TBUCOLOUS MENINGITIS: A REVIEW OF 19 CASES


BACKGROUND:
Tuberculous meningitis (TM) is the most severe manifestation of extrapulmonary tuberculosis, with a high morbidity and mortality rate(1). Few are the studies performed as well as short the case series published. The aim of this study is to analyze the etiology, diagnosis, treatment and prognosis of patients with TM.

METHODS:
Retrospective study of the cases diagnosed of TM, from January 1, 2000 to December 31, 2010, at CAULE (Spain), a hospital serving a Area of 354,000 people.

RESULTS:
Nineteen patients with mean age of 54.52 years (SD=22.25, range 27-84). The 63.16% were male. The 68.42% had risk factors (alcoholism (n=3), diabetes mellitus (n = 5), neoplasia (n=3), respiratory disease (n=4), heart disease (n=3), IDU (n=2), HCV (n=2), HIV (n = 4), immunosuppressive medications (n=1)). The average clinical duration was 8.57 days (84.21% fever, abnormal mental status 68.42%, 47.37% neck stiffness, headache and palsies 15.79%). The lumbar puncture showed a delay of 50 hours, with a difference of 14.06 days in the deceased. The characteristics of CSF were 94.17 cells (predominantly lymphocytic), 34.18 glucose, 205.36 protein and ADA 25.49. M. tuberculosis was isolated in 26.36% in CSF. CT scan was performed in 95% (edema (n=4), cerebritis (n=3), hydrocephalus (n=3), stroke (n=3)). When imaging was performed, therapy was initiated at 52.63%, with the median delay of 4.12 days. The 57.90% received corticosteroids and 21.05% died.

DISCUSSION:
We present a series of 19 cases of TM in ten years in a population area of approximately 354,000 people, which is a higher prevalence compared with other published series (eg 50 cases in Denmark (population 5 million)(2). Respect to another series, we found the next epidemiological data: neither pediatric nor imported case, and similar immunosuppressive status (68.42% had risk factors for immunosuppression). The clinical suspicion of TM is established through fever, headache, stiff neck and vomiting(3), coinciding with the data obtained in our work, where fever is the main sign (Gr.1). Also, CSF characteristics are typical of subacute TM, with low glucose (relative to plasma), high white blood cell (lymphocytes, predominantly) and high ADA(1,2) (Gr.2). Last clinical guidelines recommend a combination of microbiological diagnostic methods to increase their sensitivity and speed up an accurate diagnosis(1). In our series, liquid cultures and PCR of CSF were realized (Gr.3). It’s remarkable, in our study, the delay in diagnosis and initiation of empiric treatment. Literature suggests corticosteroids reduce mortality and neurological disorders, more than 50% received them(Gr.4). Despite the severity of TM, evolution was generally good: most patients were discharged with no disability (Gr.5).

CONCLUSIONS:
TM is associated with risk factors and subacute presentation. The clinical classic triad and CSF characteristics leads to the diagnosis. Delayed treatment is associated with poor prognosis, presenting, as a result, a high morbi-mortality. However, in our series, mortality was lower than published.

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