Guideline for the Management of Ovarian Hyperstimulation

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Target Audience:

People who need to know about this document in detail	All staff involved in the management of ovarian hyperstimulation
People who need to have a broad understanding of this document	Executive Directors *Chief Operating Officer*
People who need to know that this document exists	All staff involved in the management of ovarian hyperstimulation

Integrated Impact Assessment:

Equality Impact Assessment Date & Outcome	**Date:** **Outcome:**
Welsh Language Standard	Choose an item.
Date of approval by Equality Team:	(00/00/0000)
Aligns to the following Wellbeing of Future Generation Act Objective	Choose an item.

Disclaimer:
If the review date of this document has passed please ensure that the version you are using is the most up to date version either by contacting the author or CTM_Corporate_Governance@wales.nhs.uk

COMPONENTS:

A policy must contain the following components and must also be written to include the values and behaviours of the organisation wherever relevant:

It is accepted that for Clinical Policies and or other Written Control Documents (Procedures, Guidance etc.) the policy components below may not all be relevant.

For guidance on Clinical Policy Development please contact:

CTM_ClinicalPolicies@wales.nhs.uk

For guidance on Non Clinical Policy Development please contact:

CTM_Corporate_Governance@wales.nhs.uk

Or visit the Policy Author Page on SharePoint:

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Guideline Definition

Clinical guidelines are systemically developed statements that assist clinicians and patients in making decisions about appropriate treatments for specific conditions. They allow deviation from a prescribed pathway according to the individual circumstances and where reasons can be clearly demonstrated and documented.

Purpose

To assist all medical and nursing staff in the general management of ovarian hyperstimulation.

Scope

For all staff, medical, nursing and clerical, to provide uniformity in the management of patients diagnosed with a molar pregnancy.

Roles and Responsibilities

In seeking further advice on any uncertainties contained in this document, or if you feel that there is new or more updated advice it is your responsibility to contact the guideline author or Approval Group manager so that any amendments can be made. The guideline Approval Group is responsible for disseminating this guideline to all appropriate staff. The guideline author or a named alternative is responsible for updating the guideline along with any amendments that they become aware of or are highlighted to them. All health professionals are responsible to ensure that the guideline is utilised effectively, and to ensure that they are competent and compassionate in the implementation of it.

Training Requirements

There is no mandatory training associated with this guideline.

Monitoring of Compliance

- By audit and review of complaints relating to miscarriage diagnosis and management.
- The Governance Department will collate any complaints and distribute to the relevant individuals for comments, and share any learning points.
- The Service Lead will oversee any governance issues, make relevant recommendations to the directorate, and advise the Clinical Director or the directorate of any matters that require implementation.
- The Health Board reserves the right, without notice, to amend any monitoring requirements in order to meet any statutory obligations or the needs of the organisation

Complaints

All complaints should try to be resolved with the patient during any contact to avoid escalation. There concerns should be listened to and documented. If it is not possible to address any concerns at the time, or if the complaint is of a serious nature, the patient's complaint should be discussed with the consultant in charge for the day, or the patient should be given details of how to raise a formal complaint via the local governance department.

Definition

The ovarian hyperstimulation syndrome (OHSS) is a complication of ovarian stimulation, most commonly following gonadotrophin use but also it can occur with use of Clomiphene. It is a systemic disease caused by vasoactive products released from hyperstimulated ovaries. There is increased capillary permeability leading to leakage of fluid from the vascular compartment and intravascular dehydration. Severe forms can be complicated by thrombosis, renal and liver impairment and adult respiratory distress syndrome (ARDS). It can cause serious morbidity but deaths from OHSS are rare.

Incidence

The reported incidence of OHSS varies and accurate estimates are difficult. The majority of severe cases are seen after IVF but the syndrome can occur after any form of supraphysiological ovarian stimulation. 33% of IVF cycles have been reported to be associated with mild forms of OHSS. The severity of OHSS can worsen with time and therefore even mild forms must be kept under review. More severe forms occur with 3.1-8.0% of IVF cycles. The incidence is increased in young women, those with polycystic ovaries and where conception occurs, particularly multiple pregnancies.

