

Case report

An unusual case of anisocoria in a child with bleeding aneurysm of posterior communicating artery and idiopathic thrombocytopenic purpura (ITP)

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Abstract

Background: It can give rise to bleeding episodes in different parts of the body including the central nervous system with various systemic manifestations.

Case: An eight-year old female child, diagnosed as a case of chronic ITP for last two years, developed intense headache and vomiting for a few days before admission. This was associated with right sided mid dilated pupil with brisk reaction to light. MRI-angiography showed a bleeding aneurysm of posterior communicating artery. The features of raised intra cranial tension subsided with conservative management but the anisocoria persisted.

Conclusion: A bleeding aneurysm can manifest with anisocoria as a sign of partial third cranial nerve palsy.

Key words: ITP, children, leaking aneurysm, anisocoria

Introduction

The ITP is one of the commonest bleeding disorders in children with the prevalence of 4.5 per 100,000 live births. It can give rise to bleeding episodes in different parts of the body including the central nervous system with various systemic manifestations. Here is a case of ITP with a bleeding aneurysm of posterior communicating artery giving rise to unilateral sluggish reacting pupil probably following compression on third cranial nerve. This case is the maiden one reported from Indian subcontinent.

The case: An eight year old girl was admitted to our hospital with severe headache and vomiting for four to five days. The child was diagnosed as chronic ITP two years back and treated with oral prednisolone as and when necessary since then.

During this period child was under regular monthly monitoring and had few minor bleeding episodes in the skin.

On examination features of raised intracranial pressure were revealed. There was anisocoria with dilated right pupil. Pupillary light reaction both direct and consensual was sluggish. Movement of the eye was normal. Visual acuity was 6/6 in both the eyes. Fundus picture was normal. The systemic examination was within normal limits.

Laboratory investigation showed a normal blood picture except for a decreased platelet count ($70,000/\text{mm}^3$). The tests for anti nuclear anti body, anti-cardiolipin anti body and anti dsDNA were negative. The HIV screening was also negative. MRI-angiography showed a leaking aneurysm in the posterior communicating artery. The patient was treated with intra-venous maintenance drip, antibiotic (Ceftriaxone) and supportive vitamins etc. The patient was discharged after one month as the



headache and vomiting subsided. But the anisocoria persisted as before.

Discussion: The isolated third nerve palsy with pupillary involvement is a very important sign for intra-cranial aneurysm (Jacobson et al 1999). In our case, the incomplete third nerve palsy was partial probably due to leaking of blood from aneurysm which might have compressed the nerve. Earlier, a few cases of intra-cranial aneurysm with thrombocytopenia had been reported but most of them were associated with HIV infection (Thakker et al 2009; Mahadevan et al 2008). Intra cranial aneurysm with ITP and third nerve palsy is a rare combination (Shah et al 1996). The literature search did not reveal any such report from the Indian subcontinent.

The general condition of the child along with features of raised intracranial pressure like a headache and vomiting subsided. It was assumed that the leak had been sealed and the features of compressive third nerve palsy giving rise to anisocoria due to clotted blood, which might have resolved spontaneously with time.

Conclusion: A bleeding aneurysm can manifest with anisocoria as a sign of partial third cranial nerve palsy. It requires a prospective long term follow-up to comment on the complete recovery of the third nerve palsy.

References

- Jacobson DM, Trobe JD (1999). The emerging role of magnetic resonance angiography in the management of patients with third cranial nerve palsy. *Am J ophthalmol*; 128:94 -96.
- Mahadevan A, Tagore R, Siddappa NB et al (2008). Giant serpentine aneurysm of vertebrobasilar artery mimicking dolichoectasia: an unusual complication of pediatric AIDS. *Clinical Neuropathol*; 27: 37-52.
- Shah SS, Zimmerman RA, Rorke LB, Vezina LG (1996). Cerebrovascular complications of HIV in children. *AJNR*; 17: 1913-1917.
- Thakker A, Bhatia S (2009). Cerebral aneurysmal childhood arteriopathy: a rare complication of pediatric HIV. *Indian J Pediatr*; 46:914-915.

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