Ovarian Hyperstimulation Syndrome (OHSS)

Management of the patients presenting with Ovarian Hyperstimulation Syndrome (OHSS)

The ovarian hyperstimulation syndrome is a condition with a varied spectrum of clinical and laboratory manifestations.
It is a recognised complication of treatment with fertility drugs and occurs in mild, moderate and severe forms.
The majority of cases are mild (see below for classification and incidence).
In its severe form OHSS is potentially life threatening and prompt and appropriate management is essential to prevent or curtail its serious consequences.

Classification of OHSS

<table>
<thead>
<tr>
<th>Classification (incidence %)</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild 33% of patients</td>
<td>Abdominal bloatedness, tension and swelling, mild pain</td>
</tr>
<tr>
<td>Moderate 6-8% of patients</td>
<td>Increased degree of abdominal discomfort and bloating, accompanied by gastrointestinal symptoms - nausea, vomiting, diarrhoea.</td>
</tr>
<tr>
<td>Severe 1-2% of patients</td>
<td>Clinical ascites. Possible pleural effusion. Decreased urine output. Haematocrit &gt;45% Hypoproteinaemia</td>
</tr>
<tr>
<td>Critical</td>
<td>Tense ascites or large hydrothorax Haematocrit &gt; 55% Oligo/anuria Thromboembolism Acute respiratory distress syndrome</td>
</tr>
</tbody>
</table>

Assessment of patients with suspected OHSS

Clinical Examination
Patients with OHSS usually present with the symptoms of third-space fluid accumulation and ovarian enlargement; venous thrombosis is occasionally reported. The ovaries may well extend above the umbilicus and are fragile, rupturing even with light pressure. Consequently, examination should be extremely gentle and vaginal examination is contraindicated.
Ascites causes pronounced abdominal discomfort, hampers diaphragmatic movement and can be associated with nausea and paralytic ileus. Concomitant pleural effusions will cause further respiratory embarrassment.
Extremely rarely, patients may develop cardiac tamponade.
Observations and investigations

- The patient should have temperature, pulse and respiration recorded hourly in the first instance.
- She should have blood taken for Full Blood Count including haematocrit, urea and electrolytes, coagulation screen, liver function tests and, if there is any question of hypoxia, she should have arterial blood taken for blood gas measurement.
- She may drink oral fluids but have strict measurement of fluid input and output, which will usually require a urinary catheter to be sited with hourly charting of urinary output.
- Analgesia is best provided with paracetamol and if necessary oral or parenteral opiates. Nonsteroidal anti-inflammatory agents are not recommended.
- She should be weighed and have her abdominal girth charted daily, with pen marks made on the abdominal wall to ensure accurate measurements.
- She should have an abdominal and pelvic ultrasound examination to determine ovarian size and the presence of ascites.
- Admissions for OHSS should have thromboprophylaxis.
- Chest X ray is not contraindicated (with appropriate pelvic screening) if pleural effusion is suspected.
- The patient should be examined clinically, including chest auscultation, by the ward doctor daily, and her fluid balance reviewed.
- In cases of critical OHSS consider discussing with intensive care.

Management of severe OHSS

The aim of management is to achieve a diuresis and a haematocrit of 35%.

If there are signs of a coagulation disorder the on call Consultant Haematologist should be contacted for advice.

Do not use diuretics as the patient usually has a contracted intravascular space.

Acute Phase Fluid Management

The patient should have an intravenous line sited and have urgent rehydration with crystalloids or colloids to increase the intravascular fluid volume, correct electrolyte imbalance, and increase renal perfusion and urine output to a minimum of 30mls per hour.

It is a mistake to over-perfuse to maintain a high renal output because a large proportion of the infused fluid will leak into the extravascular space and may worsen the patient’s discomfort.

Long Term Fluid Management

Once the patient is initially rehydrated fluid management using albumin is as follows:

- 100mls of 20% albumin solution IV over one hour, then
- 100mls of 20% albumin solution every 8 hours until diuresis is established

Management of Ascites

If the patient becomes uncomfortable due to the ascites consider inserting a paracentesis drain. It has been shown to improve renal function and to shorten hospital stay.

Management of Pleural Effusion

Pleural effusions should not be managed with diuretics, as the pathophysiological mechanism is different to that found in congestive cardiac failure. The patient has a reduced vascular space and diuretics may cause further haemoconcentration and hypercoagulability.

If the patient is seriously compromised, consider insertion of a chest drain to relieve symptoms.

Surgery

Avoid surgery unless signs of:

- Haemorrhage
- Ovarian rupture
- Ectopic pregnancy

For further assistance contact Gynae on call Registrar via bleep – 1241.