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A rare encounter: Leiomyosarcoma unveiled during planned fibroid ablation

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Clinical background

A 40-year-old nulliparous woman presented with one month of menorrhagia and mild pelvic pain. Transvaginal ultrasound revealed a $5.6 \times 5.7 \times 6.1$ cm lesion, initially presumed to be a submucosal fibroid, with minimal vascularity and a low-lying Mirena. She also had a left ovarian cyst measuring $2.7 \times 1.9 \times 2.6$ cm.

Given her latest symptoms and imaging, she underwent an ultrasound-guided Tru-Cut biopsy of the suspected fibroid followed by percutaneous microwave ablation. One week post-procedure, the lesion size decreased by 13% ($5.6 \times 5.6 \times 5.4$ cm) on follow-up ultrasound. Histopathological examination of the biopsy demonstrated spindle cells with anaplastic nuclear features, consistent with a diagnosis of leiomyosarcoma.

Consequently, she had a total hysterectomy and bilateral salphingoopherectomy. Histopathology finding was consistent with localised leiomyosarcoma within the myometrium and pelvic lymph-nodes sampling were negative. No lympho-vascular involvement was noted. She was stage as FIGO Stage 1a disease.

Discussion

On ultrasound, leiomyomas appear as well-defined, hypoechoic masses with whorled architecture and peripheral vascularity. Leiomyosarcomas show irregular borders, heterogeneous texture, central necrosis, and increased central vascularity, suggesting malignancy. Overlapping features exist, so histopathology is often needed for diagnosis

Conclusion

This case underscores the difficulty of diagnosing leiomyosarcoma when initial symptoms and imaging suggest benign fibroids, and suggests ablation may pose less risk of malignancy spread than myomectomy.

