

Adverse events and complications after magnetic resonance-guided focused ultrasound (MRgFUS) therapy in uterine fibroids - a systematic review and future perspectives.

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ABSTRACT

OBJECTIVES: The aim of this review was to analyze and summarize the most common adverse events (AEs) and complications after magnetic resonance-guided focused ultrasound (MRgFUS) therapy in uterine fibroids (UFs) and to establish the risk factors of their occurrence.

METHODS: We searched for original research studies evaluating MRgFUS therapy in UFs with outcomes containing AEs and/or complications in different databases (PubMed/MEDLINE, SCOPUS, COCHRANE) until March 2022. Reviews, editorials, opinions or letters, case studies, conference papers and abstracts were excluded from the analysis. The systematic literature search identified 446 articles, 43 of which were analyzed.

RESULTS: According to available evidence, the overall incidence of serious complications in MRgFUS therapy is relatively low. No AEs/complications were reported in 11 out of 43 analyzed studies. The mean occurrence of all AEs in the analyzed material was 24.67%. The most commonly described AEs included pain, skin burns, urinary tract infections and sciatic neuropraxia. Major AEs, such as skin ulcerations or deep vein thrombosis, occurred in 0.41% of cases in the analyzed material.

CONCLUSION: MRgFUS seems to be safe in UF therapy. The occurrence of AEs, especially major ones, is relatively low in comparison with other methods. The new devices and more experience of their users seem to reduce AE rate. The lack of unification in AE reporting and missing data are the main issues in this area. More prospective, randomized studies with unified reporting and long follow-up are needed to determine the safety in a long-term perspective.