Ectopic pregnancy @ the Women’s

An ectopic pregnancy audit was planned to look at the current practice of detecting and managing ectopic pregnancies at the Women's. This project was undertaken by Salwan Al-Salihi and Claudia Cheng as part of our work as the Quality and Safety Fellows during the first half of this year.

The aim was to review the presentation, type of treatment, success rate and outcome for all ectopic pregnancies that presented to the Women's in the year 2006. We also looked at the current practice in the management of this condition and compared it to the clinical practice guidelines available at the time.

The cases were obtained from the Emergency department database, Health Information Services and Operating Theatre database. This was for the time period of 1 January 2006 to 31 December 2006. 187 cases were available for analysis from 231 after excluding private patients, and those with incorrect diagnoses.

The age of these patients ranged from 18 to 27, with a mean of 31. 39% were multiparous. There were no known risk factors documented in majority (70%) of cases. Of those documented, 13% with known primary or secondary infertility, 6% had known history of ectopic pregnancy, 4% with IUD in situ, 2% history of tubal surgery, 2% IVF pregnancy, 2% with known history of PID and 0.5% with Mullerian duct malformation.

Gestation was not very well documented, only 75% of the cases had documented gestation and all of them were <12 weeks. Most cases presents with some form of pain or PV bleeding. Only 9 cases (5%) were incidental finding. 61% presents with pain and light PV bleeding. 10 cases (5%) were haemodynamically unstable (SBP <100, PR >100). All ten of these cases presented with pain, but not all had bleeding.

Regarding investigations performed, majority (99%) had quantitative BHCG, of which 55% had serial BHCG. The only 2 cases without quantitative BHCG had positive urine HCG and ultrasound showed a live ectopic in both cases. All 187 cases had some form of ultrasound before diagnosis, 76% had departmental ultrasounds, 9% had external ultrasound performed by subspecialist, 9% with external ultrasound by radiologist and 6% had ultrasound in the emergency department.

There was roughly an equal share of medical and surgical treatments for ectopic pregnancies in 2006. 47% of cases had methotrexate treatment, 45% had laparoscopic salpingectomy, 3% had salpingostomy, 3% had diagnostic laparoscopy only and 2% chose expectant management.

Our success rate for medical treatment was superb, with an overall 90% success rate and 78% success rate after first dose of methotrexate. It is thought that...
medical treatment has comparable success rate and good cost efficiency\textsuperscript{2}. There were only 9 failures, requiring salpingectomies, out of 87 cases that received methotrexate treatment.

With regards to surgical treatments, 6 diagnostic laparoscopies were done for persisting symptoms despite normal ultrasound or no surgery required at laparoscopies – eg normal pelvises or tubal abortions found. Only 6 salpingostomies were done and none required further management post op. There were 3 conversions to laparotomies (2 for adhesions, 1 intra-operative bleed) with an overall conversion rate of 3%.

Tubal ectopic pregnancies were by far the majority of cases. However, in 2006, there was one cervical ectopic pregnancy and one cornual ectopic diagnosed both managed with methotrexate. There were two heterotopic pregnancies, this was surprising given the estimated incidence of 1 in 30,000\textsuperscript{1} (before the era of assisted reproductive technology, but neither of these cases had fertility treatments). They both had laparoscopic salpingectomies with no uterine instrumentation. One went on to have a normal delivery at term and the other miscarried soon after the laparoscopy.

One of the deficiencies found, similar to most audits, was the lack of documentation. Last menstrual period or gestation, risk factors such as history of PID or smoking status cannot be found in many cases. Adherence to the clinical practice guidelines was also poor. 73 of the 87 patients who had medical treatment failed to fully adhere to the guidelines. Majority (93\%) of them had pain when the guidelines stated this was a contraindication to medical treatment, 36\% did not have surface area calculation documented, 23\% had ectopic size >3cm (that was the limit in the 2006 guidelines, current guidelines states 3.5 cm as cut off), 16\% did not complete BHCG follow up, 15\% did not have liver function test done and 14\% had BHCG >3500. Some of these apparent deviations to the guidelines may simply be a result of lack of documentation. Given majority (84\%) of patients with an ectopic pregnancy presents with some form of pain, we will not achieve a 47\% medical treatment rate if we strictly give methotrexate only to patients without pain. Given our 90\% success rate with methotrexate, there appears not to have been adverse outcome in our management. The question then is, how do we quantify pain and how much pain is too much?

