

MR Guided Focused Ultrasound of Uterine Fibroids: The Effects of GnRH Analogue Pre-Treatment.

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Background: MR guided Focused Ultrasound (MRgFUS) has emerged as an effective, low-risk, non-invasive treatment for a wide range of patients with symptomatic fibroids. Using consecutive sonications of high intensity ultrasound within a defined target area, a volume of ablated tissue can be produced. Early work has been limited to women with a uterine diameter less than 10 cm.

Objectives: The purpose of this study is to explore the hypothesis that, by pre-treating patients with GnRH analogues, MRgFUS will cause a significant reduction in fibroid related symptoms in women with uterine size greater than 10cm in diameter.

Methods: Women presenting to the Gynaecology clinic with symptomatic fibroids which appeared device accessible on MRI scan and in whom the overall infero-superior diameter of the uterus was 10 cm or greater were invited to participate. Study subjects were given 3 injections of Goserelin (Zoladex® 3.6 mg AstraZeneca) at 28-day intervals. MR guided Focused Ultrasound was carried out 14-21 days after the final injection. Fibroid volume, fibroid symptoms and quality of life scores were measured before commencing GnRH, at treatment and 6 months after treatment. Adverse events were actively monitored and recorded.

Results: Between March 2003 and March 2004, 30 women met the inclusion criteria and were enrolled. At 6 month follow up 72% of women treated reported a significant improvement in their uterine fibroid symptoms on health-related quality of life questionnaires. The mean reduction in volume of the treated fibroid was 29% at the end of the study period. There were no serious adverse events recorded.

Conclusion: We believe the use of GnRH analogues in combination with MRgFUS is a very significant development, allowing effective extension of this treatment modality to women with larger fibroids.