

IMAGES IN EMERGENCY MEDICINE

Infectious Disease

Man with difficulty swallowing

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1 | PRESENTATION

A 64-year-old male presents with right facial pain for 1 week that suddenly worsened during the past 2 days. He was recently seen by his dentist 5 days ago and placed on amoxicillin/clavulanic acid because of a dental infection. The patient did not improve and started to develop trouble swallowing the night before, which prompted him to visit the emergency department.

2 | DIAGNOSIS

Ludwig angina

On physical examination, he exhibited trismus and severe right facial and submandibular swelling and tenderness. (Figure 1) Computed tomography (CT) soft tissue neck with intravenous contrast showed a large abscess involving the right masseter muscle and extending into the buccal side of the oropharynx and right mandibular region. (Figure 2 and 3)

Intravenous vancomycin, piperacillin, and tazobactam was initiated along with consultations with an otolaryngology physician and oral maxillofacial surgeon. A decision was made to transfer to a tertiary care center because of CT findings showing gas formation suggesting an association with necrotizing fasciitis. The patient was subsequently taken to the operating room for surgical debridement.

Necrotizing fasciitis involvement with Ludwig's angina is uncommon. Morbidity rates can be >50%.¹ Presentations can include fever, trismus, drooling, dysphagia, and tenderness. Tobacco use, alcoholism, diabetes, and poor dentition tend to be risk factors. Although usually polymicrobial, *Streptococcus* appears to be the predominant species commonly cultured.² Ensuring airway protection and providing broad spectrum antibiotics is the initial priority in treatment. Hyperbaric



FIGURE 1 Physical examination showing extensive right facial and submandibular swelling

therapy can be an adjunctive treatment.³ However, definitive treatment involves surgical intervention and debridement.⁴

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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FIGURE 2 Axial view of computed tomography soft tissue neck with intravenous contrast showing abscess with gas formation



FIGURE 3 Coronal view of computed tomography soft tissue neck with intravenous contrast showing abscess with gas formation along with shift of trachea

REFERENCES

1. Manasia A, Madisi NY, Bassily-Marcus A, Oropello J, Kohli-Seth R. Ludwig's angina complicated by fatal cervicofascial and mediastinal necrotizing fasciitis. *IDCases*. 2016;4:32-33.
2. Queresby FA, Baskin J, Barbu AM, Zechel MA. Report of a case of cervicothoracic necrotizing fasciitis along with a current review of reported cases. *J Oral Maxillofac Surg*. 2009;67(2):419-423.
3. Bağli BS, Durgut O. Hyperbaric oxygen therapy as adjuvant therapy in necrotizing fasciitis of the face: case report. *Undersea Hyperb Med*. 2018;45(6):695-699.
4. Blanchard A, Garza Garcia L, Palacios E, Bordlee B Jr, Neitzschman H. Ludwig angina progressing to fatal necrotizing fasciitis. *Ear Nose Throat J*. 2013;92(3):102-104.

How to cite this article: Liu T, Wang S. Man with difficulty swallowing. *JACEP Open*. 2022;3:e12658.

<https://doi.org/10.1002/emp2.12658>