uterus
  - Ultrasound guidance for the procedure should be used if available[4]
- Intraoperatively
  - Consider the need for prostaglandins for cervical ripening; this is safe and does not increase the risk of GTD persistence
  - Use a suction size 10-12 to obtain products of conception and evacuate the uterus
  - Avoid use of oxytocic medications until the evacuation is complete
  - Send products of conception for both histopathology including immunohistochemistry staining for p57 and karyotype
- Post-operatively
  - Ensure RhD immunoglobulin 250IU is given intramuscular (IM) to Rh-negative patients
  - Organise a review one week after suction D&C to review the histopathology, karyotype and organise ongoing weekly serum βhCG monitoring
  - If histopathology demonstrates evidence of choriocarcinoma, urgent referral to the Gynaeoncology service should be made
  - For partial molar pregnancies:[1]
    - Undertake weekly serum βhCG monitoring until three consecutive βhCG levels are normal
    - After this, no further testing is required
  - For complete molar pregnancies:[1]
    - Undertake weekly serum βhCG monitoring until three consecutive βhCG levels are normal

- After this, perform serum βhCG levels monthly until 6 months post surgical management

Gestational trophoblastic neoplasia

- Gestational trophoblastic disease that is persistent (i.e. despite surgical management) is considered gestational trophoblastic neoplasia (GTN) and should be referred to the Gynaeoncology service for ongoing management including a metastatic screen and WHO risk score
- GTN can be diagnosed if there is:[1]
  - A rise >10% over two weeks (3 weekly βhCG levels)
  - A fall of <10% over three weeks (4 weekly βhCG levels)

3.2 Documentation

- Medical Record (Powerchart and Surginet)
- Discharge letter to patient's GP (on eMR)

3.3 Education Notes

- The reported incidence of GTD is 1 in 200-1000 pregnancies.[1]
- GTD may first present following an ultrasound in early pregnancy which shows features suspicious for partial or complete molar pregnancy including a cystic appearance of the placenta or ovarian theca lutein cysts.[4] They may also be detected on histopathology following a curette for a miscarriage.
- GTD may also cause symptoms including abnormal vaginal bleeding, enlarged uterus, hyperemesis and, more rarely, hyperthyroidism, early onset gestational hypertension and respiratory distress.[1,4]
- They may be asymptomatic.
- Risk factors for GTD include Asian ethnicity, maternal age younger than 15 and older than 45, patients with a previous miscarriage and patients with previous GTD.[1,4]
- Up to 20% of molar pregnancies and up to 5% of partial molar pregnancies have malignant potential.[3]
- When GTN is diagnosed, urgent referral should be made to the Gynaeoncology service for discussion at a Multidisciplinary Tumour Board meeting and ongoing management

3.4 Implementation, communication and education plan

The revised CBR will be distributed to all medical, nursing and midwifery staff via @health email. The CBR will be discussed at ward meetings, education and patient quality and safety meetings. Education will occur through in-services, open forum and local ward implementation strategies to address changes to practice. The CBR will be uploaded to the CBR tab on the intranet and staff are informed how to access

3.5 Related Policies/procedures

Maternity - Rh (D) Immunoglobulin (Anti D)
https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2015_011.pdf

Maternity – Early Pregnancy Complications (DoH Policy) PD2009_58
https://www.seslhd.health.nsw.gov.au/sites/default/files/documents/earlypregmanagement2015.pdf

3.6 References

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4 ABORIGINAL HEALTH IMPACT STATEMENT DOCUMENTATION

- Considerations for culturally safe and appropriate care provision have been made in the development of this Business Rule and will be accounted for in its implementation.
- When clinical risks are identified for an Aboriginal and/or Torres Strait Islander woman or family, they may require additional supports. This may include Aboriginal health professionals such as Aboriginal liaison officers, health workers or other culturally specific services

5 CULTURAL SUPPORT

- For a Culturally and Linguistically Diverse CALD woman, notify the nominated cross-cultural health worker during Monday to Friday business hours

  If the woman is from a non-English speaking background, call the interpreter service: NSW Ministry of Health Policy Directive PD2017_044-Interpreters Standard Procedures for Working with Health Care Interpreters. https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_044.pdf

6 REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
February 2013	0	Endorsed Maternity Services LOPs
21/2/13	1	Approved Quality & Patient Safety Committee
July 2018	2	Reviewed and endorsed Gynaecology Services Division
May 2024	3	Authors: Dr King Man Wan & Dr Jane McDonnell
1.7.24	3	Endorsed BRGC