A Case of Diffuse Ocular Muscle Enlargement

Dr. Himasree T. DO DNB Trainee, Dr. Jisha K. MS DO DNB, Dr. Seshadrinathan MS DO
Dr. Elizabeth John MS DO

Case Report

A 2½ year old male child presented to our outpatient department with bilateral proptosis of two weeks duration. There was no history of fever or upper respiratory tract infection. Child attained milestones normally. He was immunized for his age.

On examination, there was bilateral axial proptosis, without any evidence of inflammation. Extra ocular movements were full in all directions. Anterior segment examination was normal. Pupil was brisk. Fundus examination was also normal [Fig. 1].

Thorough systemic examination was done.

Wt of the child was 12kg. There was no hepatosplenomegaly.

Investigation report

Hb -11.2 gm %, TC -6000, DC –P-31, L 69, E:nil, ESR - 16mm/hr

Peripheral smear

Large lymphocyte with scanty cytoplasm and increased nuclear cytoplasmic ratio with open chromatin and prominent nucleoli - suggestive of germ cell tumour or leukemia (Fig. 2-4).

CT scan

Diffuse muscle enlargement with involvement of tendon. The radiologist suggested the possibilities of
neovascularisation, peripheral retinal hemorrhages & central retinal vein occlusion can occur. Corneal manifestations are less due to its avascularity, but limbal infiltrations have been reported. Anterior segment manifestations are iritis, hypopyon, spontaneous hyphema & heterochromia iridis. Sclera may show perivascular infiltration \[1,2,3,4\].

Aetiologies to be considered for B/L proptosis in a child are:

- Orbital cellulitis, neuroblastoma, rhabdomyosarcoma, leukemia, eosinophil granuloma, Burkitt’s lymphoma & pseudotumour \[6\].

Causes for B/L diffuse extra ocular muscle enlargement:


ALL is a condition producing bilateral proptosis due to orbital infiltrates. Proptosis due to diffuse muscle infiltration has been described in AML. Review of literature did not reveal any reports of extraocular muscle involvement. So we are reporting this case as a rare presentation.

**References**

3. T. Sharma, J. Grewal, S. Gupta, P.I Murray; Ophthalmic manifestation of ALL, ophthalmologist role; Eye; 2004; 18; 663-672
5. Albert Jakobiec,Timothy .J.Murtha ;Hematologic Disorder:Leukemia,Dysprotenimia and Aneamia;vol 5; 353;4968-4976
6. Duane Gerald .J. Harin, Bruce.M.Marraro;acute proptosis in childhood;vol 2;46