Key Signs and Symptoms of Severe Illness in Urgent Care: A Case of Cervical Necrotizing Fasciitis and Necrotizing Mediastinitis

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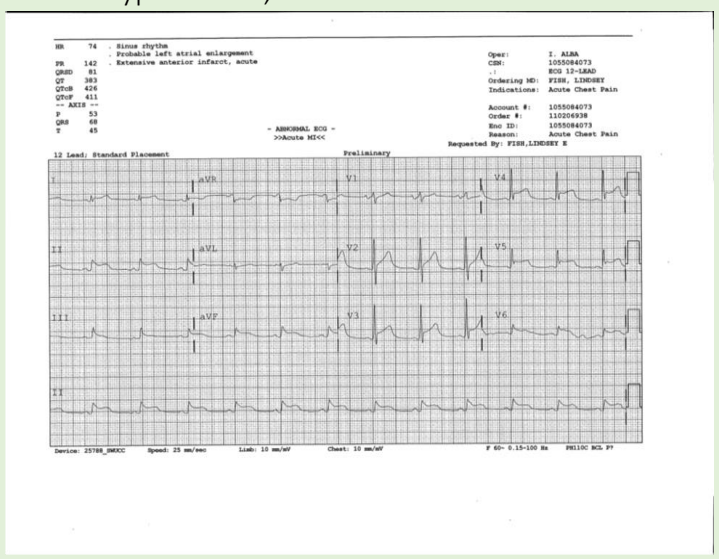
INTRODUCTION

- Cervical necrotizing fasciitis (CNF) is a rapidly progressive infection that can be fatal[1].
- Disease progression into the thorax is descending necrotizing mediastinitis (DNM).
- Prompt diagnosis and implementation of rapid medical management for these patients is critical to survival.

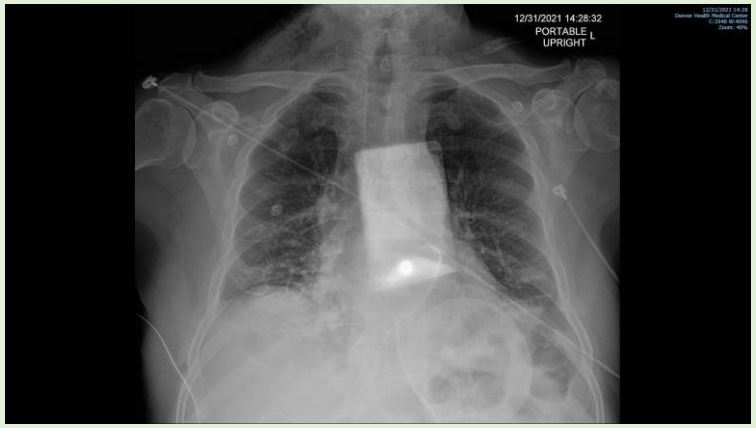
URGENT CARE VISIT

- CC: Mr. S is a 60-year-old man who presented to the urgent care clinic with a chief complaint of sore throat and phlegm in the throat for 6 days.
- HPI: Also reported a little bit of cough with chest pain. Home COVID negative. PCP treated with PCN for presumed strep throat with slight improvement.
- PMH: DM, HTN, HLD, Tobacco Use
- Vitals: T 37°C BP 74/47 HR 74 RR 24 SpO2 90%
- Constitutional: well-developed, no distress, fatigued
- OP – erythematous without exudates, 1+ B tonsils
- CV: RRR nl S1, S2 no M/R/G
- Chest nl effort, no respiratory distress, bibasilar rales
- Neurological: alert and oriented x 3, slow to answer questions and unable to give fluid history
- Due to hypotension, EKG was ordered.

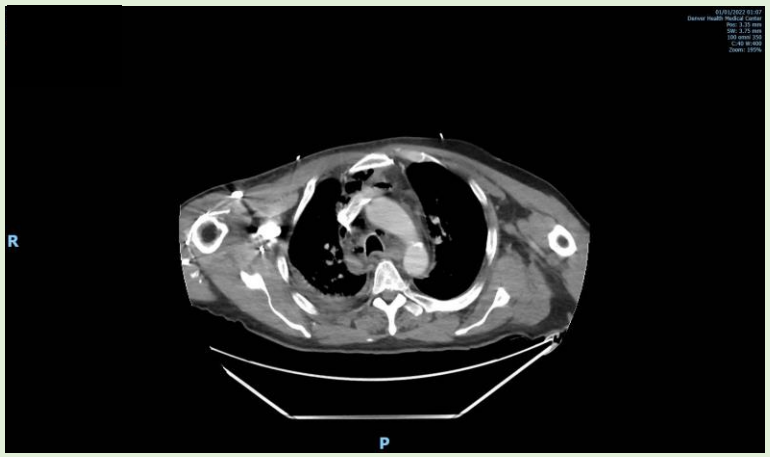


HOSPITAL COURSE

- The local emergency department was notified, with emergent transfer for presumed ST-Elevation Myocardial Infarction.
- Emergent cardiac catheterization demonstrated no Acute Coronary Syndrome.
- Admission to the MICU for hypotension management



- Additional Neck Exam performed following the chest x-ray: + crepitus on right.
- The patient received extensive fluid resuscitation and antibiotics. MAPs remained low over the evening.



- CT: descending necrotizing mediastinitis with fluid, stranding and gas foci in bilateral supraclavicular regions extending into the mediastinum.

PATIENT OUTCOME

- ENT and General Surgery were consulted
- Final diagnosis of septic shock due to Necrotizing Fasciitis of the Neck and Necrotizing Mediastinitis with associated Type II Myocardial Infarction.
- After obtaining further history from the patient, the presumed source was several recent dental extractions.
- Patient had prolonged hospital course with multiple surgeries but eventually made a full recovery.

DISCUSSION

- Cervical necrotizing fasciitis and descending necrotizing mediastinitis are serious infections that occur as a complication of oropharyngeal infection.
- Despite the associated high mortality rate, a correct diagnosis and early treatment may result in successful treatment and full recovery.
- This case highlights the risk of a premature closure of diagnosis which can easily lead to misdiagnoses. During the COVID-19 pandemic, there was increased premature closure of diagnosis that resulted in delays in recognizing and treating medical conditions.
- Creating a differential diagnosis, such as one for hypotension in the patient is critical to quality patient care.
- It is essential to highlight the importance of including dental history when interviewing patients as this is frequently excluded, however, was the missing piece in the initial history regarding the etiology of this patient's infection.

REFERENCES

1. Hira Nazir, Chiew Ying Chieng, Simon N. Rogers, Ramunas Nekrasisus, Martin Dodd, Neil Shah, Outcomes of necrotizing fasciitis in the head and neck region in the United Kingdom-a case series and literature review, Advances in Oral and Maxillofacial Surgery, Volume 6, 2022.
2. Nunes Maia VR, Fish LE. Key signs and symptoms of severe illness in urgent care: cervical necrotizing fasciitis and necrotizing mediastinitis. *J Urgent Care Med*. 2023;17(6):43-46.