Management of early pregnancy loss - a complete audit cycle

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Online Publication Date: 01 April 2006

To cite this Article: Tierney, J. P., Welsh, J., Owen, P. and Group, on behalf of the Effective Gynaecology in Glasgow (2006) 'Management of early pregnancy loss - a complete audit cycle', Journal of Obstetrics and Gynaecology, 26:3, 229 - 232

To link to this article: DOI: 10.1080/01443610500537898
URL: http://dx.doi.org/10.1080/01443610500537898

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Management of early pregnancy loss – a complete audit cycle

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Summary
This is a complete audit of the management of early pregnancy within Glasgow hospitals using the Royal College of Obstetricians & Gynaecologists (RCOG) Clinical Green Top Guideline 25 as the set standard. The Effective Gynaecology in Glasgow Group (EGGG) developed a document to record the current practice of the management of early pregnancy loss within Glasgow hospitals over a 4-week prospective period. Results were centrally collated and distributed to individual units. All units were formally instructed in the current RCOG guideline and a repeat audit cycle was undertaken to determine any difference in management. There was improvement in all categories analysed, as outlined in Table I. We have demonstrated that a dedicated group can improve clinical management through the audit process.

Introduction
The majority of women with early pregnancy bleeding are referred to hospital for assessment and if miscarriage is diagnosed nearly 90% will undergo surgical uterine evacuation (Hemminki 1998). Surgical uterine evacuation is the standard recognised treatment and both sharp and suction curettage may be employed, although suction curettage appears to be safer (Verkuyl and Crowther 1993).

Medical evacuation and expectant management are often acceptable and appropriate alternatives to surgical evacuation, with up to 20% of women preferring medical management (Hinshaw 1997). Reasons for this include the avoidance of general anaesthesia and a greater feeling of being in control.

The RCOG published a Clinical Green Top Guideline (No. 25) in 2000 on the Management of Early Pregnancy Loss (RCOG 2000), which outlines a number of recommendations for the management of early pregnancy loss. We aimed to describe the management of early pregnancy bleeding and/or loss in Glasgow hospitals and compare these findings with the recommendations published by the RCOG.

According to the Medline database, (1966 – 2005, key words: early pregnancy loss/audit/management), no similar audit has previously been published.

Specific objectives
1. To establish if suction curettage (rather than sharp curettage) was performed
2. To determine the proportion of women undergoing surgical uterine evacuation that were screened for Chlamydia trachomatis
3. To establish how many suitable women were offered medical or expectant management
4. To establish if the tissue obtained at the time of surgical evacuation underwent histological examination
5. To find out how many Rhesus negative women received Anti-D where indicated.

Methods
A data collection form was designed by the EGGG and was administered over a prospective 4-week period by a data coordinator from each of the five Glasgow hospitals (Figure 1).

The results of the first audit were compiled into a report, disseminated to all relevant clinicians and discussed locally at Early Pregnancy Unit meetings. In addition, 2 months prior to the commencement of the re-audit, a letter was sent to all middle grade and consultant gynaecologists and nursing/midwifery staff involved in early pregnancy management reminding them of the key findings of the initial audit.

The re-audit was performed in the same manner using the same form over a further 4-week period.

The five auditable standards used were taken from RCOG Green Top Guideline 25 (2000) (see later).

Results
A total of 306 women were included in the first audit, 153 (50%) of whom had a viable pregnancy. A total of 288 women were included in the second audit, 145 (50%) of whom had a viable pregnancy.

The guideline (RCOG 2000) provides a number of auditable standards against which practice can be measured. The results are summarised and presented in Table I.
Auditable standard 1

‘Surgical uterine evacuation for miscarriage should be performed using suction curettage (Grade A recommendation)’.  

First audit. There was a total of 306 women in the first audit. Of these, 153 (50%) had a viable pregnancy and 135 (44%) did not (in the remaining 18 cases the diagnosis was unclear at the time of initial presentation and data
collection). Of the 135 cases with a non-viable pregnancy, 50 (37%) underwent surgical evacuation with 41 (82%) undergoing suction curettage.

Re-audit. There were 288 women in this audit. Of these, 141 (49%) had a viable pregnancy and 147 (51%) did not. Of the 147 cases with non-viable pregnancy, 57 (39%) underwent surgical evacuation. All women undergoing surgical evacuation in the second audit underwent suction curettage.

Auditable standard 2

‘All ‘at risk’ women undergoing surgical uterine evacuation for miscarriage should be screened for Chlamydia Trachomatis (Grade C recommendation)’.

(With the exception of age < 25, ‘at risk’ is not more specifically defined, so for this audit we have considered all sexually active women as being ‘at risk’.)

First audit. A total of 50 women underwent surgical evacuation with 11 (22%) cases screened for Chlamydia.

Re-audit. A total of 57 women underwent surgical evacuation with 23 (40%) cases screened for Chlamydia.

Auditable standard 3

‘Medical and expectant methods are also effective in the management of confirmed miscarriage (Grade A recommendation)’.

