NHS
Greater Glasgow and Clyde

CLINICAL GUIDELINE

Ovarian Hyperstimulation Syndrome

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

Version Number:	4
Does this version include changes to clinical advice:	No
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Approval Group:	Assisted Conception Service Clinical Governance Group

Important Note:

The Intranet version of this document is the only version that is maintained.
Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

Standard Operating Procedure

C-SOP-056

Document review history		
Review date	**Reviewed by**	**Amendments**
02Feb15	Helen Lyall	Format change of SOPs to align with revised Quality Management
16 Feb 16	Samra Khan	3.1- Revisions 3.2 - Revisions
10Mar16	S Khan	Revisions
10May2018	S Khan	Updated for Q pulse
1/3/22	A J Sastry	Tel numbers

C-SOP-056 Management Of Ovarian Hyperstimulation Syndrome

Document number: C-SOP-056 | Version: 7

CONTENTS

1 Introduction

1.1 Scope and purpose

This procedure describes the general clinical procedures that need to be undertaken within the Assisted Conception Service (ACS), Glasgow Royal Infirmary (GRI).

1.2 Responsibility

The Nurse Manager is responsible for ensuring the implementation and maintenance of this SOP. Individual members of staff are responsible for ensuring that they are familiar with this document and adhere to those elements pertinent to their role.

1.3 Development process

This SOP was developed and written by Helen Lyall.

1.4 Dissemination process

All members of the clinical team will be e-mailed to inform them of this SOP and any subsequent changes. It will also be on the agenda at a clinical meeting. A signature sheet must be signed by each individual once training complete.

1.5 Required training

Training for this procedure is required. Practitioners must be assessed as competent in understanding the process of this procedure and must only be performed by a fully trained

member of the clinical team. Training is deemed satisfactory if delivered via in-house training with a competency assessment.

1.6 Required equipment

None

1.7 Related Documents

None

1.8 Definitions

Scottish Guidelines

1.9 Infection control

As infection control is extremely important in healthcare and treatment, adequate hand decontamination is essential. Hand washing must be performed before the start of any clinical or laboratory procedure, at the end of such a procedure, before and after using gloves and in the event of hands becoming contaminated. Any other specific requirements for hand washing are included in the body of the relevant SOP.

1.10 Future review process

This SOP will be entered onto Q-pulse including the due review date. Q-pulse will notify document editors that review is necessary. Reviews and updates must take place in a timely manner.

1.11 Audit of compliance

This SOP may be audited via the Directorate annual internal audit plan. It may also be audited as an unplanned audit if a line manager has concerns that:

- practice has changed significantly or
- a practitioner is not adhering to this SOP.

2 General information

OHSS is self-limiting and usually resolves spontaneously within several days. However, it may persist for longer particularly in those women receiving assisted conception treatment.
Mild OHSS is common – it occurs in up to 33% of IVF treatment cycles. Moderate to severe OHSS is rare (occurs in 3 to 8% of IVF treatment cycles) but is life threatening. The clinical course is, however, a continuum of scope and severity.
Clinicians should be aware and women informed that pregnancies complicated by OHSS may be at increased risk of pre-eclampsia and preterm delivery.
Those most at risk of suffering from OHSS are young women (<30 years of age) with a low BMI undergoing ovarian hyperstimulation treatment. Other predisposing factors include:

- PCOS
- The presence of multiple follicles/oocytes
- Treatment with hCG (to mature oocytes during ovarian hyperstimulation)
- Previous OHSS
- Pregnancy

In all cases, the Assisted Conception Service team at GRI must be:

- informed of the diagnosis using the proforma below
- involved in clinical decisions and supervision of continuing care.

3 Description of Procedure

A history of ovarian stimulation and typical symptoms:

- abdominal distension and pain
- nausea
- vomiting
- diarrhoea, etc

Differential diagnoses:

- complicated ovarian cyst (torsion, haemorrhage)
- pelvic infection
- intra-abdominal haemorrhage
- ectopic pregnancy
- appendicitis

