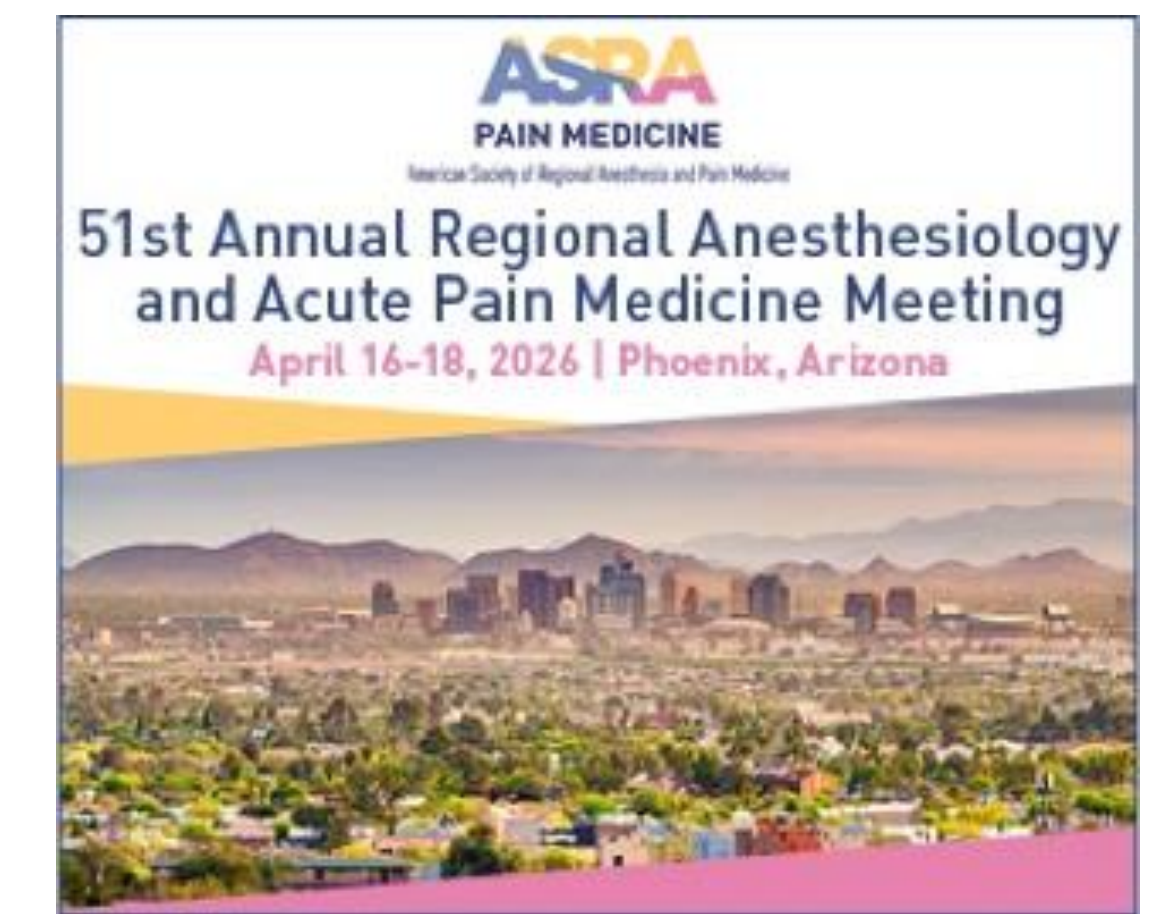


Ultrasound-Guided Neuraxial Anesthesia in a Patient with Migrated Gluteal Biopolymers

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Introduction

Cosmetic gluteal augmentation with injectable biopolymers is increasingly encountered in patients.

Biopolymer migration into the lumbosacral region can complicate neuraxial anesthesia administration by raising concerns about needle passage through abnormal tissue along expected neuraxial trajectories.²

We describe the use of preprocedural lumbar ultrasound mapping to guide epidural placement in a patient with MRI-confirmed biopolymer migration.