First audit. A total of 82 women were considered suitable for expectant management. Of these, 76 (93%) were offered such care; 67 women were considered suitable for medical evacuation, which was offered to 38 (57%) women.

Re-audit. A total of 81 women were eligible for expectant management, which was offered to 78 (96%); 80 women were eligible for medical evacuation, which was offered to 77 (96%).

Auditable standard 4

‘Tissue obtained at the time of miscarriage should be examined histologically to confirm pregnancy and to exclude ectopic pregnancy or gestational trophoblastic disease (Grade C recommendation)’.

First audit. A total of 50 women underwent surgical evacuation. Histological examination was performed in 38 cases (76%).

Re-audit. A total of 57 women underwent surgical evacuation. Histological examination was performed in 44 cases (77%).

Auditable standard 5

‘Non-sensitised rhesus (Rh) negative women should receive Anti-D immunoglobin in the following situations: ectopic pregnancy, all miscarriages over 12 weeks (including threatened), all miscarriages where the uterus is evacuated, and for threatened miscarriages under 12 weeks when bleeding is heavy or associated with pain (Grade B recommendation)’.

First audit. Two women with miscarriage > 12 weeks were Rh negative, both were given Anti-D. Seven women with threatened miscarriage < 12 weeks with heavy bleeding were Rh negative, four received Anti-D. Four women undergoing surgical uterine evacuation were Rh negative and all received Anti-D. No ectopic pregnancies were identified in the first audit. In total, 10/13 women (77%) had appropriate Rhesus prophylaxis.

Re-audit. Four women with miscarriage > 12 weeks were Rh negative, all were given Anti-D. Five women with threatened miscarriage < 12 weeks with heavy bleeding were Rh negative and all received Anti-D. Thirteen women undergoing surgical uterine evacuation were Rh negative and all received Anti-D. One ectopic pregnancy was identified and she received Anti-D. Compliance was therefore 100%.

Discussion

Early pregnancy bleeding and/or loss are common gynaecological conditions affecting most women at some point in their lives. Evidence-based guidelines provide standards to which clinicians should aspire and also provide a management framework for less experienced clinical staff who are most frequently charged with the care of women with this complaint. Auditing actual practice against such standards provides us with an opportunity to objectively evaluate at least some aspects of our care, to identify any deficiencies and to attempt to rectify those deficiencies.

We observed improvements in the adherence to guidelines in all five of the selected standards implying that the audit process has raised the level of clinical care provided across the Glasgow hospitals.

Surgical evacuation of the uterus has long been the routinely offered, first line management for women with non-continuing pregnancies. The uptake of non-surgical management increased during the audit cycle. Increasing
familiarity and awareness of non-surgical management by medical and nursing staff is likely to explain the wider offer of medical management from 57% in the first audit to 96% in the second audit. With regard to surgical evacuation the audit revealed a rise from 82% to 100% in the use of the recommended technique of suction evacuation.

Chlamydia screening rates increased during the audit but remain low. Individual hospital policies of routine antibiotic prophylaxis for all women undergoing surgical uterine evacuation may account for this. Furthermore, routine antibiotic prophylaxis will inevitably act as a disincentive for clinicians to pursue screening for Chlamydia although it remains relevant, since screening positive has implications for the male partner.

With regard to histological analysis of tissue, we are only able to comment on those cases where tissue was available. Some women undergoing expectant or medical management will have passed tissue outwith the hospital setting so we have limited our analysis to women undergoing surgical evacuation. Despite this limitation, there was a small increase in the number of tissue samples sent for analysis, although we failed to meet total compliance.

There is clearly scope for further improvement. Reminding clinicians via notices acting as prompts in theatre or as a component of a proforma (Anderson et al. 2005) can reasonably be expected to generate further improvements.

There was complete adherence to the guideline with regard to the administration of Anti-D except in three cases in the first audit. These cases were in the category of 'threatened miscarriage less than 12 weeks with heavy bleeding or pain'. While these cases may be genuine omissions, they are more likely to reflect the subjectivity of retrospectively categorising such women since 'heavy bleeding or pain' is either not defined or cannot readily be defined.

While this audit cycle has demonstrated an improvement in practice in all categories, whether this improvement has come about as a consequence of the intervention following the first audit or as a consequence of awareness rising due to the simple existence of the audit cannot be determined. To clarify the relative contributions of various aspects of the audit process would necessitate a controlled trial of intervention vs no intervention, which cannot easily be achieved within a culture of information sharing.

While there remain areas for further improvement, the positive changes observed are encouraging and would appear to justify the resources required to conduct a city-wide audit of several hospital departments. We would encourage other departments to conduct similar audits of their practice of the management of this common and important complaint.

Acknowledgement

The authors wish to thank Dr Tyra Hogben, Dr Mohua Sen, Dr Kiran Popli, Dr Lucy Carr, Dr Helen Fox, Dr Rosalind Jordan, Sister Emily Marshall, Sister Eileen McGuire and Sister Carol Nasseri for their assistance in the collection of the data presented in this audit.

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