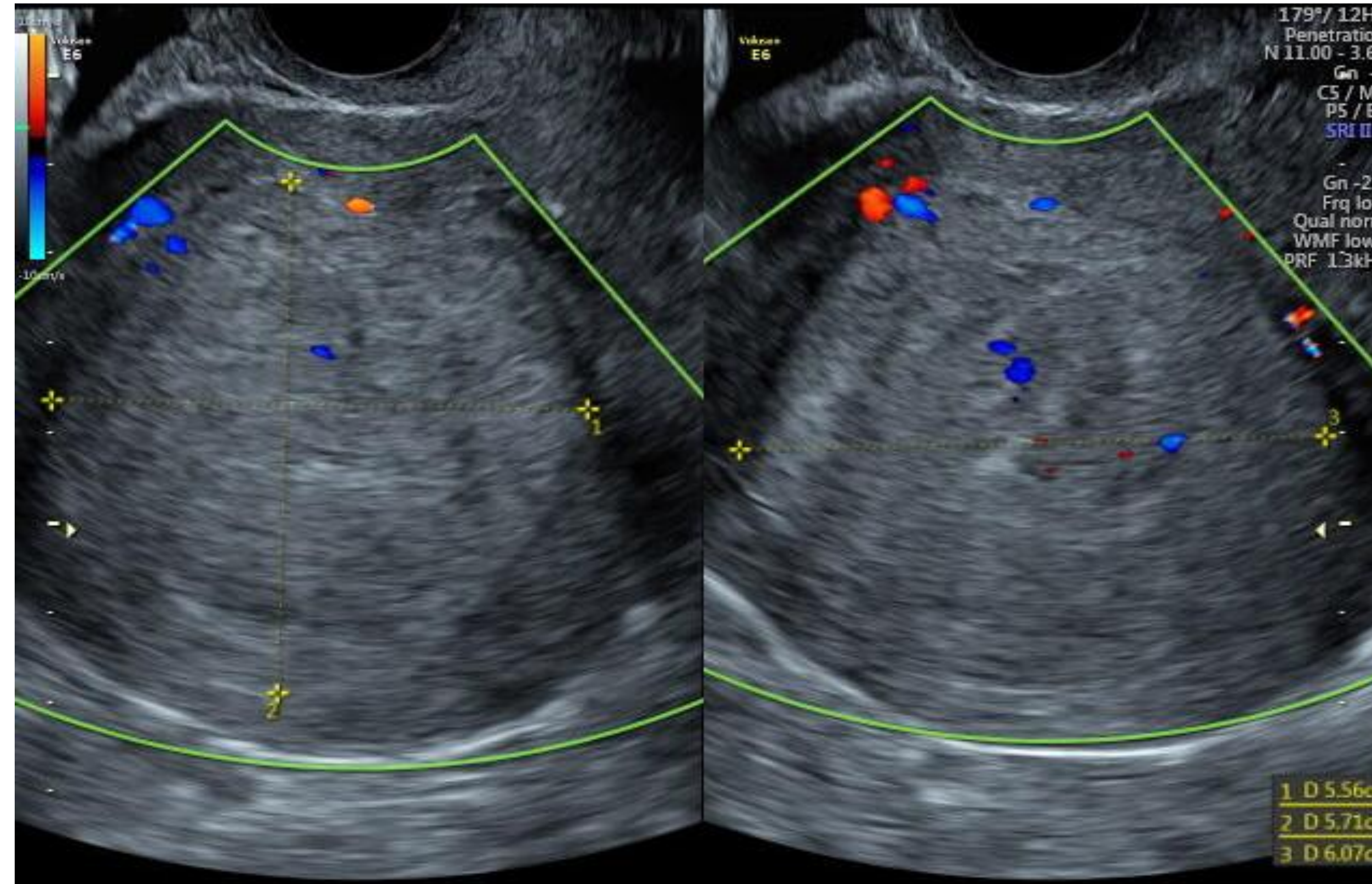


Fig 1: Ultrasound scan of myoma prior to microwave ablation showing a well-defined, slightly hyperechoic and minimal vascularity.

