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Case Report

Cervical Melioidosis: A Rare Cause Of Neck Abscess

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I N F O

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A B S T R A C T

Background: Melioidosis infection is an emerging saprophytic infection in India. It is caused by the gram-negative bacteria *Burkholderia pseudomallei*. It is a multisystem disease with a rare infection of the head and neck. It is fatal because of significant mortality and morbidity, but with early diagnosis and treatment, it carries a good prognosis, especially for localised abscesses of the head and neck.

Case Presentation: We report a case of localised abscess of the neck in an adult female patient who was a diabetic and responded well to intravenous amoxicillin + clavulanic acid and cotrimoxazole treatment.

Conclusion: Neck melioidosis should be considered in differential diagnosis in patients with a rural background and presenting with neck abscesses, especially in tubercular endemic areas.

Keywords: *Burkholderia pseudomallei*, Melioidosis, Localised Abscess

Background

Burkholderia pseudomallei is an opportunistic gram-negative bacillus, that causes an infectious clinical condition called melioidosis. It is endemic in southeast Asia and northern Australia, with increasing incidence in the Indian subcontinent. The disease is fatal with significant mortality because of sepsis. The bacillus is reported in people who come in contact with wet soil and surface water.[1] The manifestation varies from short febrile illness and localised abscess to sepsis. Commonly seen in immunocompromised conditions like alcoholism and diabetes. Its diagnosis is challenging as it may mimic other conditions like tuberculosis which is endemic, hence it is also known as a great mimicker. It requires a high index of suspicion in order to diagnose it.[2] The treatment regime and duration also vary when compared to common neck abscess, which requires prolonged antibiotic treatment in order to avoid relapse.

Case Presentation

A 77-year-old female who is a known case of type 2 diabetes mellitus, presented with swelling over the right side of the neck associated with fever at the onset and pain on and off for one month. Clinical examination revealed a 5 x 4 cm well-defined swelling of the right level II region with tenderness and fluctuation positive. Multiple cervical lymphadenopathies were present over the right side of the neck at levels two, three and four. The patient had taken antibiotic treatment (penicillin group) previously but the swelling remained status quo.

The patient underwent an emergency computerised tomography scan (Figure 1) and incision and drainage, and pus was sent for culture and sensitivity along with CBNAAT and AFB stain (Figure 2). The report of pus for culture sensitivity came to be B. pseudomallei. Susceptible to amoxicillin + clavulanic acid, imipenem, meropenem, ceftazidime, co-trimoxazole, and chloramphenicol. As it was

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a localised abscess, she was put on amoxicillin + clavulanic acid three times a day for 4 weeks and the swelling markedly decreased in size during the biweekly review consultation. Further oral co-trimoxazole for ten weeks was advised. The blood parameters post-surgery and with initiation of treatment improved. The C reactive protein decreased to 14 from 107 mg/dl. The WBC count came to near-normal values from 24 to 11.

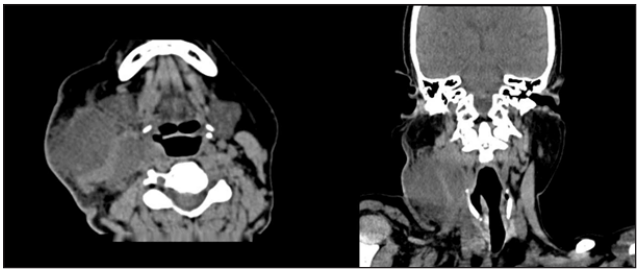

Figure 1.CT Scan Showing Right Neck Abscess

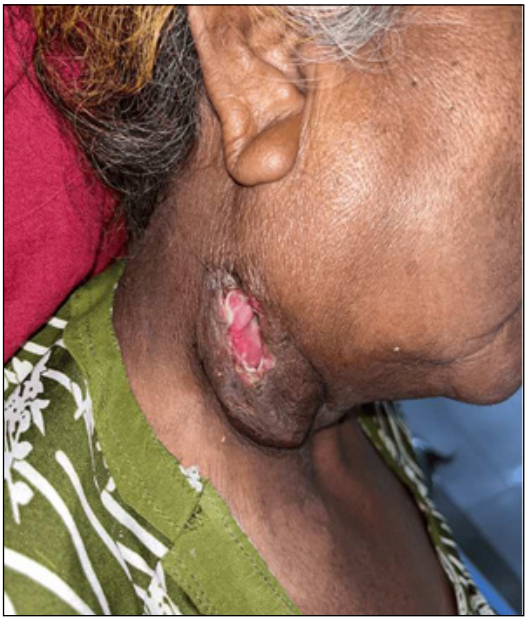

Figure 2.Neck Abscess After Incision And Drainage

Discussion

Melioidosis is an emerging infection of public health importance, caused by B. *pseudomalle*i which grows in humid climates and wet soil. Commonly seen in the rainy months after often trivial trauma which can herald the infection.[3] The route of entry may be through inoculation, inhalation or ingestion. Once infected it can remain dormant for months to years only to resurface with compromised immunity.[4] It can affect a number of organs but the head and neck are uncommonly affected. Its presentation may vary from lymphadenitis and localised abscess to acute pneumonia and septic shock.[4] Moreover, it is a diagnostic challenge to isolate the bacterium and then to correctly identify it.

When it comes to cold abscesses of the neck, neck melioidosis has to be taken into consideration as a differential diagnosis, particularly in areas where the condition is prevalent, in Asian migrants, or in individuals who have previously visited the region.

A crucial step in confirming the bacterium's presence is laboratory testing. However, it could take three to seven days to isolate and identify the bacterium from different clinical specimens. Many big medical institutions now offer molecular and immunologic diagnostics; sadly, their specificities are poor.

The treatment regimen consists of 2 weeks of intensive phase with intravenous antibiotics like ceftazidime and 3-6 months of eradication phase of oral antibiotics like trimethoprim-sulfamethoxazole to prevent relapse. Though it is a dreadful disease, its prognosis can be improved with early detection and treatment of localised disease.

The unusual feature of this case was that the patient had no history of trauma. There was no association seen with the rainy season in our patient, and she was not a farmer though she belonged to a rural setting.

Conclusion

As melioidosis is an emerging infection in India hence it is underreported and often confused with cold abscess of the head and neck which is more common. A high index of vigilance has to be kept in a tuberculosis-endemic country as the treatment is widely different for both the entity. Prognosis is markedly improved with early detection and appropriate management of localised abscesses. Hence it should be considered in the differential diagnosis of localised abscess of the head and neck.

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Conflict of Interest: None

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