

Isolated Brainstem Tuberculoma in Rural Area Case Report

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Abstract: ***Background:** Intracranial tuberculosis isn't uncommon in developing countries but localization to the brainstem is rare. We report an isolated brainstem tuberculoma at Matlaboufawzaini hospital of Touba in Senegal. **Case Presentation:** This is a 24-year-old male with the notion of tuberculosis contact in his older brother admitted for headache, dizziness, partial left half-body crisis and left half-body deficit 4/5. The symptomatology have occurred progressively 03 months before his admission. The CT -Scan showed a single lobulated enhancing mass in brainstem. C-Reactive Protein was 48, Human Immunodeficiency Virus test was negative. The diagnostic of tuberculoma seemed more likely for us. He received a treatment based on antituberculosis and corticosteroids with a good evolution that was marked by a complete recovery of the deficit with headaches and dizziness regression. The control CT-scan after 08 months showed complete regression of the lesion. **Conclusion:** Antitubercular therapy gives very good results in the management of brainstem tuberculomas. This treatment confirms the diagnosis especially in countries where stereotaxis and neuronavigation biopsy have not yet emerged.*

Keywords: tuberculoma, brainstem, case report, CT-scan

1. Background

Intracranial tuberculosis is not uncommon in developing countries [1]. Most tuberculomas in adults are supratentorial, brainstem tuberculoma is uncommon in Senegal as in India where tuberculosis is endemic. In India brainstem tuberculoma constitutes 2.5–8% of all intracranial tuberculomas [4, 6]. We report a case of brainstem tuberculoma at Touba hospital in Senegal.

2. Case Presentation

This is a 24-years-old male with the notion of tuberculosis contact in his older brother, who was admitted for headache, dizziness, partial left hemiparesis crisis and left side deficit.

The clinical picture occurred progressively since 03 months before his admission to Matlaboufawzaini hospital in Touba.

On examination: his Glasgow was 15 with left hemiparesis at 4/5

The rest of the exam was normal.

The scanner revealed a lesion of the brainstem developed at the right bulboprotuberantial stage.

This lesion presented an irregular rim peripheral enhancement (figure 1).

The C-Reactive Protein was 48, the Human Immunodeficiency Virus test was negative, the rest of the examinations were normal.

We thought of a brain tuberculoma or a glial lesion.

The tuberculoma hypothesis seemed to be the most likely one.

He was put on anti-tuberculosis treatment for 08 months, corticosteroids for 15 days, carbamazepine and physiotherapy.

The evolution was marked by a complete recovery of the deficit, a disappearance of headaches and dizziness.

The control CT after 08 months showed almost complete regression of the lesion (Figure 2).

3. Discussion

Intracranial tuberculosis isn't uncommon in developing countries [1], brainstem tuberculoma represents 5% of intracranial tuberculomas [2, 4]. Localisation in brainstem

can lead to confusion; The main differential diagnosis remains brainstem glioma.

If the imaging suggests tuberculoma, anti-tuberculosis treatment can be initiated. In lack of improvement of the clinical picture and increase of the lesion, a differential diagnosis should be considered and a stereotaxic biopsy attempted. [3]

The use of anti-tuberculosis drugs generally remains the main treatment in suspected cases. [1]

Magnetic Resonance Imaging remains the best imaging technique for brainstem tuberculoma, but in our city it wasn't available [2].

We evoked and retained the diagnosis of tuberculoma of the brainstem due to the characteristics of the lesion with the scanner namely a rounded, irregular lesion, the context of tuberculosis contact and also the response to the treatment. NishantSadashiva et al on 14 patients treated for tuberculoma of the brainstem, they found on imaging that all the cases had lesions with irregular contours, rounded in conglomerate with an enhancement of their contours [3].

In our country we do not have stereotaxis or neuronavigation to do the biopsy.

This biopsy can be responsible of serious complications [2]

In our country the duration of anti-tuberculosis treatment is 12 months (2 months RHZE and 10 months RH). However the duration is 18 months somewhere else [2,3]

We noted very good clinical improvement under anti-tuberculosis treatment, as the regression of the deficit, disappearance of seizures and complete regression of the lesion at imaging. The control CT-Scan did not show an enhancement of the lesion in the brainstem. This is similar to the evolutionary results under treatment in most cases described in the literature [1, 2, 3, 4].

