Original Research Paper

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Ophthalmology

A CASE OF EXCELLENT RESPONSE OF INFANTILE ORBITAL HEMANGIOMA TO PROPRANOLOL

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KEYWORDS :

INTRODUCTION

Infantile hemangiomas are common, benign vascular tumors of infancy. Hemangiomas can occur anywhere on the body, but are most commonly found on the face and neck. When occurring periocularly and left untreated, their visual sequelae(like occlusion of visual axis, amblyogenic anisometropia, optic nerve compression, glaucoma & exposure keratopathy due to significant proptosis.) are common. While they can be present at birth, hemangiomas more often appear during the first six months of life. Exact cause of capillary hemangiomas is unknown.

We present a 5-month-old female infant with extensive hemangioma, involving the orbit, face, nape of nack and chest. Which we treated with high-dose propranolol under the strict monitoring and had rapid, excellent response with no major side effects.

CASE REPORT

Informer: Mother

A 5 month old female infant referred to the tertiary eye care institute with complain of:
Protrusion of right eye ball, inability to close right eye, associated with red soft swelling (gradually increasing in size) over UL & LL skin at lateral canthus of right eye since 2.5 months.

Patient was relatively asymptomatic at birth, at 2 month of age mother noticed tiny, flat, non itchying red soft swelling over back of neck which gradually increased in size & spread to back of ear, right side of face esp around Right eye over a period of 2.5 months.

Birth history was not significant.
No other significant systemic history.

No H/O trauma, foreign body, previous eye surgery. Past history and family history is normal.

GENERAL EXAMINATION

Patient is well oriented

Red lesion blanched on pressure was non pulsatile and no bruit was heard on auscultations over nape of neck, face & chest.

OPHTHALMIC EXAMINATION

Both eye Visual acuity: Child follows light

Right eye : Proptosis with red soft swelling over bulber conjunctiva, over upper lid & lower lid skin at lateral canthus with lagophthalmos

Right eye : Cornea clear
Right eye : Iris/ Pupil normal shape and reacting to light
Right eye : Extra ocular movement mild restricted to all quadrants
Left eye : Extra ocular movement - Normal
Both eye : Digital tension - normal
Both eye : Fundus examination - Normal

INVESTIGATIONS

MRI orbit with brain:

Approximately 3.4 x 4.4x 3.4 cm sized well defined lobulated lesion is noted intraconal as well as extraconal compartment of right orbit. Mass effect in the form of displacement of right optic nerve laterally and proptosis of right eyeball with widening of right orbit. On post contrast scan it shows homogenous postcontrast enhancement with progressively increase in delayed enhancement. Imaging finding was suggestive of vascular malformation.

Blood investigations were normal.

TREATMENT

Patient was advised for right eye lid tapping & started on carboxymethyl cellulose 0.5% e/d 6tid & HPMC 2% EO tds

Tab Propranolol (0.5 mg/kg/day) 1mg tds for 7 days f/b (1mg/kg/day) 5 mg tds(with close monitoring of Blood Pressure, Heart Rate, RBS)
Syp cefixime (10 mg/kg) 2.5 ml bd Syp multivitamine 1 tsf bd

DISCUSSION

Various pharmacological agents such as steroids (intralesional), interferon, vincristine, bleomycin, cyclophosphamide, or imiquimod have been used in the treatment of IH with no single uniformly safe and effective treatment.

Traditionally intra lesional steroids have been used but complications include ophthalmic artery occlusion, retinal embolisation, and central retinal artery occlusion. Systemic side effects for intralesional injection include cushingoid features, growth deceleration, and adrenal suppression. Local side effects include eyelid hypopigmentation, subcutaneous fat atrophy, sclerodermiform linear atrophy, periocular calcification, and eyelid necrosis.

Now treatment with propranolol has become the mainstay of systemic therapy for periocular lesions. Mechanism of action of propranolol:

Induction of vasoconstriction, which is immediately visible as a change in color, and palpable softening of the hemangioma.

Beta-blockers could also influence signal-transduction-pathway of angiogenic factors.

Numerous case series suggest success not only in controlling the growth and size of the lesion but also in improvement of astigmatism.

CONCLUSION

Medical therapy with oral propanolol (under close monitoring of B.P, H.R, RBS to prevent side effects) cause significant reduction of patient's Infantile Hemangioma with significant decrease in proptosis was observed with in 1st two weeks of treatment & lagophthalmos improved within one week.

Intra lesional steroids is invasive procedure along with many adverse drug reaction which can be visually threatening while treatment with oral propranolol is relatively safe with proper monitoring give significant improvement in lesion.

So propranolol should be considered 1st line of treatment for infantile capillary hemangiomas.

Day 1:


After 21 Days of treatment:


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