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Skull base osteomyelitis presenting as a Collet Sicard Syndrome

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Background

Collet Sicard Syndrome is a rare association of 9th, 10th, 11th and 12th nerve palsies and it can have multiple etiologies. Skull base osteomyelitis is a rare cause of Collet Sicard Syndrome. Skull base osteomyelitis can develop as a severe complication of ENT infections in immunocompromised or diabetic patients.

Case presentation

A 65-year-old male with a history of uncontrolled diabetes presented himself to the Emergency Department for a left suppurative otitis. The patient had one-month history of auricular suppuration. The clinical examination revealed a left peripheral facial palsy, a soft tissue edema of the auricular region and left 9th, 10th, 11th and 12th cranial palsies manifesting as voice hoarseness, left palatal palsy, absent gag reflex, weakness of scapular elevation and left side tongue deviation. The laboratory tests showed an inflammatory process with elevated values of the C Reactive Protein at 77 mg/dl and a normal blood count. A computed tomography scan was performed and showed a temporal bone lysis extending to the sphenoid bone involving the jugular foramen and the hypoglossal canal, an atlanto-occipital arthritis and multiple venous thrombosis: of the internal jugular vein, the left sigmoid sinus and the lateral venous sinus. The final diagnosis was severe skull base osteomyelitis and the association of multiple nerve palsies formed a complex Collet Sicard Syndrome. The microbiologic exams of the suppuration liquid revealed Pseudomonas Aeruginosa.

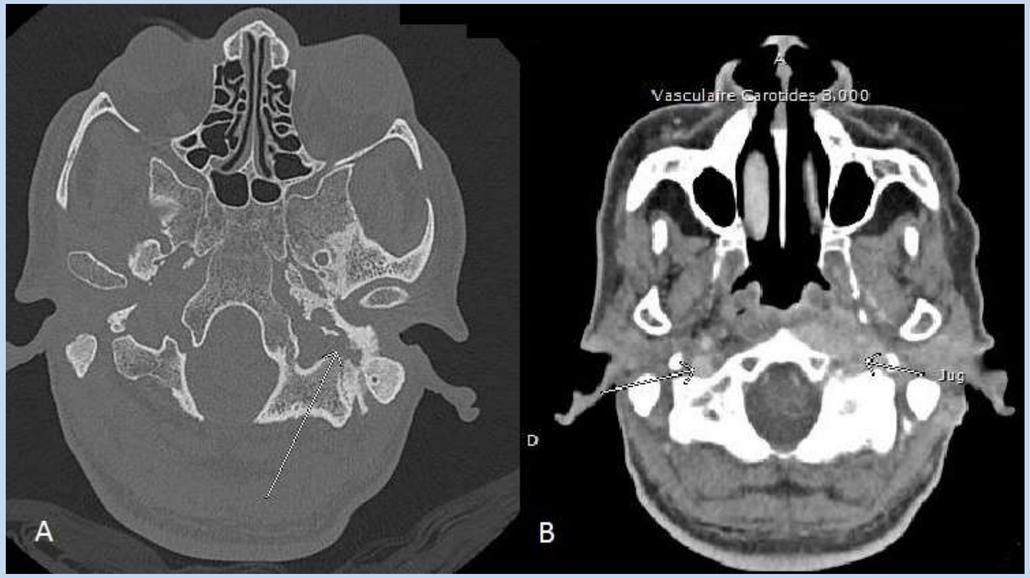

Figure 1. A. CT scan showing temporal bone lysis B. Left jugular vein thrombosis

Antibiotic therapy associated intravenous meropeneme and ciprofloxacin.The patient had a surgical mastoidectomy for nervous decompression. At a six-month evaluation the patient preserved a left peripheral facial palsy and mild dysphagia.

Discussion

There are very few reported cases of Collet Sicard syndrome due to a skull base osteomyelitis. The particularity of our clinical report is that we found no other article in the specialty literature describing this association of skull base osteomyelitis, arthritis, venous thrombosis, 5th and 9th to 12th nerve palsies.

The most common findings in cases of skull base osteomyelitis are: inflammatory or traumatic processes involving the head and the neck in association with standard infectious signs. Literature reviews [1], [4] suggest that immunocompromised and diabetic patients are predisposed to the condition.

Computed tomography or MRI makes the diagnosis and the presence of multiple venous thrombosis seems to be a severity criterion [1]. Pseudomonas Aeruginosa is responsible for 95% of all otogenic skull base osteomyelitis [2],[3]. The overall mortality of the disease is 10-20 % and one third of the patients have long-term neurologic sequelae [5],[6].Our patient had an uncontrolled diabetes equivalent with an immunocompromised state so he was predisposed to severe infections. His Pseudomonas external otitis extended to the skull base.

Conclusion

Skull base osteomyelitis has to be suspected before an ENT infection associated with multiple nervous palsies especially in an immunocompromised or diabetic patient. External otitis in a diabetic patient requires searching for infectious, nervous and vascular local complications. A thorough clinical examination allows an early stage diagnosis, which along with an immediate treatment will improve the outcome of patients.

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