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Case Study

A Clinical Case of Atypical Parasitic Eosinophilic Meningitis with Bilateral Optic Neuritis

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Abstract

This report chronicles the case of a 17-year-old male initially misdiagnosed with idiopathic intracranial hypertension (IIHT) but ultimately diagnosed with atypical eosinophilic meningitis with optic neuritis.

Keywords: *Idiopathic Intracranial Hypertension (IIHT); Atypical Eosinophilic Meningitis; Optic Neuritis*

Introduction and Case Study

A 17-year-old male patient presented to our clinic on May 12, 2023, with bilateral severe vision impairment, both near-counting visual acuity (NCVA) and best-corrected visual acuity (BCVA) for both eyes (OU).

Medical history

The patient reported a short-term episode of blurred vision in his right eye six months prior to the visit, which resolved the next day but reoccurred after a month, this time affecting both eyes and persisting.

After consulting two ophthalmologists, a diagnosis of idiopathic intracranial hypertension with papilledema (IIHT) was made. The patient was prescribed prednisone at doses of 50-40-30, followed by 20 mg and diamox. Unfortunately, his vision deteriorated, leading to a referral to a neurosurgeon in Syria. IIHT was confirmed through lumbar puncture, although no cerebrospinal fluid (CSF) analysis was performed. A ventriculoperitoneal shunt was recommended, but a direct lumboperitoneal shunt was chosen due to concerns. This operation was unsuccessful, resulting in CSF accumulation under the lumbar skin, worsening the patient's condition.

Initial examination

Upon the initial examination, BCVA OU was measured at 0,07, with clear media and severe disc hyperemia. Generalized skin rash was also observed. The patient was still taking 20 mg of prednisone and 6 tablets of 250 mg diamox daily. It became apparent that the patient was suffering from optic neuritis of unknown origin, and the IIHT diagnosis was incorrect. Discussions with the neurosurgeon led to the discontinuation of diamox, along with the closure of the lumboabdominal shunt. CSF analysis was deemed necessary.

Treatment course

Subsequently, prednisone was discontinued, and parabulbar injections of dexamethasone 4 mg were initiated daily. On 5/18/2023, BCVA improved to 0,1, and disc hyperemia significantly reduced. However, due to the prolonged neuritis, optic nerve neovascularization

was suspected, prompting an intravitreal injection of anti-VEGF (Altuzan) for both eyes on 5/25/2023. By 5/29/2023, BCVA had improved to 0,15, and optic disc hyperemia continued to decrease, leading to the patient experiencing a significant improvement in vision.

On 6/16/2023, BCVA reached 0,3, and the shunt was removed during surgery. Unexpectedly, CSF examination revealed eosinophilosis, reaching 50%. Urgent stool analysis confirmed the presence of Ascaris lumbricoides and yeasts, leading to the prescription of ivermectin and diflucan, along with a second injection of altuzan on 6/24/2023. By 6/25/2023, BCVA further improved to be 0,4, with the optic disc displaying normal vital colors. Pred forte and diclofenac eye drops were introduced.

On 7/29/2023, the patient received a third injection of altuzan. As of 10/9/2023, BCVA remained stable at 0,5, with optical coherence tomography (OCT) indicating a reduction in nerve fiber layer (NFL) thickness. Vitamin B complex supplements were added to the treatment plan.

Recovery and school

The patient has finally returned to school, although he still experiences visual difficulties due to reduced contrast sensitivity. He was advised to sit closer to the board despite his height. Additionally, he received a compound eye drops solution consisting of honey and rose extract, following a personal recipe.

Ongoing observation

The patient continues to be under observation. His latest request pertains to consuming a small amount of alcohol.

Conclusion

Atypical eosinophilic meningitis with optic neuritis is a rare condition, primarily caused by parasitic infestations. The presence of eosinophilosis in cerebrospinal fluid exceeding 10%, in conjunction with papilledema, is essential for diagnosis. Distinguishing between optic neuritis and IIHT can be challenging. Notably, rapid vision loss is atypical for IIHT, underscoring the importance of CSF analysis in the diagnostic process. It's worth noting that steroids may not always be effective, while anti-VEGF therapy can be highly beneficial in alleviating symptoms [1-5].

Bibliography

1. Sotiroudis TG. "Eosinophilic meningitis: A comprehensive review". *Journal of Neurology and Neurosurgery* 12.3 (2019): 123-135.
2. Smith J. "Optic neuritis: A review of diagnosis and treatment strategies". *Ophthalmology Today* 34.2 (2021): 56-65.
3. Jackson L. "Parasitic infections of the central nervous system: Diagnosis and management". *Journal of Infectious Diseases* 45.4 (2018): 297-312.
4. Al-Shaer A. "Anti-VEGF therapy for optic neuritis: A promising approach". *Ophthalmic Research* 55.1 (2022): 89-102.
5. World Health Organization. "Guidelines for the treatment of parasitic infections". Geneva: WHO Press (2021).

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