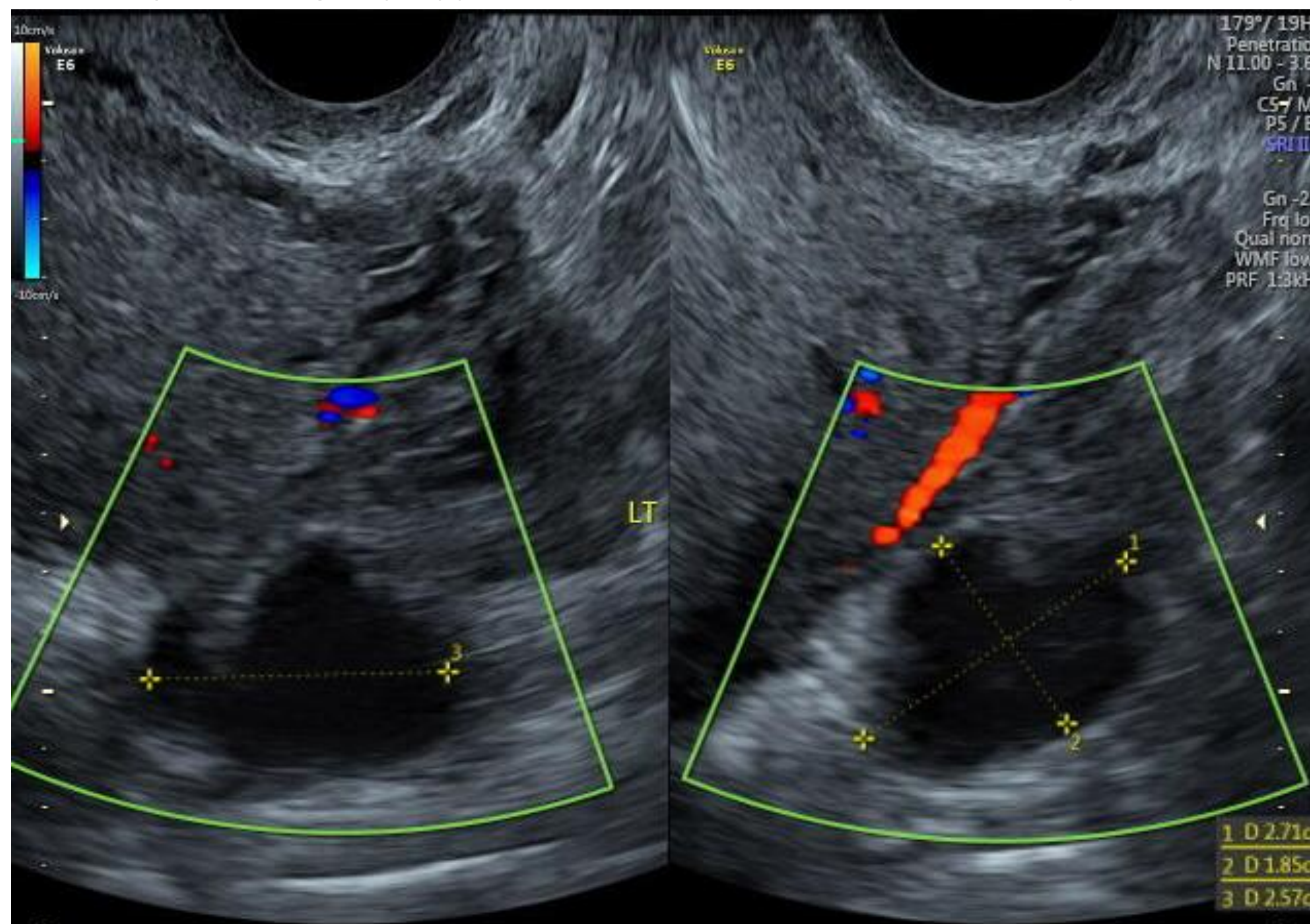


Fig 2: Ultrasound scan of left ovarian cyst

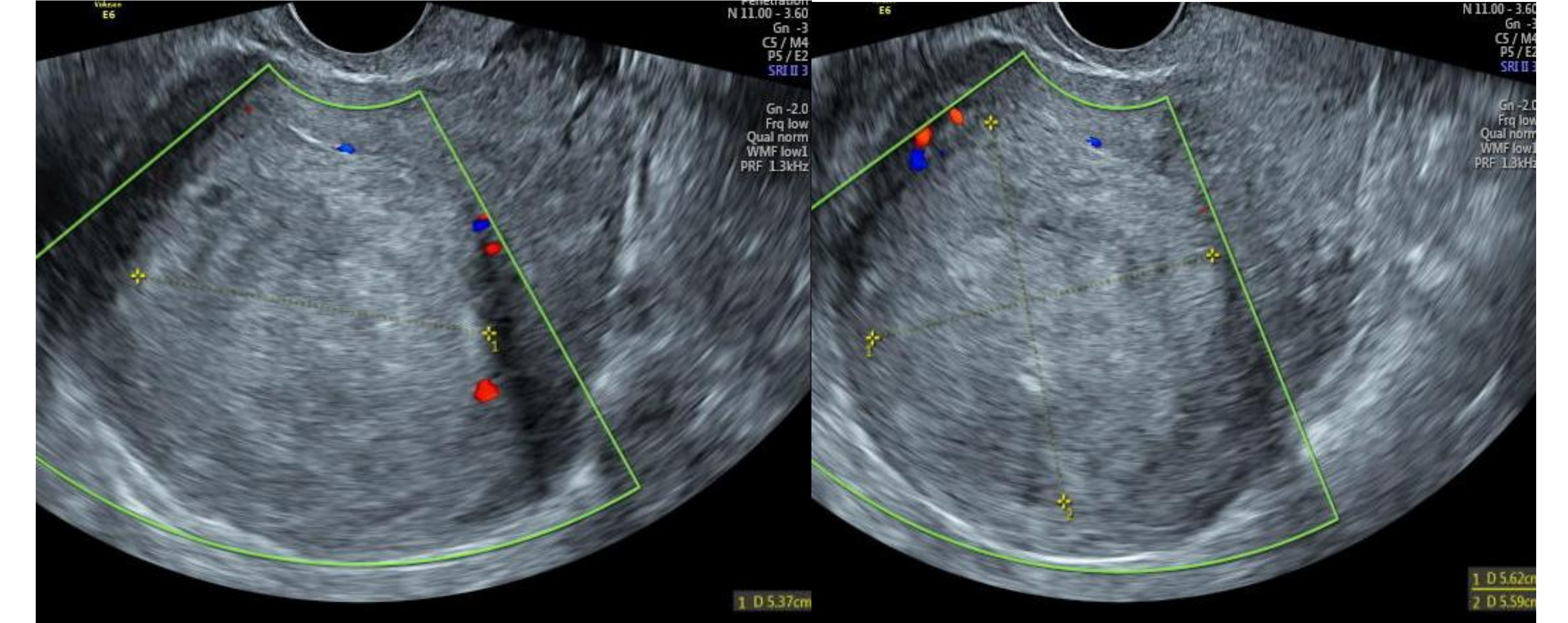


Fig 3: Ultrasound image of myoma 1 week post microwave ablation showing slight increase in echogenicity and reduction in size.



Fig 4: Hysterectomy Specimen that showed a localised disease after microwave ablation