

That's Not Supposed to be There!

Brian Kenny, DO; Patrick Hinfey, MD; Garrett Norman, MD

RUTGERS HEALTH

**Newark Beth Israel | RWJBarnabas
Medical Center HEALTH**

History of Present Illness

Chief complaint: Progressive left sided mouth pain for 6 days

39-year-old man with no PMHx presented to the ED with left sided mouth pain, stating that he cannot open his mouth. He went to his dentist for a tooth infection six days ago and was given amoxicillin, since this time his symptoms have progressed. Over the past day he has not been able to open his mouth wide enough for fluids or solids. He admits to having difficulty breathing when lying flat.

Physical Exam

BP 132/83, HR 157, RR 29, T100.5 (Oral), SpO2 95%

HENT: EOMI, PERLL, trismus secondary to left sided facial pain, erythema and swelling superior to mandible on left extending towards clavicle, rightward uvular deviation, left peritonsillar swelling.

Neck: tenderness to left side of neck, limited range of motion secondary to pain, no palpable crepitus

Pulmonary/Chest: mild respiratory distress, tachypnea, no accessory muscle usage; clear to auscultation bilaterally; no palpable crepitus

Abdominal: soft, non-tender, no distention or masses

Labs

WBC 10.4, Hg 10.3, Hct 31.4, Plt 264
Na 135, K4.2, Cl 99, HCO3 29, BUN 8, Cr 0.4
Glucose 354
Lactic acid 3.2

Questions

What is the diagnosis and initial management of this disorder?

What underlying disorder could have made this patient susceptible to this condition?

Answers

Necrotizing soft tissue infection. Initial management consists of early antibiotic administration and surgical consultation.

Diabetes mellitus is a severe risk factor in the development of necrotizing soft tissue infections



Pearls

Recognizing necrotizing fasciitis is necessary for emergency physicians, as surgical intervention is time sensitive and critical towards patient outcomes. A thorough history and physical exam and be highly suggestive of the condition, allowing for early consultations and directed antibiotic therapy.

Surgical debridement is the definitive management and should be considered as soon as necrotizing fasciitis is considered in the differential diagnosis

Case Discussion

Patient was seen by the EM resident and the attending. The patient was in severe distress, febrile and tachycardic. There was clear evidence of erythema and soft tissue swelling from superior to the angle of the left mandible, spreading inferiorly towards the clavicle and mediastinum. The patient was diaphoretic, hypoxic to 91% on room air, and tachypneic to the low 30's. Therefore, was placed on a non-rebreather for improved comfort and oxygenation. Intravenous antibiotics and hydration were initiated promptly.

ENT was consulted immediately for concerns of soft tissue infection and airway compromise. The patient had fiberoptic nasal imaging performed at the bedside, which revealed no evidence of pharyngeal or epiglottic edema. The patient was able to tolerate lying flat while on supplemental oxygen, and subsequently was taken to the CT scanner. CT imaging revealed extensive soft tissue free air from the angle of the mandible extending into the right mediastinum with concerns for necrotizing fasciitis. At this time, Cardiothoracic was consulted in addition to calling ENT back to the bedside. Decision was made in conjunction with the consulted services to bring patient to the operating room for fiberoptic intubation, and neck and chest exploration for necrotizing fasciitis. The patient was diagnosed with cervical necrotizing fasciitis with extension into the mediastinum. The blood cultures taken while in the ER grew *Streptococcus constellatus*.

The patient had a prolonged ICU stay, complicated by the need for tracheostomy, multiple pneumothoraxes, and multiple returns to the operating room for further interventions. The patient was discharged to a rehab facility after 21 days in the intensive care unit.

References

Tintinalli, J.E., Stapczynski, J.S., Ma, O.J., et al. Tintinalli's Emergency Medicine: A Comprehensive Study Guide. 8th ed. McGraw-Hill Education, New York, NY; 2015