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Case Report

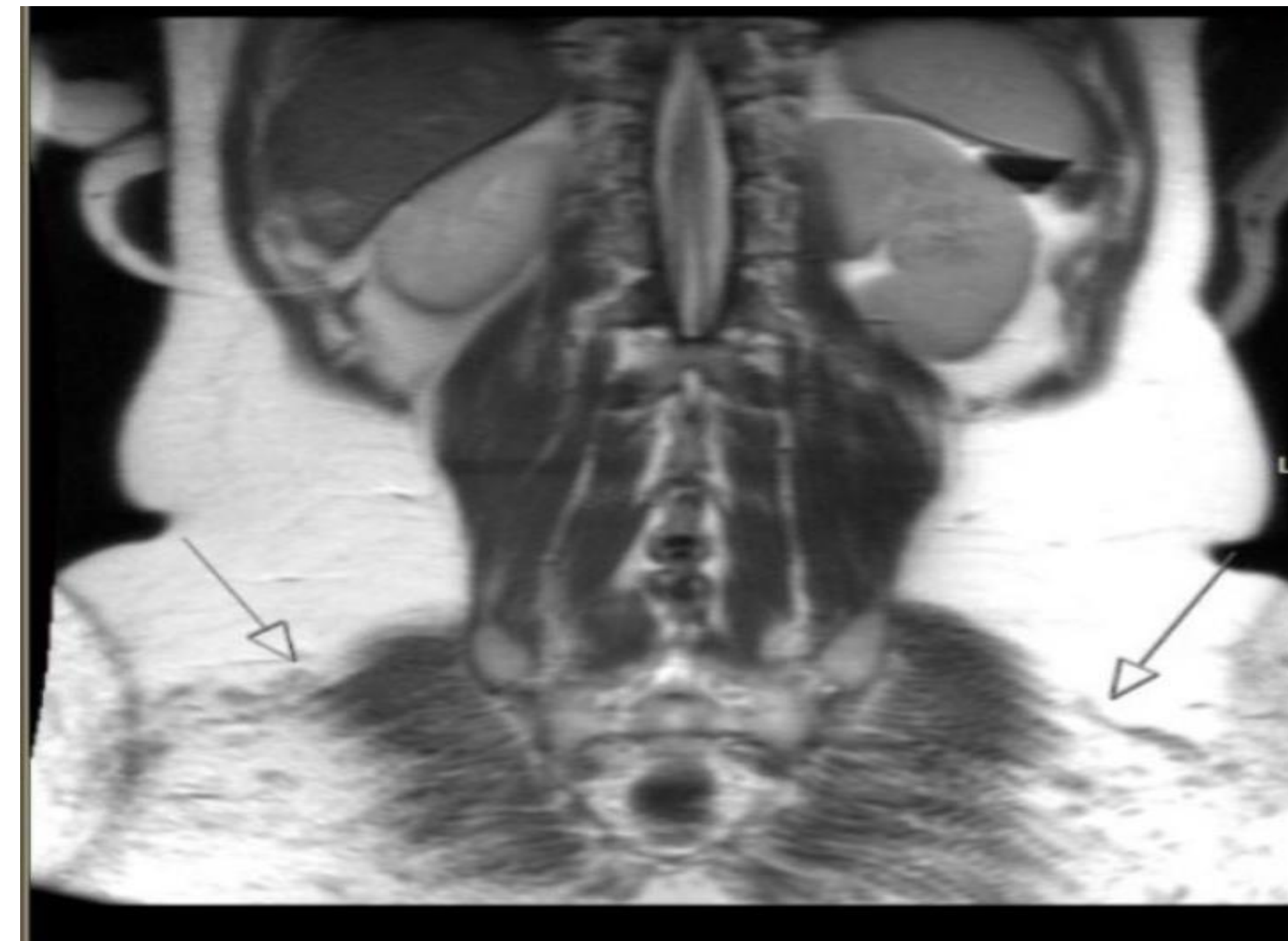


Figure 1. MRI, Coronal view

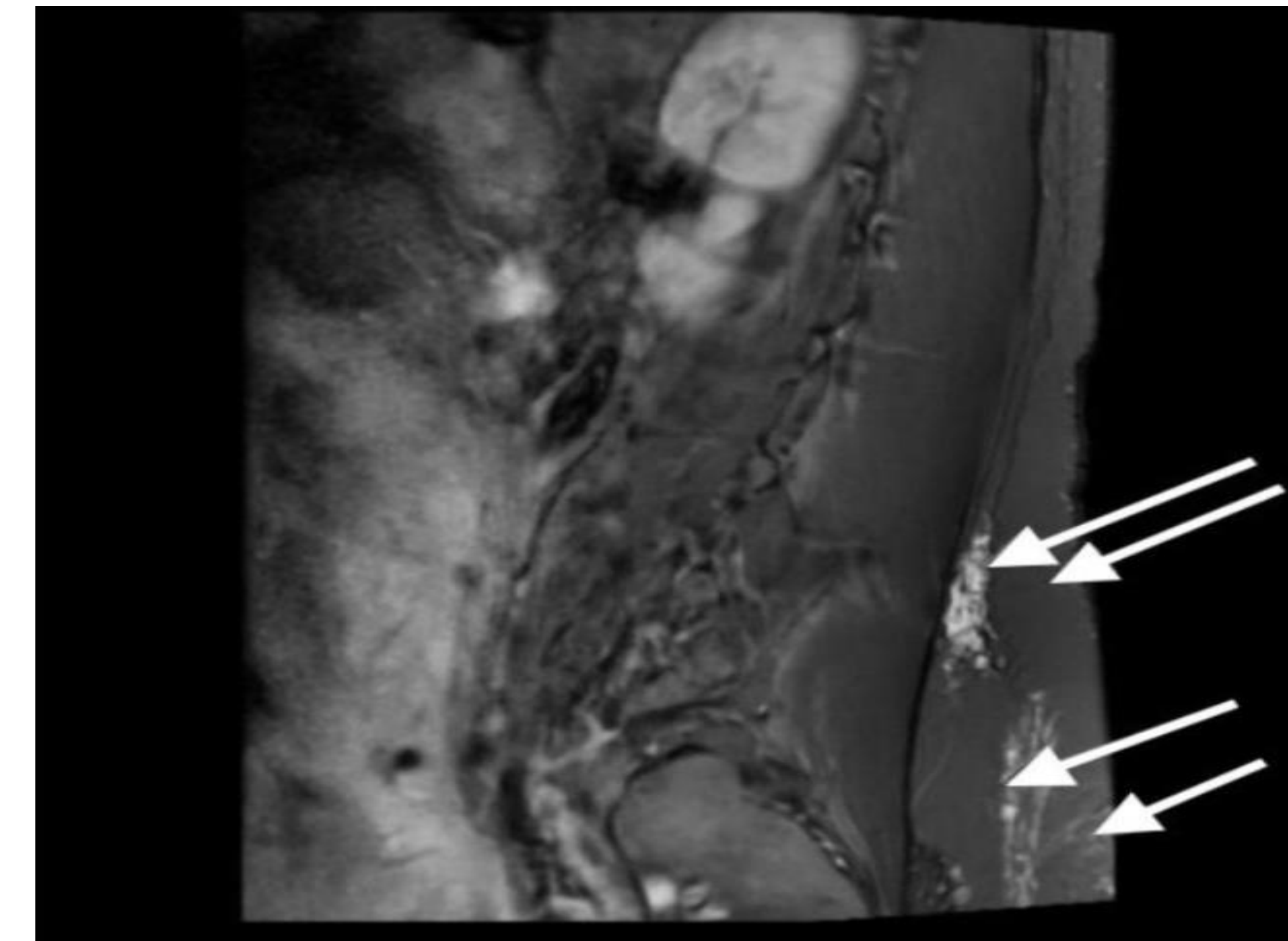


Figure 2. MRI, Sagittal view

A 32-year-old gravida 1 para 0 at 24 weeks of gestation, with a history of gluteal biopolymer injections 14 years prior, expressed concerns about the safety of labor epidural analgesia at a routine prenatal visit.

As part of her anesthesiology consultation, a non-contrast lumbar MRI obtained at 26 weeks' gestation demonstrated nodular thickening of the subcutaneous soft tissues at the lumbosacral junction consistent with migrated biopolymer, with cephalad extension terminating at the L5–S1 level (Figures 1 and 2).

At 40 weeks 2 days' gestation, she presented in labor and requested epidural analgesia. MRI images were re-reviewed and confirmed no visible filler material at the L1–2 through L3–4 interspaces.

Real-time ultrasound examination of the lumbar spine with a curvilinear probe was used for pre-procedural mapping to identify an interspace cephalad to the migrated biopolymer. Under sterile conditions, an epidural catheter was placed at the L1–2 interspace and later used for cesarean delivery without complication.

Conclusions

Migration of biopolymers into areas relevant to neuraxial access poses unique challenges as perforation of siliconomas may displace foreign material into neuraxial structures, placing local nerves at risk for inflammatory injury.^{2,4}

In patients with filler migration, ultrasound can complement MRI by confirming safe interspaces and avoiding abnormal tissue.

Given the limited literature describing the administration of neuraxial anesthesia in patients with biopolymer migration, ultrasound mapping may improve procedural confidence and guide neuraxial placement.

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