

Sternoclavicular joint septic arthritis presenting as cervical abscess and subcutaneous emphysema: A case report

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Abstract

Sternoclavicular joint septic arthritis results from hematogenous spread of a bacterial infection, usually in the immunocompromised. It commonly presents as a chest wall abscess. Cervical abscess resulting from sternoclavicular joint septic arthritis is a rare complication with only one reported case in the English literature. We describe a case of sternoclavicular joint septic arthritis in an elderly diabetic adult with cervical abscess as initial presentation.

Keywords

Neck abscess, sternoclavicular joint, septic arthritis, cervical subcutaneous emphysema

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Introduction

The sternoclavicular joint (SCJ) is a synovial saddle joint between the manubrium and clavicle. Most complications with this joint involve chronic and degenerative arthritis;¹ it is a site of septic arthritis in only 0.5%–1% of joint infection cases (17% for intravenous (IV) drug users).^{2,3}

Septic arthritis is bacterial invasion of a joint. It occurs in about 2–6 cases per 100,000 people annually.⁴ Consequences of septic arthritis include abscess, osteomyelitis, and mediastinitis as the infection spreads from the joint to other locations in the body.⁵

Like septic arthritis of any joint, septic arthritis of the SCJ has potential to cause complications, such as neck abscesses. Typically, neck abscesses originate from dental infections, neck trauma, or lymphadenitis.^{6–9} To the best of our knowledge, only one case¹ of SCJ septic arthritis presenting as a cervical abscess has been described in the English literature. We describe a case of SCJ septic arthritis presenting as a cervical abscess with subcutaneous emphysema.

Case report

A 65-year-old diabetic male presented to our Emergency Department with painful right neck swelling overlying the sternocleidomastoid muscle (SCM). He endorsed fever, fatigue, chills, sore throat, and difficulty swallowing. He denied recent dental work or trauma to the head and neck.

The physical exam revealed tenderness to palpation diffusely to the right anterior neck and the right SCJ. His blood glucose and leukocyte count were elevated. Emergency medicine ordered computed tomography (CT) neck without contrast which showed likely fluid collection, probable abscess, extending from the right parotid to the right SCJ, and free air in the inferior portion of the right neck adjacent to the inferior border of the right SCM (Figures 1 and 2). Otolaryngology was consulted, and he was taken to the operating room (OR) for incision and drainage. A large abscess was found revealing purulent drainage as well as bony erosion of the right SCJ. The drainage was sent for culture along with bony samples from an eroded appearing right SCJ. Cultures from the abscess and the eroded right SCJ grew Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteria. He was placed on IV antibiotics per infectious disease and was sent to a skilled nursing facility after an uneventful hospital course.

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Figure 1. Computed tomography neck without contrast coronal view showing right supraclavicular/right neck space free air, medial to the sternocleidomastoid muscle (arrow).



Figure 2. Computed tomography neck without contrast sagittal view showing right supraclavicular/deep neck space free air, superior to the clavicle (arrow).

Discussion

Septic arthritis most commonly occurs from hematogenous seeding elsewhere in the body.¹⁰ Septic arthritis in the SCJ can present with several complications such as abscess, fistula, and mediastinitis. Abscess specifically was found about 20% of the time; however, the majority were located in the chest wall.¹¹ Similarly, Akkasilpa et al.¹² found that retrosternal

abscesses developed in 28% of patients from SCJ septic arthritis. A cervical abscess is exceedingly rare with our case being the second reported.

The most common symptoms associated with SCJ septic arthritis are fever, chest pain, and shoulder pain. It presents with bacteremia with staphylococcus aureus as the frequently isolated bacteria.⁵ The foremost risk factors that predispose to SCJ septic arthritis are an immunocompromised patient, diabetes mellitus, IV drug use, rheumatoid arthritis, intra-articular injection, chronic steroid use, hemodialysis, and existing infection in the body.⁵ An interesting feature of this case is the septic arthritis preceding the abscess. In several other reports, septic arthritis is usually the consequence of nasal abscess, otitis media, or tonsillitis.^{13–15} This case adds to the current literature because there is only one other report of neck abscess resulting from SCJ septic arthritis. Septic arthritis itself is not a rare condition and is considered an urgent orthopedic matter. This report shows the importance of close follow-up and accurate diagnosis when it comes to septic arthritis in order to avoid complications like abscesses. It also illustrates a rare complication of SCJ septic arthritis that otolaryngologists should be wary of clinically.

Conclusion

This case highlights a rare presentation of SCJ septic arthritis and should be on the differential list of otolaryngologists when seeing a patient with a deep neck space abscess, especially in a diabetic patient.

Declaration of conflicting interests

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Ethical approval

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Informed consent

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