Fonsecaea pedrosoi

The characteristics of brain abscess in the Central Province of Saudi Arabia are outlined in a report which is a review of 22 consecutive cases that were treated at King Khalid University Hospital between 1985-1991. The incidence of brain abscess in Saudi Arabia is calculated to be 3.6 cases/500,000 population/year which is twice as high as the incidence reported from the West. There were 17 males and 5 females with an age range of 8 months-80 years (mean 29.9 years). The parietal lobe was involved in 27%, while the abscess was in the posterior fossa in 14% and multiple in another 14% of cases. The primary source of sepsis was unknown in 50%, post-traumatic in 18% and from a dental and mastoid origin in 14% of cases only. Duration of symptoms ranged between 4-30 days (mean 12 days). Fever was present in 55% of cases and epilepsy in 23%. Sixteen (73%) cases had burr hole aspiration, while 3 (14%) had craniotomy and excision, and 3 (14%) cases were managed with antimicrobial treatment only. Staphylococci were the pathogens in 27%, while streptococci were cultured in 23% cases and the culture was negative in 23%. Three (14%) cases all of which died had fungal abscesses caused by Fonsecaea pedrosoi. The mortality was 18%, good recovery in 68% and fair recovery in 14%. Follow-up was from 3 months to 5.5 years (mean 1.8 years) [1)].

Jamjoom et a. reviewed six cases of multiple brain abscesses that were treated at King Khalid University Hospital (KKUH) over an eight year period. This represented 22% of the total brain abscesses treated during the same period. The series is unusual in that the infective pathogens were fungi (Fonsecaea pedrosoi) in two patients (33%) and an aerobic actinomycete (Nocardia asteroides) in one patient (16%). Two patients treated elsewhere with antibiotics empirically for one month died at three and 28 days following admission. The poor outcome was probably related t the delay in obtaining a microbiological diagnosis and commencing the appropriate antimicrobial therapy. The importance of early identification of the pathogen in patients with multiple brain abscesses is stressed [2)].

Case reports

Phaeohyphomycosis causes a wide spectrum of systemic manifestations and can affect even the immunocompetent hosts. Involvement of the central nervous system is rare. A 48-year-old farmer presented with chronic headache, fever, and impaired vision and hearing. Serial MRIs of the brain showed enhancing exudates in the basal cisterns, and lesions in the sella and perichiasmatic and cerebellopontine angle regions along with enhancement of the cranial nerves and leptomeninges. Cerebrospinal fluid (CSF) showed lymphocytic pleocytosis with elevated protein and decreased glucose on multiple occasions. Clinical, imaging, and CSF abnormalities persisted despite treatment with antitubercular drugs and steroids for 2 years. Biopsy of the dura mater at the cervicomedullary junction revealed necrotizing granulomatous lesions, neutrophilic abscesses, and giant cells containing slender, pauci-septate, pigmented fungal hyphae. Fungal culture showed growth of Fonsecaea pedrosoi, which is classically known to cause brain abscesses.

Hesarur et al. reported the diagnostic odyssey in a patient with chronic meningitis from a region endemic for tuberculosis and describe the challenges in establishing the accurate diagnosis. Lack of therapeutic response to an adequate trial of empirical antitubercular therapy warrants search for alternative causes, including fungal meningitis. They highlighted the uncommon manifestation of F.

pedrosoi with chronic meningitis as well as the protracted clinical course despite not receiving antifungal therapy [3].

Non-cirrhotic portal fibrosis, a common cause of splenomegaly in tropical countries, can lead to hypersplenism and pancytopenia. Hypersplenism in this setting has not been associated with opportunistic infections. Madhugiri et al. described a patient with hypersplenism secondary to non-cirrhotic portal fibrosis who developed a Fonsecaea pedrosoi brain abscess and succumbed to the illness despite aggressive management [4].

Tuberculosis of the skull base and middle ear cavity is very rare. Infection with neurotropic fungi Fonsecaea pedrosoi is rare, which usually presents as brain abscess. We herein present an unusual case of concomitant tuberculosis and fungal (Fonsecaea pedrosoi) infections involving the middle ear cleft extending and destroying the craniovertebral junction [5].

Madhugiri et al. reported a rare case of a contained fungal granuloma caused by F. pedrosoi. The patient presented with epilepsy, which was treated as a case of extratemporal lesion-related epilepsy. The diagnosis was made after resection [6].

Nóbrega reported the first human culture-proven case of brain abscesses due to Fonsecaea pedrosoi in Brazil. The patient, a 28 year-old immunocompetent white male, had ocular manifestations and a hypertensive intracranial syndrome. Magnetic resonance imaging (MRI) of the brain revealed a main tumoral mass involving the right temporo-occipital area and another smaller apparently healed lesion at the left occipital lobe. A cerebral biopsy was performed and the pathological report was cerebral chromoblastomycosis. The main lesion was enucleated surgically and culture of the necrotic and suppurative mass grew a fungus identified as Fonsecaea pedrosoi. The patient had received a knife wound sixteen years prior to his hospitalization and, more recently, manifested a pulmonary granulomatous lesion in the right lung with a single non-pigmented form of a fungus present. It was speculated that the fungus might have gained entrance to the host through the skin lesion, although a primary respiratory lesion was not excluded. The patient was discharged from the hospital still with ocular manifestations and on antimycotic therapy and was followed for eight months without disease recurrence. Few months after he had complications of the previous neuro-surgery and died. A complete autopsy was performed and no residual fungal disease was found [7].

An 18-year-old boy presented seizures of recent onset. Two years back, he developed cutaneous phaeohyphomycosis after a splinter scratch on his chest wall. Imaging revealed a contrast enhancing parafalcian solid mass. Right frontal parasagittal craniotomy was performed and the lesion resected as much as possible, followed by IV amphotericin B and oral itraconazole treatment. The patient has been doing well during a 15-month follow-up period [8].

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