

Interventional Radiology in Obstetrics and Gynaecology:



A retrospective cohort study.

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Abstract

Interventional radiology in obstetrics and gynaecology is a relatively new and rapidly evolving subspecialty in medicine. In selected patients, it is an important and potentially life-saving alternative to traditional surgery and should be offered as a treatment option in a broad range of Obstetric and Gynaecology cases¹.

Australian data on the role of interventional radiology as part of a treatment protocol in the management of postpartum haemorrhage, symptomatic fibroids and fertility for example, is limited and mostly comes from case reports or small cohort studies^{2,3}.

Being able to provide information about the long-term effects of these procedures is essential not only for counselling of the patients but improving overall treatment. Similarly, local information about safe and effective cross-speciality management of Obstetric and Gynaecology problems is limited.

Objectives

Capture and analyse the local data on the indications, procedures, complications and short and long-term success of using interventional radiology in the management of obstetric, general gynaecological, reproductive medicine and gynaecological oncology problems.

Provide locally relevant information to our departments about the safety, effectiveness and potential problems with these current procedures.

Start collecting prospective data on the abovementioned procedures and establish a long-term research study that is recognised across the Radiology and Obstetrics and Gynaecology departments to facilitate future research in this field.

Methods

This was a retrospective descriptive cohort study conducted across both the Obstetrics and Gynaecology and Radiology departments between 2011 and 2013 at a large tertiary hospital.

Patients (both public and private) were identified from a centralised log-book and electronic and paper medical records were reviewed and used to identify readmission rates and complications.

A questionnaire was then sent to the patient to provide feedback about further complications, surgical interventions, issues or benefits from the treatment.

Ethics Committee did not approve contacting the non-respondents by telephone.

Results

127 interventional radiology procedures were performed. They included: hysterosalpingogram +/- recanalization (HSG), uterine artery embolisation (UAE), removal of non-palpable Implanon, CT guided drainage of pelvic mass, ovarian artery embolisation, internal iliac artery embolisation, insertion of internal iliac artery balloon catheters pre-operatively at Caesarean hysterectomy for placental adherence disorders and internal iliac vein embolisation.

8% experienced pain immediately post procedure. Anaphylaxis, acute pulmonary oedema, ongoing bleeding requiring a repeat procedure and surgical intervention in the immediate post-procedure period occurred in 0.8% of cases. 15% of readmissions were for pain, ongoing bleeding and sepsis with repeat procedure rates being highest for patients who underwent vessel embolisation. Of the 17 patients who had uterine artery embolisation for a fibroid uterus, two required a hysterectomy in the subsequent three years.

There is no information about the long-term fertility rates or outcomes of subsequent pregnancies in the cohort that had embolisation for postpartum haemorrhage. There was only a 10% response rate to the questionnaire. Nearly 20% of patients no longer had a valid address and the questionnaire was returned to sender. Overall, 90% of the cohort did not respond.

Conclusion

This retrospective cohort study obviously has clear limitations.

However, it does highlight the fact that Australian data about the overall effectiveness, safety and long-term outcomes for these treatment options is lacking and that there is a need for a prospective evaluation tool to be introduced.

References

1. Ganeshan, A et al. The Role of Interventional Radiology in Obstetrics and Gynaecology Practice. *European Journal of Radiology* 2010; 73: 404-411.
2. Gupta J, Sinhu A, Lumsden M, Hickey M. Uterine artery embolization for symptomatic uterine fibroids (review) *Cochrane Database of Systematic Reviews* 2014, Issue 12 Art No.: CD005073.
3. Liang, E et al. Efficacy of uterine artery embolisation for treatment of symptomatic fibroids and adenomyosis – An interim report on an Australian experience. *ANZJOG* 2012; 52: 106-112.

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