

Recurrent Postoperative Seroma and Fistula After Lumbar Spine Instrumentation: A Case Report and Doxycycline Sclerotherapy Protocol

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Background

- 75-year-old patient
- Multiple spinal fixations (L3–S1) with repeated complications and revisions (hematoma, infection, rod fracture, revisions)
- Persistent post-op seroma with purulent discharge and CSF leak

Interventions

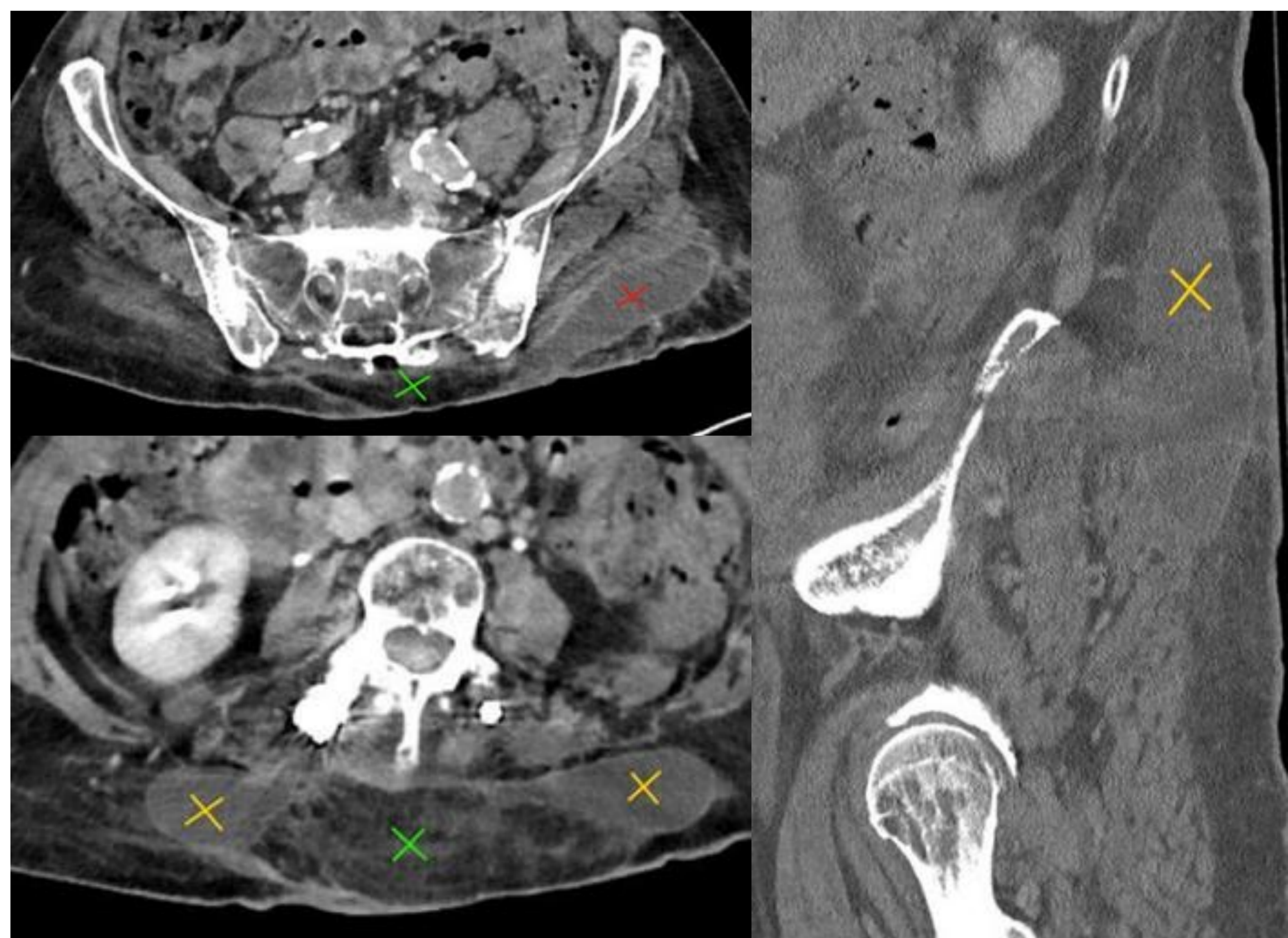
- Pedicled SGAP flap for dead space closure allowing for good tissue coverage
- 2 revisions surgeries: flap mobilization with complete capsulectomy, quilting sutures.
- Persistent seroma.
- Radiologic drain with iterative Doxycycline sclerotherapy
- Progressive drain output reduction (<30 cc/24h)
- Drain removed after stable imaging
- No recurrence of seroma/fistula at follow-up (3 months)