4. Conclusion

The anti-tuberculosis treatment gives very good results in the management of tuberculomas of the brainstem. This treatment confirms the diagnosis especially in countries where stereotaxis and neuronavigation biopsy have not yet emerged.

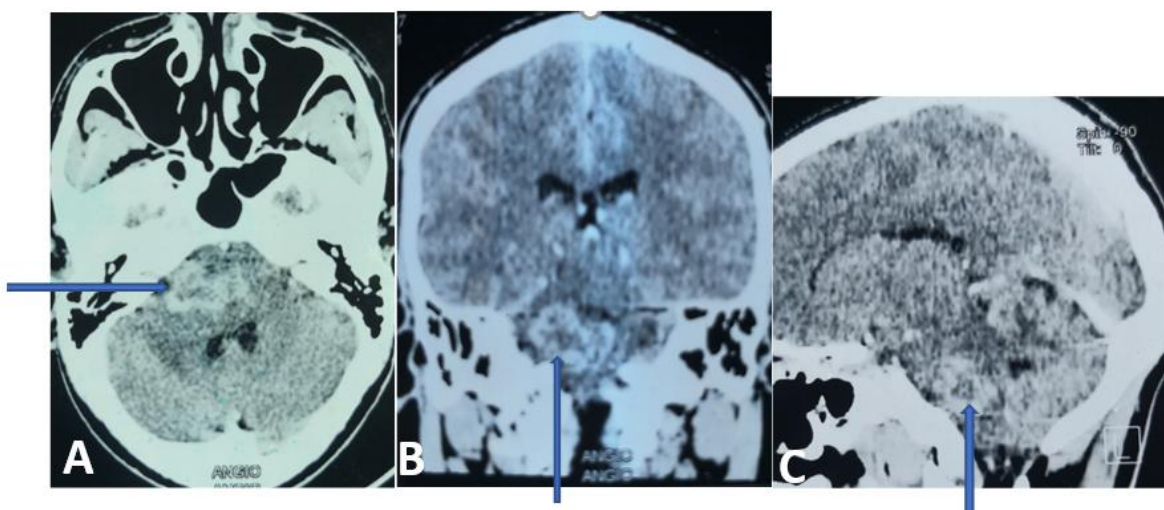
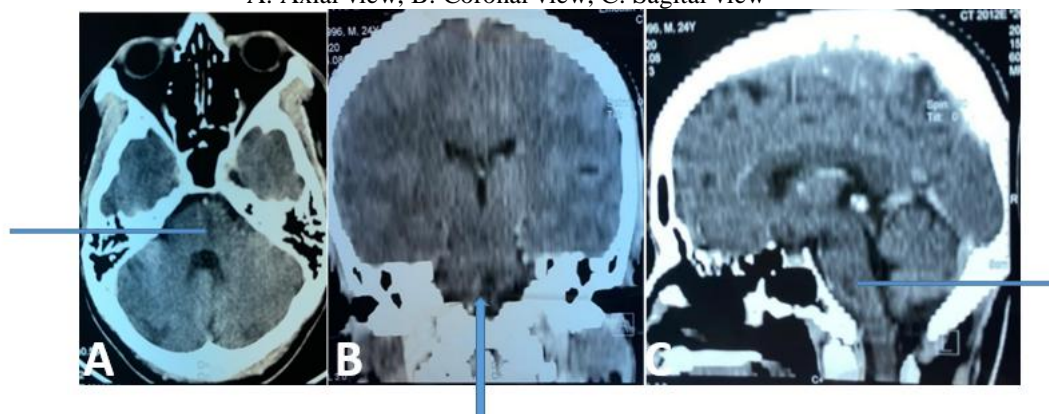


Figure 1: Cerebral CT: a lesion of the brainstem developed at the right bulboprotuberantial stage. This lesion presented an irregular rim peripheral enhancement. (show in blue arrow)
A: Axial view, B: Coronal view, C: Sagittal view



Figures 2: Injected CT scan of control after 08 months of treatment: showed Complete regression of the lesion.(show in blue arrow)
A: Axial view, B: Coronal view, C: Sagittal view

Lists of Abbreviations

CT: tommodensitometry

RHZE: Rifampicin Isoniazid Ethambutol Pyrazinamid

Consent for publication: patient give written consent to publish this study without any consideration.

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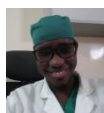
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