Initial clinical assessment

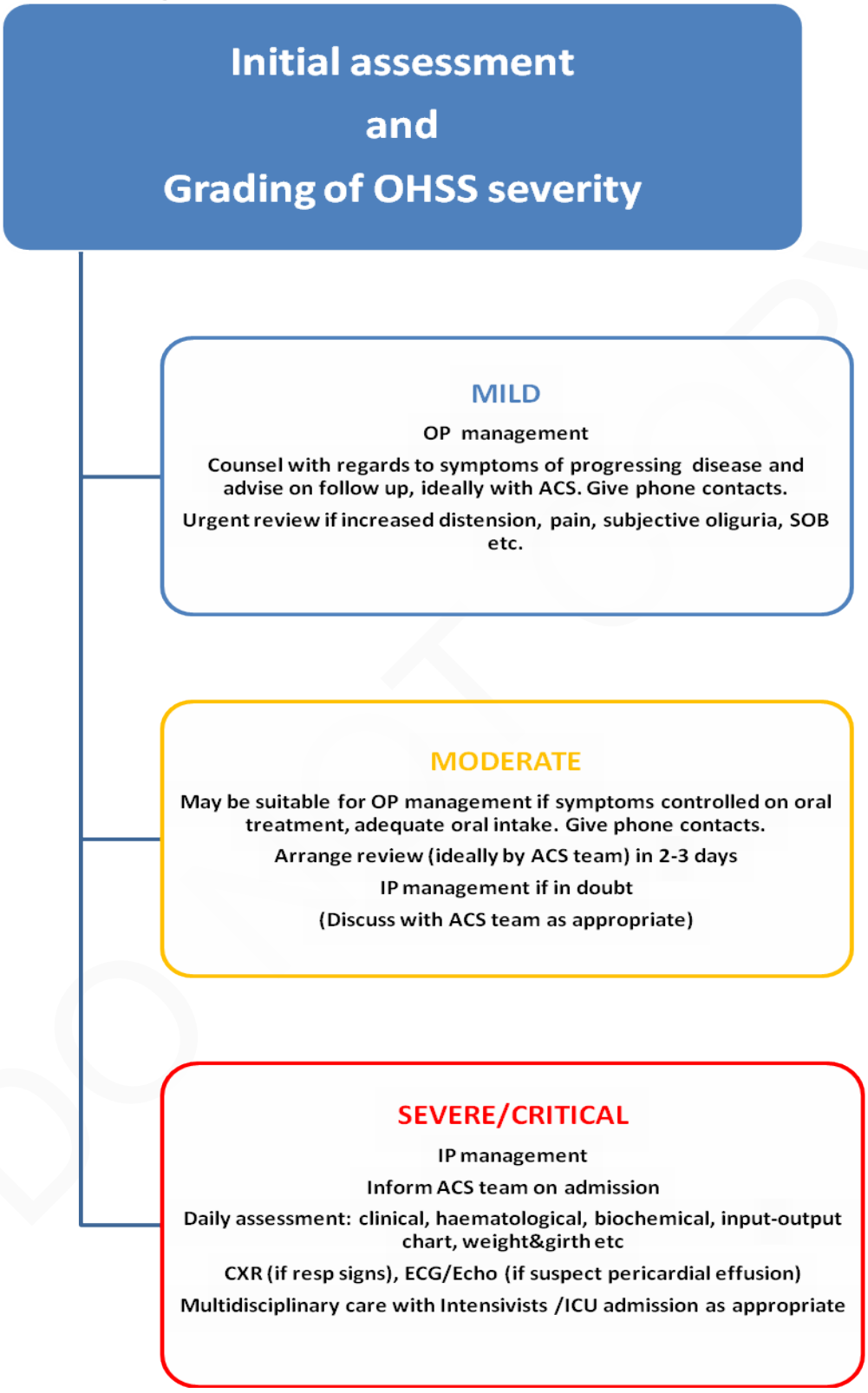
- History and clinical evaluation
- Weight and abdominal girth (at navel)
- Haematology, biochemistry and coagulation profiles
- Pelvic ultrasound (ovarian size, ascites, exclude other pathology)
- CXR if respiratory symptoms
- ECG / ECHO if suspected pericardial effusion
- Grading of severity

OHSS is graded as follows:

Grade	Clinical parameters
Mild	• Abdominal bloating • Mild abdominal pain • Ovarian size < 8cm***
Moderate	• Moderate abdominal pain • Nausea and/or vomiting • USS evidence of ascites • Ovarian size 8-12cm***
Severe	• Clinical ascites +/- hydrothorax • Oliguria (< 0.5-1ml/kg/hr) • Haemoconcentration (Hct >45%) • Deranged electrolytes, renal function, liver enzymes • Ovarian size >12cm***
Critical	• Tense ascites +/- large hydrothorax • Hct >55% • WCC >25,000 • Abnormal electrolytes, biochemistry • Oliguria/anuria • Thrombo-embolism • ARDS

***ovarian size may not correlate with severity due to effect of follicular aspiration

Management Pathway



Important clinical management information

Treatment is mainly supportive. In-patients should be reviewed on a daily basis and tests repeated appropriately. There is insufficient evidence to support the use of gonadotrophin releasing hormone antagonists or dopamine agonists in treating established OHSS.

Pain control

- Regular paracetamol
- Opiates if required
- NSAIDs should be avoided due to potential renal complications

Control of nausea and vomiting

- Regular anti-emetic therapy

Fluid management

- Allow to drink to slake thirst.
- To maintain adequate urine output (>0.5ml/kg/hr) and reverse haemoconcentration, when oral intake is inadequate, supplement with I/V fluids.
- If Hb >14g/dl or Hct >0.45%, give 1L normal saline over 1 hour, then drink to thirst.
- If oliguria persists, consider 6% HES – 33mls/kg/day
- Fluid management is critical in severe disease; aim for a total of 2-3L/24hr guided by a strict input-output chart.
- Correction of hypovolaemia, hypotension, and oliguria has highest priority, accepting that fluid administration may contribute to the accumulation of ascites.
- If haemoconcetration and oliguria persist despite of volume expansion consider central venous pressure monitoring, discuss with an anaesthetist.
- Paracentesis may improve renal perfusion and correct oliguria
- Diuretics should only be used in exceptional circumstances (with appropriate haemodynamic monitoring), e.g. if oliguria persists despite adequate intravascular volume expansion (haematocrit <38%) and normal intra-abdominal pressure.

Thromboprophylaxis

- LMWH and TED stockings for all inpatients till discharge, longer if other risk factors

Paracentesis

- May be indicated with tense ascites causing severe pain, compromised respiratory function, or oliguria/anuria that does not improve with appropriate hydration.
- Ultrasound guided to avoid injury to enlarged and vascular ovaries

Pelvic surgery

May be required in certain rare circumstances, e.g.:

- ruptured ovarian cyst with haemorrhage

- adnexal torsion
- ectopic pregnancy.

Monitoring proforma

Please complete this form and keep a copy in the ACS case notes, or e mail a copy to ACS after the patient's discharge.

OHSS grade:

Mild Moderate Severe Critical

Additional interventions:

Paracentesis Intensive care

Surgical intervention (please specify) Other (please specify)

The section below to be completed by ACS team only

AMH level:

Additional risk factors:

Age PCOS BMI Previous OHSS No. of Oocytes Other

Stimulation protocol:

Agonist Antagonist

Outcome:

Negative Biochemical Ectopic Clinical (state if single/multiple)

Comments: