

Traumatic Spinocutaneous Fistula Following a Stab Wound to the Neck

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BACKGROUND

- Post-traumatic CSF fistula is a rare complication of injury to the head or spine.
- Leakage of CSF is often present on initial examination; however, significant delays in diagnosis have been reported.
- We present a case of a delayed spinocutaneous CSF fistula following a stab injury to the neck; the diagnosis was made on post-injury day 8.

PATIENT DESCRIPTION

- A 28-year-old female presented to the emergency department (ED) after an assault.
- Five stab wounds were identified on the scalp, face, and upper extremities.
- A urine qualitative beta-human chorionic gonadotropin was incidentally positive.
- The lacerations were irrigated, explored, and primarily closed with suture.
- The patient was then discharged home with cephalexin, pain medication, and obstetrics follow-up.
- The patient returned to the ED less than 24 hours later with complaints of scalp pain and headache and she was concerned about a missed laceration.
- A 2-cm laceration was found just below the occiput. There was no visible muscle involvement and minimal drainage. The wound was repaired with 6 skin staples.
- She returned on post-injury day 3 with complaints of back and bilateral lower extremity pain and left leg numbness.
- She expressed concern for her pregnancy and an ultrasound was obtained that confirmed a 5-week, 2-day intrauterine pregnancy with a yolk sac. She was discharged with cyclobenzaprine and lidocaine transdermal patches.
- The patient returned on post-injury day 8 complaining of a positional headache and leakage of clear fluid from a suboccipital scalp wound.

INTERVENTION

- A brain MRI was obtained and showed a suboccipital stab injury extending to the dorsal spinal canal and fluid in the surrounding paraspinous soft tissue.
- Cervical spine MRI identified a fistulous CSF tract (Figure).
- She was admitted to the neurosurgical intensive care unit and underwent lumbar drain placement for CSF diversion.
- After 7 days, the drain was clamped and removed.
- A follow-up cervical spine MRI obtained 1 week later showed interval decrease in fistula size. She was discharged home.
- At her follow-up visit 3 weeks later, there was no CSF leak.

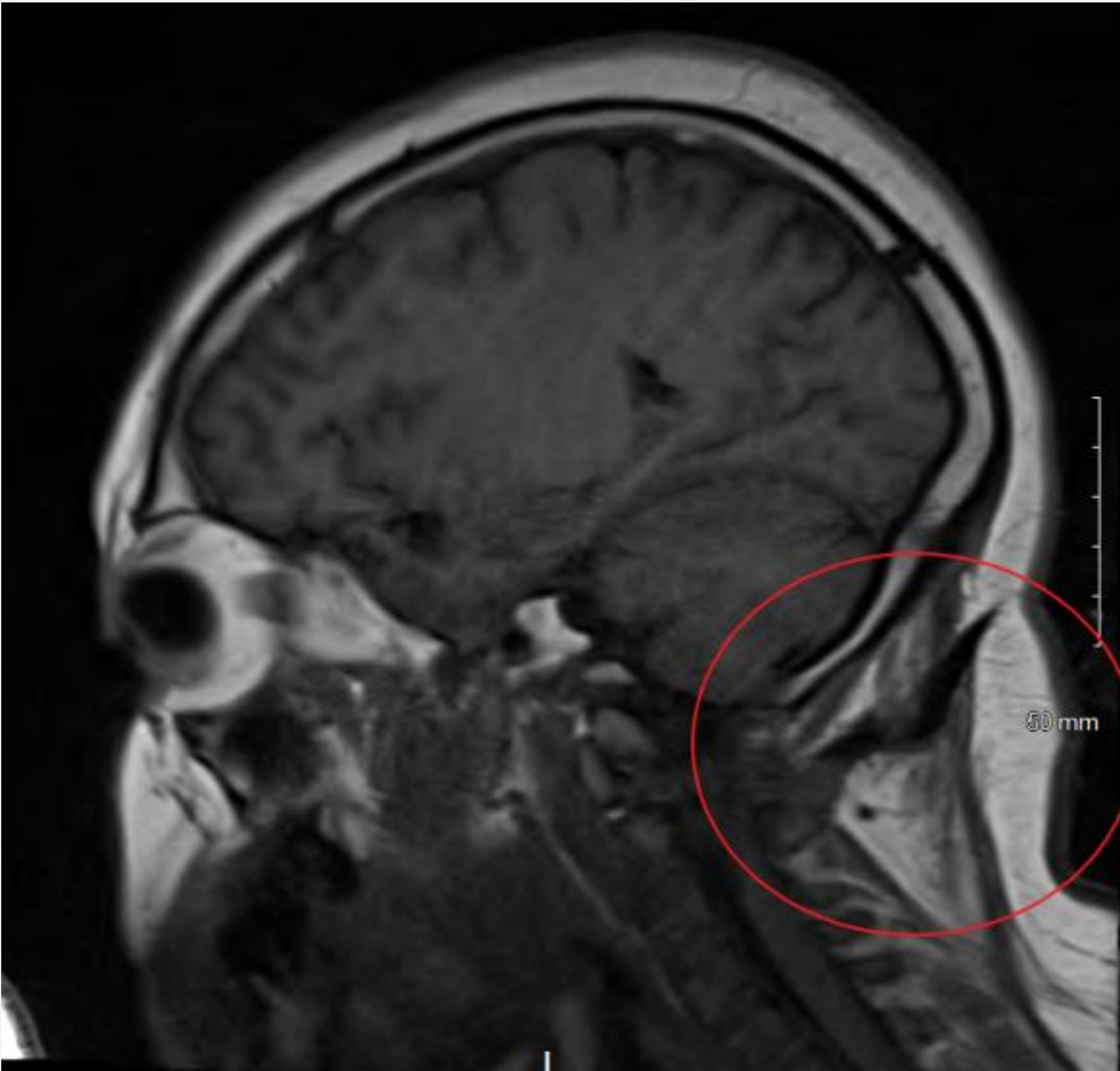


Figure. Cervical spine MRI showing a spinocutaneous CSF fistula

CONCLUSIONS

- Bacterial brain abscesses are a rare cause of intracranial pathology in immunocompetent patients.
- Most bacterial brain abscesses present with fever and focal neurological deficits. However, as in this case, patients may present with minimal symptoms.
- Clinical gestalt as well as the patient’s persistence in presentation resulted in an early diagnosis and treatment with an excellent clinical outcome.
- When found early, fusobacterium brain abscesses are treated effectively with surgical drainage and a lengthy course of IV antibiotics.