In order to improve documentation, we suggest introducing a standard gynaecology admission form. This would ensure essential information such as LMP, gravity and parity are recorded.

Another important finding with this audit was the low follow up rate of 84\% in patients who received methotrexate. More alarmingly, 4/6 patients with salpingostomies fail to have complete BHCG follow up. Since 2006, the EPAs (early pregnancy assessment service) was established. This service assesses and manages early pregnancy complications and patients requiring BHCG follow up go through this service. It would be interesting to repeat this audit in the near future as a comparison.

Claudia Cheng
Laparoscopic Fellow

References


...continued from front page

Clinical Risk Assessment workshop

As part of the Women’s Risk Management Framework processes, a workshop was held recently with a range of clinicians and clinical managers and stakeholders to identify and prioritise current clinical risks.

A list of risk topics was drawn up with reference to previous known adverse events recorded as:

- Sentinel events
- Incident notifications with extreme or major consequences to the patient
- Medication incidents
- Complications
- Medico Legal matters
- Complaints

Participants reviewed the data and considered:

- Is this list correct?
- Are there omissions?
- Are there risks that arise elsewhere in the hospital and impact on clinical risks?

In small groups, the participants then undertook a process of risk assessment of the risk topics to identify the top level risks for the Women’s to address in the short to medium term. The participants were asked to consider:

- What is the real risk? What can happen and how does it happen?
- What systems and processes are currently in place to manage the risk?
- With these controls, how to you rate the risk?
- What do we need to do to reduce the risk?
- If we effect these changes, how would we then rate the risk? Can we reduce it?

Lots of lively discussion and debate ensured. Finally, the top clinical risks that we need to work on were identified as:
Clinical risk reduction in the deteriorating gynaecology patient

We thought that we needed to take this very seriously. A small working group has met to map out an action plan to address the issues which have been identified. Some actions have already been taken with changes to rostering arrangements and starting the night handover in Ward 51. We were also successful in getting funding from our insurers, VMIA, for a 12 month project to address these concerns. We will be undertaking this work in collaboration with the Mercy Hospital for Women, acknowledging that these concerns are not unique to this hospital and to learn from each other.

This project will address one group of the issues identified, broadly categorised under communication, in particular:

- Development of a formalised multidisciplinary clinical handover in gynaecology
- Development and implementation of escalation guidelines for gynaecology and oncology (should we have a MET team?)
- A communication based project to address cultural issues so that there is clear support and willingness to escalate and consult effectively.

The importance of clinical handover is not only in the handover of care between shifts, but also its value as a patient safety barrier in triggering an assessment of the patient.

The issues relating to delay in recognising and/or acting on a deteriorating patient are found in other health services, but this project will address their specific shape...
in specialist obstetrics and gynaecology settings and address solutions that are workable within our type of specialist hospital. The obstetric and gynaecology setting differs in that, apart from oncology patients and babies in NICU, most patients have underlying good health. Other hospitals have adopted a MET team. The idea of the MET team is to predict who is going to do badly over the next four to eight hours and to have a system that gets attention for these patients early, rather than waiting and having to call a ‘Code Blue’, when the patient is in full cardiac arrest – often too late.

Within the project, we will appraise and trial SBAR (Situation-Background-Assessment-Recommendation) – a technique for communication between members of the health care team about a patient’s condition. SBAR is an easy-to-remember, concrete mechanism useful for framing any conversation, especially critical ones, requiring a clinician’s immediate attention and action. It allows for an easy and focused way to set expectations for what will be communicated and is seen as a measure to improve teamwork. The intention is to appraise its suitability in this context and trial its acceptability.

