



Title A Multi-Centre Retrospective Cohort Study Comparing the Efficacy, Safety, and Cost Effectiveness of Hysterectomy and Uterine Artery Embolization for the Treatment of Symptomatic Uterine Fibroids. The HOPEFUL Study

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Aim

To examine the medium-term effects of hysterectomy and uterine artery embolization (UAE) in treating symptomatic uterine fibroids.

Conclusions and results

Hysterectomy is the standard treatment for symptomatic uterine fibroids. During the mid 1990s a minimally invasive, uterus-conserving treatment was described, i.e. uterine artery embolization (UAE). Evidence from a few, small, randomized controlled trials (RCTs) comparing the two treatments suggested UAE is a safe, effective treatment up to 12 months. Long-term safety and efficacy remain unknown.

Data were available for 1108 women (649 UAE and 459 hysterectomy). The cohorts presented a different baseline profile for many confounders, including educational level (UAE higher), ethnicity (UAE more ethnically diverse), and parity (more UAE women nulliparous). After adjusting for confounders, clustering by center, and missing values, fewer complications were experienced by women in the UAE cohort compared to the hysterectomy cohort (odds ratio 0.48, 95%CI: 0.26, 0.89). When only severe/major complications were considered, this odds ratio was reduced to 0.25 (95%CI: 0.13, 0.48). Anticipated general side effects of UAE occurred in 32.7% of the UAE cohort, of which 8.9% also experienced complications. Obesity and medical comorbidity predisposed women to complications, while prophylactic antibiotics appeared to protect against both complications and the anticipated side effects of UAE. More women in the hysterectomy cohort reported relief from fibroid symptoms (89% versus 80%, $p < 0.0001$) and feeling better (81% versus 74%, $p < 0.0001$), but paradoxically only 70% (compared to 86%, $p = 0.007$) would recommend their treatment to a friend.

Recommendations

See Executive Summary link at www.nchta.org/execsumm/summ1205.shtml.

Methods

See Executive Summary link at www.nchta.org/execsumm/summ1205.shtml.

Further research/reviews required

This study confirms the medium-term safety of UAE and generates hypotheses of vital importance for women with symptomatic fibroids. Further research is required on the following questions:

- Which subgroups of women will benefit most from UAE? And which types of fibroids respond to UAE?
- Which UAE techniques are optimal with regard to treatment success and cost effectiveness?
- Which treatments for fibroids including UAE and myomectomy offer the most successful option for future fertility? (Particularly for infertile patients undergoing in vitro fertilization.)
- What is the role of prophylactic antibiotic use prior to UAE?
- How does hormone replacement therapy after UAE affect recurrence of fibroid symptoms?