

# RARE CASE OF EMPHYSEMATOUS OSTEOMYELITIS IN VERTEBRAE

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## INTRODUCTION:

**Intraosseous gas (IG)** refers to accumulation of gas bubbles within the bone secondary to infection, neoplasm, trauma and fractures. In infection, the formation of IG occurs via hematogenous pathway due to gas-producing organisms.

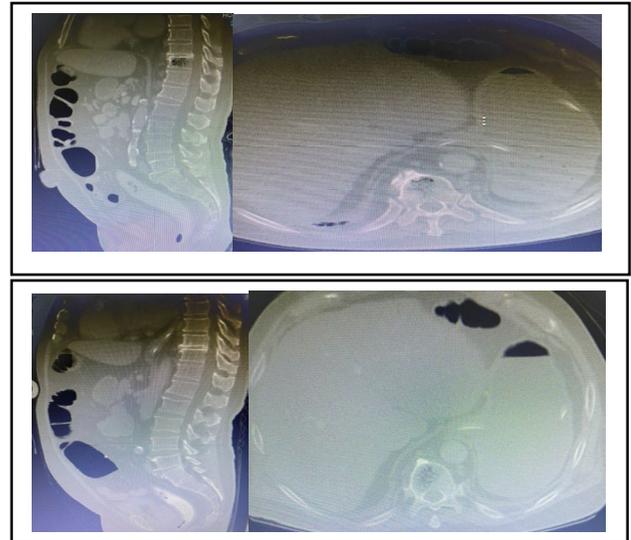
## REPORT:

A 72 years old male with Diabetes Mellitus (DM) presented with fever, shortness of breath and lethargy for one day. Physical examination showed patient with GCS of 10 having tachycardia and tachypnea with arterial blood gas of severe metabolic acidosis. Blood investigation revealed raised C-reactive protein (33 mg/dL) and Procalcitonin (400 ng/mL) and was diagnosed as occult sepsis.

Upon admission, computed tomography (CT) abdomen done and showed liver and prostate abscess with incidental finding of hypodense area with multiple air pockets within T11 vertebrae (figure 1). Diagnosis of emphysematous osteomyelitis (EO) vertebrae due to *Klebsiella Pneumonia* established based on blood culture. Patient was started on Intravenous antibiotics. Repeated CT scan after a month of antibiotics commencement showed resolving EO with reduction in size and number of air pockets (figure 2).

**Figure 1: CT abdomen sagittal and axial cut on the level of T11**

**Figure 2: Repeated CT abdomen sagittal and axial cut on the level of T11**



Unfortunately, patient was unstable to undergo MRI or tissue biopsy of vertebrae. Patient eventually succumbed due to septic shock secondary to disseminated *Klebsiella* infection with multi-organ failure.

## DISCUSSION:

Reported cases of EO spread from the intra-abdominal infection, intra-abdominal or spinal surgery, and soft tissue or skin infection. (1) *Klebsiella pneumoniae* being the most common pathogen found in EO and the risk increases in individuals with impaired host defenses, eg in DM.(1)

## CONCLUSION:

When dealing with occult sepsis with no obvious locus, the diagnosis of EO shouldn't be excluded. Duration of antibiotic or invasive intervention should be based on locus of infection and resolution of symptoms clinically or radiologically.

## REFERENCE:

1.P.C. Ram, S. Martinez, M. Korobkin, R.S. Breiman, H.R. Gallis,

**CT detection of intraosseous gas: a new sign of osteomyelitis**

AJR Am J Roentgenol, 137 (1981) pp. 721-723