VIDEO COMMENTARY

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Hysteroscopic ablation of type 2 and type 3 fibroids using radiofrequency or microwave energy

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ABSTRACT

Background: Minimally invasive, uterus-sparing radiofrequency (RF) and microwave (MW) ablation have been introduced under ultrasound or laparoscopic guidance to treat uterine fibroids. These technologies enable targeted coagulative necrosis, potentially minimising surgical time and trauma while shortening recovery. They can also be used under hysteroscopic guidance, although feasibility data is lacking.

Objectives: To assess the feasibility and short-term outcomes of hysteroscopic RF and MW ablation for FIGO-type 2 and type 3 fibroids.

Participant: Four patients were included: two with FIGO-type 2 fibroids and two with FIGO-type 3 fibroids, all presenting with heavy menstrual bleeding (HMB) and no desire for pregnancy.

Intervention: Procedures were performed at a tertiary care university hospital under sedation. As no evidence-based guidelines define selection criteria between MW and RF, both modalities were employed in fibroids with similar presentation. Under direct hysteroscopic visualisation, the needles were inserted through the operative channel into the myoma, maintaining a 10-mm safety margin. Tissue necrosis was confirmed by hyperechogenicity of the treated area. Each procedure lasted approximately 4 minutes. All patients were discharged the same day without complications.

Conclusions: Hysteroscopic ablation was technically feasible and safe in this limited case series. The procedure induced necrosis, reduced fibroid vascularisation, and resolved HMB without complications, scarring, or adhesions. Future studies are needed to evaluate long-term outcomes and determine whether it may serve as a standalone option.

What is New? Hysteroscopic myolysis may expand the therapeutic armamentarium for selected patients seeking uterine preservation. By using the natural intracavitary pathway, the technique allows precise ablation while preserving uterine integrity and minimising procedural invasiveness.

Keywords: Heavy menstrual bleeding, hysteroscopy, microwave, myoma, radiofrequency ablation, uterine fibroids

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Ethical approval: The study was conducted in accordance with the principles of the Declaration of Helsinki. The internal committee of the Department of Maternal and Child Health, University Hospital of Naples "Federico II", Naples, Italy has reviewed the study and deemed this work exempt from IRB approval because this video will not involve any additional risk for partecipant than those ordinarily encountred in a normal scheduled surgery.

Informed consent: Written informed consent was obtained from all participants prior to inclusion in the study and for the use of anonymized clinical data and images for research and publication purposes.

Data sharing: The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Transparency: The authors affirm that this manuscript is an honest, accurate, and transparent account of the study being reported, that no important aspects have been omitted, and that any discrepancies from the study as planned have been explained.

Video 1. Hysteroscopic ablation of type 2 and type 3 fibroids using radiofrequency or microwave energy: https://youtu.be/CYBjNez97Ls