A Case of Necrotizing Soft Tissue Infection Presenting as a Sore Throat

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PATIENT HISTORY

CHIEF COMPLAINT:
- 53 y.o. Hispanic male with sore throat
- Pain rating: 6/10 with dysphagia
- Associated symptoms:
  - Subjective fevers x 2 weeks
  - "Raspy" voice with worsening cough
  - Right upper trapezius discomfort
- Previous hospitalization 1 week prior for IV antibiotics for strep pharyngitis, after which the patient removed his own IJ central line

PAST MEDICAL HISTORY:
- No medications, surgeries, or allergies

SOCIAL HISTORY:
- 35-pack-year smoking history
- Prior history of alcohol abuse

EXAMINATION

GEN: WDWN male, non-toxic appearing

VITALS:
- P: 79, R: 22, T: 97.9° F
- BP: 116/58 mmHg

NECK EXAM:
- 10cm x 20cm dusky erythematous induration, ill-defined margins
- Moderate pressure resulted in purulent expression via right IJ open wound
- No fluctuance or crepitus

OTHER EXAMS:
- Throat: white patches on tonsillar base
- Cardiac: 3/6 systolic apical murmur
- Pulmonary: Lungs clear to auscultation

DIAGNOSTIC WORKUP

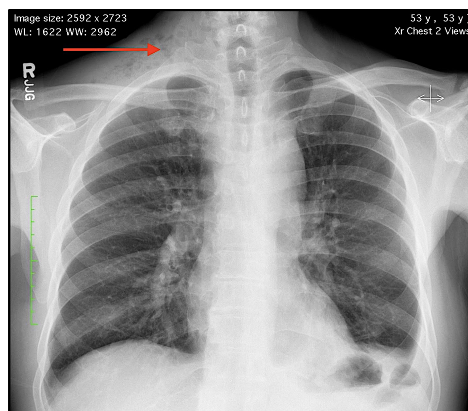

Figure 1: Chest x-ray, A/P view
- Gas pockets within right-sided soft tissues of neck (see red arrow)
- No evidence of pneumonia

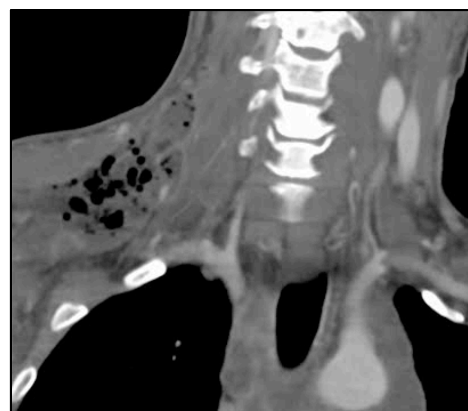

Figure 2: Neck CT with contrast, coronal view
- Air compatible with abscess
- Suspicious of gas-forming organisms and necrotic lymph nodes

DIFFERENTIAL DIAGNOSIS

A. Erysipelas
B. Abscess
C. Cellulitis
D. Necrotizing Soft Tissue Infection

DIAGNOSTIC RATIONALE:
- Erysipelas does not present with dusky color or ill-defined margins
- Abscess is unlikely due to lack of crepitus and fluctuance
- Admitting diagnosis: Cellulitis with low suspicion for NSTI; confirmed on CXR
- CT was ordered for intra-op planning

OUTCOME:
- Antibiotics immediately initiated: levofloxacin, cefepime, clindamycin, and vancomycin
- Acute care surgery immediately consulted
- Patient taken to surgery emergently
  - Copious purulent fluid was expressed from surrounding sternocleidomastoid
  - Necrotic muscle was debrided
  - Post-operative diagnosis (+) for NSTI
- POD #1: further irrigation w/out debridement
- POD #2: wound vacuum placement
- POD #7: discharged
- 6 weeks post-op: wound healed
  - Neck rotation limited from scar contracture

DISCUSSION

- NSTIs are rare, with an annual incidence of 0.04/1000 in the US[1]
- Typical precipitating events: breaks in epithelial or mucosal surfaces
- Early findings: erythema (80%), induration (66%), tenderness (54%)[2]
- Late findings: pain out-of-proportion, skin bullae, unstable vitals
- Key characteristics: signs/symptoms progress within hours, much faster than abscess or cellulitis
- Gold standard for diagnosis: operative exploration
- Mortality rates decrease from 28% to 4.5% with surgical debridement within 12 hours of ED admission[3]

CONCLUSION

- Rapid chronology of disease must raise suspicion for NSTI
- Early suspicion, IV antibiotics, and prompt surgical debridement remain keys to patient survival

REFERENCES

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3. Kobayashi L, Konstantinidis A, Shackelford S, et al. Necrotizing Soft Tissue Infections: Delayed Surgical Treatment. *J Trauma.* 2011;71(5):1400-1405.

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