Diagnosis of OHSS

Patients will have a history of ovarian stimulation, but a differential diagnosis must always be considered. Assessment will involve a clinical examination, including abdominal girth and an ultrasound scan. Haemoglobin, haematocrit, renal and liver function tests must be performed. It is important to assess the severity of the disease and be aware that the condition may worsen over time.

The syndrome is classified as mild, moderate, severe and critical according to the following symptoms and signs:-

Mild

- Mild abdominal pain and bloating.
- Ovarian size<8cm.

Moderate

- Moderate pain
- Nausea and vomiting
- Ascites on Ultrasound scan (USS)
- Ovarian size usually 8- 12 cm.

Severe

- Clinical ascites (occasionally hydrothorax)
- Oliguria
- Haematocrit >45%
- Ovarian size>12 cm.

Critical

- Tense ascites or large hydrothorax
- Oligo/anuria
- RDS
- Thromboembolism
- Haematocrit>55%
- BC>25000/ml.

OHSS presenting within 9 days of the Human Chrionic Gonadotrophin (HCG) injection is classed as "early". After this it is classed as "late" and reflects endogenous HCG stimulation from a pregnancy. Late OHSS tends to be more severe and last longer.

All patients undergoing ovarian stimulation should be given advice about the condition. OHSS is classed as an adverse incident and must be reported to the Human Fertilisation and Embryo Authority (HFEA) as per their protocol.

Management

Management of OHSS is essentially supportive until the condition resolves spontaneously.

Prolonged monitoring may be needed in the presence of a pregnancy. Patients should be reassured that the pregnancy may continue normally.

Women with mild OHSS and many with moderate OHSS can be managed in an out-patient setting, with review every 2-3 days unless symptoms suggesting more severe disease develop.

Pain relief using paracetamol or codeine is advisable and non-steroidals should be avoided.

Antiemetic drugs may be used and women should be encouraged to drink to thirst and not excessively.

Strenuous exercise and sexual intercourse should be avoided.

Luteal support drugs should be continued.

Women with moderate OHSS who are unable to control their pain and/or nausea with oral medication and those with severe OHSS require inpatient management.

Baseline investigations are required as well as clotting studies, chest X-ray (if symptoms) and electrocardiogram (ECG) and echocardiograph (if pericardial effusion suspected).

Abdominal girth and weight should be recorded daily, as should fluid input/output.

Women should be allowed to drink to thirst as ascites may worsen with vigorous intravenous therapy.

Antiemetics and analgesia will be required to enable them to tolerate oral fluid intake but some will require IV fluid replacement. Most will require a fluid intake of 2-3 litres in 24 hours. Although reduced renal perfusion secondary to hypovolaemia or tense ascites may cause oliguria in up to a third of women, acute renal failure is rare.

Abnormal liver function tests are found in 25-40% of cases but usually normalise as the disease resolves.

Haemoconcentration is a measure of the severity of OHSS and is reflected by raised haemoglobin and haematocrit. Those with a haematocrit >45% will need more intense initial fluid replacement e.g. 1 litre of normal saline in 1 hour.

Women with persistent haemoconcentration and/or oliguria may require colloids. Few data exist to support the use of any one of theses over another, but HES is reported to be associated with a higher mean urine output, fewer paracenteses and shorter hospital stay.

Paracentesis may be required if these measures fail to improve the condition or where there is significant discomfort or respiratory embarrassment. The rate of asciotic fluid drainage must be controlled and intravenous colloid administered.

Diuretics should be avoided as they worsen intravascular dehydration.

The reported incidence of thrombosis is 0.7-10%. There are no firm data indicating the value of diagnostic tests or the use of heparin prophylaxis but as thromboembolism is potentially life threatening, prophylactic measures should be provided for all women requiring hospital admission for OHSS. Venous support stockings and prophylactic heparin may be used and should be continued to the end of the first trimester or longer, depending on risk factors.

Anaesthesia and medical colleagues should be involved at an early stage in all cases of critical OHSS and cases with severe OHSS, where initial crystalloid and colloid therapy fails to correct the haemoconcentration and dehydration, as they may require intensive care management.

If local expertise in managing these complex problems is limited, early discussion with, or referral to a tertiary centre is essential.

References

Royal College of Obstetricians & Gynaecologists (RCOG) (2006) The Management of Ovarian Hyperstimulation Syndrome Green-top guideline No5