**Progress**

We are in the process of appointing a project officer to lead the project. The first steps will be a broad consultation, especially with junior medical staff, nurses and consultants to get feedback on their perceptions of the problems and what solutions they think could work. This would start in December, especially to get JMO views before some of them finish their time here. Watch this space!

Mary Draper
Director Clinical Governance

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**Pharmacy news**

The drug committee meets every 2 months to discuss matters relating to the promotion of quality use of medicines; and ensuring safe, appropriate and cost effective prescribing and usage of drugs and therapeutic agents.

The members for 2007 are:

- **Chairperson**
  - Prof Jeremy Oats

- **Secretary**
  - Swee Wong (Pharmacist)

**Anaesthetics**
- Dr Christopher James

**Clinical Microbiology**
- Prof Suzanne Garland

**Nursing**
- Lee Sin Lim / Moi Chin Lim

**Oncology**
- Dr Deborah Neesham

**Neonates**
- Dr Peter Davis / Dr Doug Hacking

**Obstetrics/Gynaecology**
- Dr Les Reti / Prof Jeremy Oats

**Medical officer representative**
- Dr Natalie Harrison

**New drugs added to the formulary**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Formulary</th>
<th>Indication</th>
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<tbody>
<tr>
<td>Fluconazole</td>
<td>50mg capsule</td>
<td>Vulvar disorders clinic</td>
</tr>
<tr>
<td>Triamcinolone</td>
<td>10mg and 30mg injections</td>
<td>Vulvar disorders clinic</td>
</tr>
<tr>
<td>Nuvaring® (ethinylestradiol-etornorgestrel)</td>
<td>Vaginal ring</td>
<td>Choices clinics</td>
</tr>
<tr>
<td>Butaconazole</td>
<td>2% vaginal cream</td>
<td>Communicable Diseases clinic</td>
</tr>
<tr>
<td>Solifenacin</td>
<td>5mg tablet</td>
<td>Urinary tract urology</td>
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<tr>
<td>Metformin slow release</td>
<td>500mg XR tablet</td>
<td>Unrestricted</td>
</tr>
<tr>
<td>Seretide inhaler</td>
<td>125/25</td>
<td>Unrestricted</td>
</tr>
<tr>
<td>Anastrozole</td>
<td>1mg tablet</td>
<td>Oncology unit</td>
</tr>
<tr>
<td>Exemestane</td>
<td>25mg tablet</td>
<td>Oncology unit</td>
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<tr>
<td>Letrozole</td>
<td>2.5mg tablet</td>
<td>Oncology unit</td>
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<tr>
<td>Gastrografin</td>
<td>(for bowel obstruction in cancer patients)</td>
<td>Oncology unit</td>
</tr>
<tr>
<td>Aprepitant</td>
<td>80mg and 125mg tablet</td>
<td>Oncology unit</td>
</tr>
<tr>
<td>Insulin glargine</td>
<td>Penfils and flexpen</td>
<td>Endocrine unit (Diabetes)</td>
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<tr>
<td>Rotavirus vaccine program</td>
<td>Oral vaccine</td>
<td>As per childhood vaccination</td>
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<tr>
<td>Milepristone</td>
<td>200mg tablet</td>
<td>Restricted to approved prescribers only</td>
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</tbody>
</table>

**Glucose monitoring sensors**
- Endocrine unit

**Endorsements by the committee**

- Standing orders for RWH
- National Inpatient Medication Chart (NIMC)
- Nurse practitioner prescribing
- Approval system for restricted antimicrobials
- Amendment to NIMC – VTE prophylaxis
- RWH Insulin chart

For any further enquiries regarding Pharmacy news, please contact rwh.pharmacy@rwh.org.au

Swee Wong

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Please let the associate editors have your views on the contents of this newsletter, or any other matters involving clinical practice which may be of interest to our readers.