Conclusion

- Iterative sclerotherapy with radiological drain allowed for resolution in this particular complex recurrent seroma



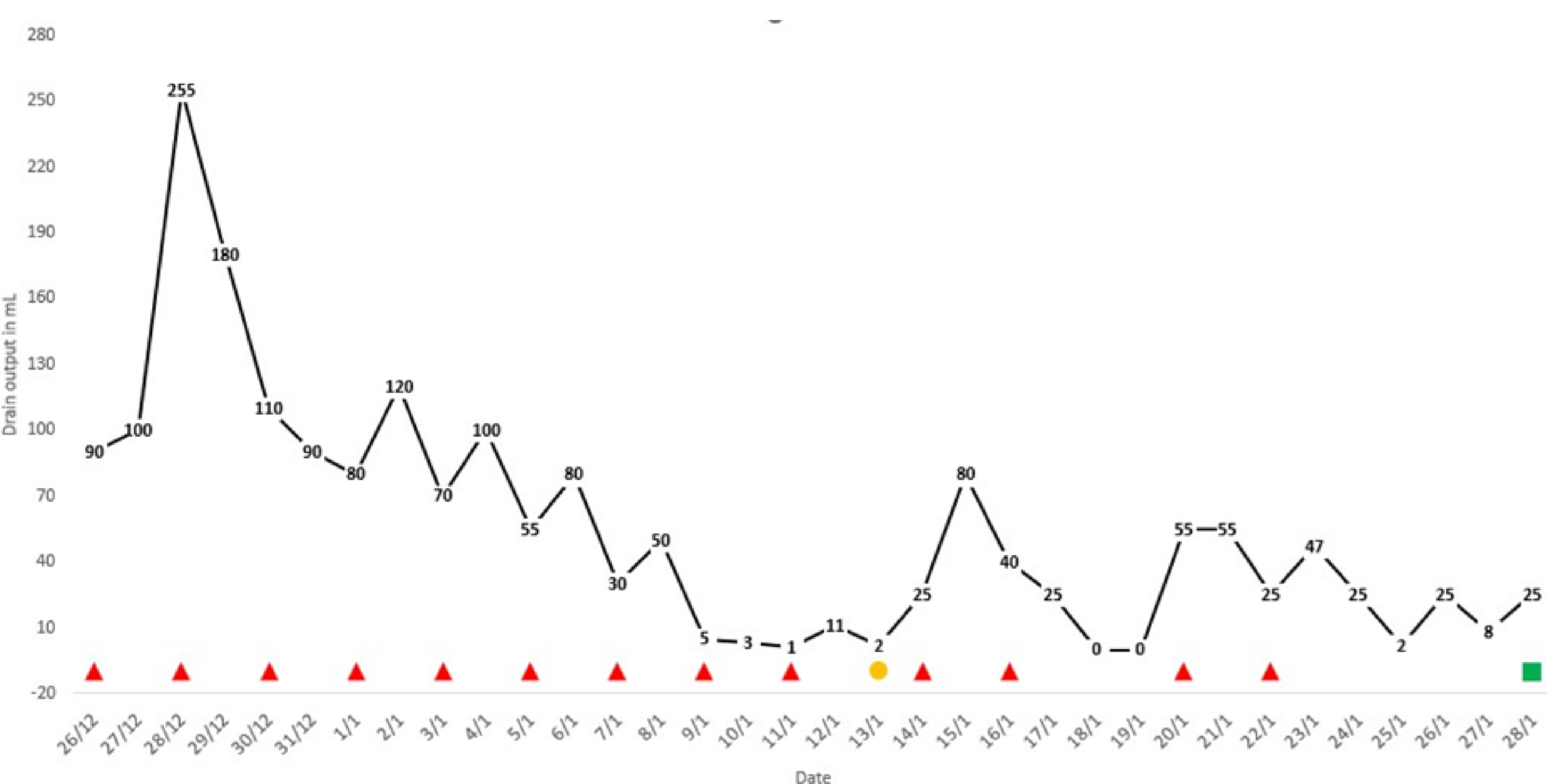
Intraoperative view of the SGAP flap during revision surgery with flap mobilization. Left: before capsulectomy. Green arrow: SGAP pedicle. No spinal hardware is exposed. Right: after capsulectomy.



Axial and sagittal computed tomography (CT) views of the persistent seroma after SGAP revision with capsulectomy. Yellow cross: seroma, red cross: donor site seroma, green cross: SGAP flap

Sclerotherapy protocol

- 1) Radiological drain placement
- 2) Daily drainage, with 200mg (20mg/mL) doxycycline injection every 48 hours
- 3) Drain removal after <30cc/24h output



Daily drain output and doxycycline injection timeline. Red triangle : Doxycycline injection. Orange circle : drain replacement. Green square : Drain removal



Three months after discharge from acute care