

ORAL PRESENTATION

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MRI predictors of clinical success in MR-guided focused ultrasound (MRgFUS) treatments of uterine fibroids: results from a single center

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Background/introduction

To assess the technical and clinical results of MRgFUS treatment and factors affecting clinical treatment success.

Methods

252 women (mean age, 42.1 ± 6.9 years) with uterine fibroids underwent MRgFUS treatment using an ExAblate 2100 system (Insightec Ltd., Israel). All patients underwent MRI screening before treatment. Results were evaluated with respect to post-treatment non-perfused volume (NPV), symptom severity score (SSS), reintervention rate, pregnancy and safety data.

Results and conclusions

NPV ratio was significantly higher in fibroids characterized by low signal intensity in contrast-enhanced T1-weighted fat saturated MRI images and in fibroids that are distant from spine ($>3\text{cm}$). NPV ratio was lower in fibroids with septations, with subserosal component and in skin-distant fibroids ($p < 0.001$). NPV ratio was in high correlation with clinical success: NPV of more than 80% resulted clinical success in more than 80% of patients. Reintervention rate was 12.7% (mean follow-up time, 19.4 ± 8 months; range, 3-38). Expulsion of fibroids (22%) significantly correlated with a high clinical success rate. No severe adverse events were reported.

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Adequate patient selection and correct treatment techniques, based on the learning curve of this technology, combined with technical advances of the system, lead to higher clinical success rates with low complications rate, comparable to other uterine sparing treatment options.

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