№ 147

"Oh, I'm seeing double and my eyes suddenly squints?!": A rare case of cerebellopontine angle tumor with ocular manifestation

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INTRODUCTION

Acute diplopia can emanate from innumerable causes, including cranial nerve (CN) palsies, ocular conditions, and intracranial pathologies like stroke and tumors. Cerebellopontine Angle Tumors (CPA) account approximately 10% of intracranial tumors, and patients may present with diverse atypical symptoms depending on the type and location of the lesion. We describe a case of CPA tumor in a young adult with ocular manifestations.

CASE DESCRIPTION

A 30-year-old woman presented with worsening binocular diplopia over the past day, along with intermittent episodes of vertigo for the past 4 months. She also developed right eye strabismus and progressive blurring of vision. Additionally, she reported mild left-sided weakness for the past 3 months. She denied fever, persistent vomiting, seizures, with no connective tissue disease signs or ear-related symptoms. Although she sought medical attention previously yet only was prescribed dizziness medication. On examination, vital signs were stable. Neurological assessment revealed right-sided CN VI palsy, horizontal nystagmus, and loss of the right nasolabial fold. Strength in the left upper and lower limbs was 4+/5, and no other significant abnormalities were found. A contrast-enhanced CT (CECT) of the brain revealed a well-defined extra-axial mass at the right cerebellopontine angle, causing mass effect and displacement of the brainstem, along with signs of early hydrocephalus.

DISCUSSION

Acute diplopia poses a diagnostic challenge, especially in the emergency department (ED). The initial measure is determining the diplopia is monocular or binocular. Binocular diplopia (BD) results in double vision albeit both eyes are open and resolves as one eye closes which contrast to monocular diplopia (MD). MD suggestively indicates localized affected eye that requires ophthalmologist referral. Conversely, BD imply ocular misalignment associated with cranial nerves, muscles, or the central nervous system (CNS), requiring further radiological investigation especially related with neurological signs. Imaging is critical to rule out serious conditions like tumors or strokes in these cases.

CONCLUSION

Acute diplopia is relatively rare in the ED but can stem from benign to emergent causes with significant morbidity. A thorough diagnostic approach is crucial to avoid misdiagnosis and reduce risks of complications.

Scan for CXR

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