

## Thoracic Vertebral Osteomyelitis Associated with Ulcer of Gastric Conduit after Ivor-Lewis operation

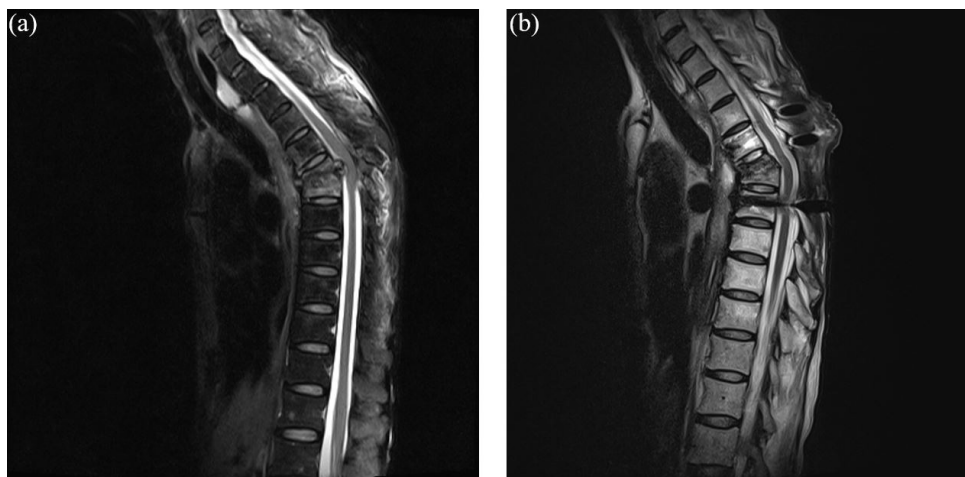
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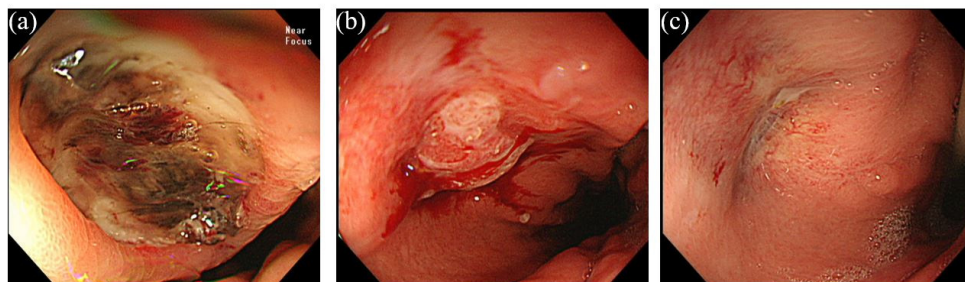
**Introduction:** Vertebral osteomyelitis (VOM) can be caused by various pathogens, necessitating accurate pathogen identification and delineation of route of infection for effective treatment. We herein report a unique case of thoracic VOM directly caused by ulcer of gastric conduit that developed after an Ivor-Lewis operation.

**Case report:** A 64-year-old female patient with a history of an Ivor-Lewis operation for lower esophageal cancer 14 years prior, presented persistent upper back pain for 8 weeks. She had previously been treated for gastric ulcer bleeding with endoscopic hemostasis 3 months ago. In Computed Tomography (CT) and T-spine Magnetic Resonance Imaging (MRI), impending spinal cord compression was observed at the T5-T6 level due to VOM and epidural abscess, with a suspected fistula in the adjacent esophagus. Surgical decompression and spinal fusion were performed for both microbiological diagnosis and therapeutic intervention. Despite suspicions from imaging studies, the fistula was not confirmed through esophagography and upper endoscopy. Culture of the surgical bone specimen revealed carbapenemase-producing *Klebsiella pneumoniae*, suggestive of a gastrointestinal (GI) tract origin. Tigecycline, amikacin, and meropenem were administered based on susceptibility test. Subsequently, GI tract normal flora such as *Slackia exigua* and *Olsenella uli* were additionally identified in the bone specimen, further supporting the suspicion of VOM originated from GI tract. Upper endoscopy was repeated, and active ulcer was found at the gastric conduit of the Ivor-Lewis operation, which was the source of bleeding 3 months prior. As the ulcer location matched the affected spine level, ulcer healing was prioritized as a strategy to manage the route of infection. She was maintained on lansoprazole twice daily, along with antibiotics. Additional 2 months of treatment, VOM and gastric ulcer were significantly improved, leading to her discharge.

**Conclusion:** This was a rare case of thoracic VOM caused by a gastric conduit ulcer post-Ivor-Lewis operation, emphasizing the role of recognizing postoperative anatomical alterations and accurately identifying the route of infection.



**Figure 1.** (a) T5-T6 VOM and epidural abscess, impending cord compression on T-spine MRI. (b) Improved VOM and instability after 2 months of antibiotics treatment and T5 decompression, T4-6-7 posterior spinal fusion



**Figure 2.** Chronological change of gastric conduit ulcer. (a) Active gastric ulcer bleeding at 3 months before admission. (b) At initiation of lansoprazole twice daily treatment. (c) Healed ulcer after 2 months of lansoprazole treatment