Long-term follow-up of uterine artery embolisation for symptomatic fibroids shows an increasing need for reintervention

M Hickey, F Brownfoot, J Marino

Department of Obstetrics and Gynaecology, University of Melbourne, and Royal Women's Hospital, Victoria, Australia

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CONTEXT

Symptomatic uterine fibroids may be managed surgically with hysterectomy or myomectomy, or by radiological therapies including uterine artery embolisation (UAE) or high-intensity focused ultrasound. Treatment is indicated only for symptoms of this often-asymptomatic condition. The US and UK specialty societies (www.acog.org, www.rcog.org.uk) and the National Institute for Clinical Excellence (NICE, www.nice.org.uk) have endorsed the safety and short-term efficacy of UAE but identified research needs in long-term symptom relief and fertility effects.

Effective non-surgical options for fibroids are needed, particularly to preserve fertility. Short-term follow-up suggests that UAE reduces symptoms and may be more cost-effective than surgery¹. Longer follow-up now questions the durability of these outcomes.

METHODS

This paper reports 5 year follow-up data from a pragmatic, open randomised controlled trial in 27 UK centres, studying women who had ≥ 1 symptomatic fibroids, complained of menorrhagia or bulk symptoms, and were candidates for surgery (n=157). Randomisation was to UAE or surgery (hysterectomy or myomectomy) in a 2:1 ratio, stratified by centre. Of those randomised to surgery, most (42/51) underwent hysterectomy. The specific hypothesis is not clear, but the study was designed to detect a 10 point difference in the primary quality of life (QOL) measure (SF-36) at 1 year (n=200, power=90%, $P<0.05$). Secondary measures included health preference outcomes (EuroQol-5D), complications, adverse events, need for further interventions, and cost-benefit measures. Analysis was by intention to treat.

FINDINGS

QOL did not differ between groups at 5 years and satisfaction rates were high. The most striking outcome was the rate of reintervention for treatment failure or complications following UAE, which rose to nearly one third (32%) at five years, compared to only 4% in the surgery arm. Consequently, UAE was no longer more cost-effective than surgery ².

COMMENTARY

The principal limitation of this study is that it essentially compares UAE with hysterectomy. Many women considering UAE wish to preserve their uterus. Despite 4 years recruitment from 27 UK centres, Moss et al. failed to meet their recruitment target, reflecting the inherent difficulties in recruiting for randomised trials of surgical vs. non surgical treatments. Only 28% screened were randomised. Ideally, the authors would have compared UAE to myomectomy and stratified according to the nature and severity of fibroid symptoms, size and location, fertility wishes and age. However, they are to be congratulated for completing this study and for achieving 84% follow-up at 5 years.

The primary outcome, QOL, is appropriate for heavy menstrual bleeding (www.nice.org.uk) but not necessarily for other fibroid symptoms, and this unblinded study was not powered to show differences in secondary outcomes. QOL data at 5 years were collected by postal questionnaires and telephone.

It is not surprising that only women in the UAE group required reintervention since most of the surgery group had undergone definitive treatment (hysterectomy). Of clinical significance is that most reinterventions following UAE were for further symptoms, particularly pain. Whether pain

persisted or recurred is unclear but clinically important. Eight of the 106 randomised to UAE elected for repeat UAE at 1-5 years and 18 for hysterectomy. Although satisfaction rates were high, it could be argued that these women would have been better off with a hysterectomy in the first place. Further, since subjects were aged 42 ($\pm$ 5-7 years) at recruitment, natural menopause (rather than treatment) might have resolved symptoms by 5 years. Menopausal status was not reported.

The rising rate of reintervention following UAE is consistent with other prospective and retrospective studies. The EMMY study randomised 177 women to UAE or hysterectomy and reported 28% hysterectomy rate for recurrent symptoms 5 years after UAE ³. Similar reintervention rates have been reported from retrospective cohorts such as HOPEFUL ⁴. In studies randomising women wishing to conserve their uterus to UAE vs. myomectomy, reintervention rates were higher after UAE at 2 years (14% vs. 2.7% ⁵ and 32.8% vs. 3.2% ⁶).

IMPLICATIONS FOR PRACTICE

Women considering UAE should understand that the likelihood of needing further treatment for fibroid symptoms is around one third at 5 years and is higher than myomectomy. Those seeking definitive treatment should consider hysterectomy. Health care providers should know that UAE may not be a cost-effective option in the long term. Management of symptomatic fibroids should be individualized and consider the patient's wishes to conserve her uterus and the importance of complete symptom resolution. Those considering future pregnancy should be aware that little is known about pregnancy after UAE, and that it may compromise both ovarian function and pregnancy outcome ⁶. Fertility benefits of fibroid removal have been established only for submucous fibroids ⁷.

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Author/s:

Hickey, M;Marino, JL;Brownfoot, FC

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