Emergency Ocular Motility Disorders

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Emergency Ocular Motility Disorders

Cranial nerves palsies (oculomotor, Trochlear & abducent)

Orbital cellulitis

Retrobulber haemorrhage

Ocular Motor Cranial Nerves Palsy

Annual incidence of third, fourth, and sixth nerve palsies combined was 7.6 per 100,000

The most commonly affected nerve was the fourth (36%), followed by the sixth (33%), the third (22%), and multiple nerve palsies (9%).

Causes include cogenital ,trauma, bacterial meningitis & tumours

Ocular Motor Cranial Nerves Palsy

* While in elderley vasculopathic 3rd 4th & 6th nerve pasies are common & usually resolve in 2 -3 month.
* In children they may be due to more seriouse pathology like trauma , tumours & usually needs further investigations
* They may cause loss of binocular vision & amblyopia
* Children have a high regeneratve ability & aberrant regeneration may occur

Accommodative esotropia after ocular and head injury.

Some children may lose their ability for motor fusion after traumatic injury to either the eye or head.

Patients had the onset of Acc . ESO within two months of the trauma .

The ocular alignment of the child was controlled by the use of spectacles that corrected the accommodation

These patients are unique because they did not show any evidence of accommodative esotropia before their injuries..




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Am J Ophthalmol. 1990 Feb 15;109(2):195-8

Accommodative esotropia after ocular and head injury.

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Author information

Abstract

Five children lost their ability for motor fusion after traumatic injury to either the eye or head. All patients had the onset of accommodative esotropia within two months of the traumatic episode. The ocular alignment of each child was controlled by the use of spectacles that corrected the accommodative requirements. These patients are unique because they did not show any evidence of accommodative esotropia before their injuries. One child developed accommodative esotropia with a high ratio of accommodative convergence to accommodation. The use of bifocal spectacles controlled the deviation for this child.

PMID: 2301531

[Indexed for MEDLINE]

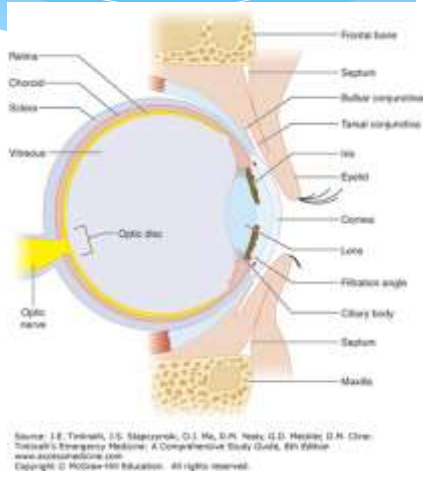
Orbital and periorbital (preseptal) cellulitis

Orbital and ocular adnexal infections are more common in children than adults and must be accurately distinguished from periorbital infections, because the pathogenesis, treatment, and potential severity of sequelae vary considerably.

Orbital and periorbital (preseptal) cellulitis

The septum separates the periorbital soft tissues (preseptal region) from the orbital space and provides a barrier to the spread of infection between the 2 regions.

The preseptal infection can also travel through the valveless venous drainage system of the midfacial region involving the eye cavity and, thereby allowing for the indirect spread of infection



Orbital and periorbital (preseptal) cellulitis

The eye is surrounded by paranasal sinuses on 3 of its 4 walls.

Infection can spread from the paranasal sinuses to the bone, forming subperiosteal abscesses, and into the orbital space, producing orbital cellulitis (lamina papyracea)

These anatomic considerations help to explain the typical pathogens found in orbital cellulitis.

The periorbital area is protected from the paranasal sinuses by the orbital septum; therefore, it is far less susceptible to infection by sinus pathogens. Infections in the periorbital area are usually secondary to skin pathogens

Orbital Vs Preseptal cellulitis

Periorbital cellulitis :is more common than orbital cellulitis

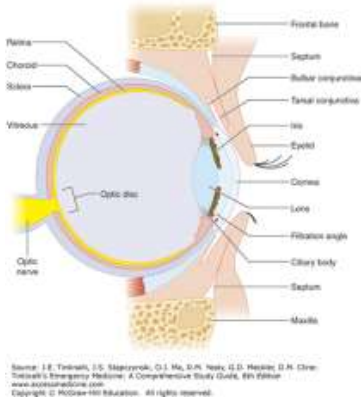
It presents with erythema, induration, tenderness, or warmth of the periorbital tissues.

Signs of systemic illness are often absent. Extraocular motion is not affected and should be full.

decreased movement of the eye is one of the cardinal features of orbital cellulitis, along with proptosis, decreased visual acuity, chemosis, and papilledema .

Orbital Vs Preseptal cellulitis

* Orbital cellulitis is also associated with erythema, pain, and swollen eyelids, but the eyelid swelling of orbital cellulitis can be differentiated from that of periorbital cellulitis in that it will not extend beyond the superior orbital rim onto the brow . This limitation of upper eyelid swelling is due to the extension of the orbital septum onto the periosteum of the inferior margin of the superior orbital rim, which effectively provides a structural barrier limiting the degree of upper eyelid swelling in orbital cellulitis



Treatment

* Presebtal cellulitis is treated with appropriate oral antibiotics
* Any child with orbital cellulitis must be admitted for parenteral antibiotics and close observation among a multidisciplinary team, with or without surgical intervention.
* If subperiosteal abscess or collection of pus occur surgical drainage is necessary

Causes of Retrobulbar Hemorrhage

Trauma may be other injury to surrounding strucures

Orbital or periorbital surgery may occur post op

Blood diseases , hemophilia , Coagulopathies & leukaemia

Vascular malformations may cause spontaneous Hge

Retrobulbar Hemorrhage

Symptoms

Pain ,Decreased vision ,Diplopia , Nausea &Vomiting

Signs

Proptosis with resistance to retropulsion

Ophthalmoplegia , Increase IOP & RAPD

Periorbital ecchymosis Subconjuctival Hmg

Optic disc or retina pallor

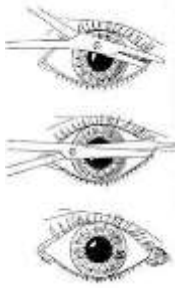
Venous retrobulbar hge is usualy self lmited and tend spred slowly ,they often do not require treatment

Arterial retrobulbar hmg ocurs more rapidly, more aggressive

Retrobulbar Hemorrhage

- Retrobulbar hemorrhage may result in acute loss of vision that is reversible when recognized and treated promptly.
- The diagnosis is clinical & no need for scans
- The technique of emergent orbital decompression by lateral canthotomy and cantholysis
- The anatomy of the lateral canthus and the surgical procedure are illustrated by gross dissection.

Lateral Canthotomy Cantholysis



Lateral Canthotomy Cantholysis

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FOR YOUR TIME