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Effective Homoeopathic Management of Periorbital Ecchymosis: A case report

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Abstract

Trauma is an inevitable phenomenon in paediatric population, be it mild, moderate or severe. Homoeopathic, a form of alternative system, is known for long standing chronic diseases but often slighted in acute medical conditions. As being the case, we would like to see how homoeopathy would respond to a traumatic case. Raccoon eye sign (RES) or Periorbital Ecchymosis (PE) is caused by blood tracking into periorbital tissues, which is frequently observed after head trauma but is also observed in systemic diseases, such as amyloidosis, neuroblastoma, and surgical interventions. A 7 year old boy presented with unilateral periorbital ecchymosis due to trauma and homoeopathic treatment brought out remarkable change in the ecchymosis and subconjunctival hemorrhage and clinical resolution of the hemorrhagic lesions.

Keywords: Raccoon eye, periorbital ecchymosis, subconjunctival hemorrhage, homoeopathy, trauma

Introduction

Objective: To assess the impact of alternative medicine-Homoeopathy, in an acute traumatic head injury.

Results: The resolution of the periorbital ecchymosis as well as the subconjunctival hemorrhage occurred in a quicker pace than it usually takes.

Conclusion: The periorbital ecchymosis and subconjunctival hemorrhage along with pain after impact of trauma was resolved by duly homoeopathic treatment.

Discussion

Definition

Periorbital ecchymosis (PE) or raccoon eye sign (RES) occurs due to blood tracking into periorbital tissues, causing dark blue or purple discoloration of both the eyelids. ^{[1][2]}

Etiology

- **Trauma:** After traumatic injuries to the head and neck, including basal skull fractures, soft tissue injuries and facial fractures, which occurs due to the contusion and stretching of capillaries.
- **Immune Mediated:** Neonatal Lupus erythematosus, Sweet syndrome or acute febrile neutrophilic dermatosis (skin disease characterized by the sudden onset of fever, an elevated white blood cell count, and tender, red, well-demarcated papules, and plaques that show dense infiltrates by neutrophil granulocytes on histologic examination.
- **Vascular Lesions:** Venous sinus thrombosis, Benign Intracranial Hypertension, SAH, Giant Cell Arteritis
- Systemic diseases: Coagulopathy, Amyloidosis, Myxoedema
- **Malignancies:** Neuroblastoma and Multiple myeloma ^[6], Lymphoma, Acute Leukemia and Kaposi Sarcoma ^[2].
- **Iatrogenic (Post-interventional):** Rhinoplasty, sinus surgery, ERCP ^[1], Ear surgery ^[4] and continuous positive airway pressures ^[2].

Necessity of Evaluation

It is vital to diagnose a skull base fracture (SBF) during the evaluation of an injured patient due to its high morbidity and mortality. A SBF was defined as any fracture in the region of the base of the skull that comprises sphenoid and ethmoid bones, the occipital bone beneath the transverse sinus and the petrous part of the temporal bone.

A retrospective study published in 2001 showed that RES is nearly 75% strongly associated, with SBF. [5]

As per a study, [2] RES is shown in 42% of SBF and 25% of soft tissues injuries according to a study in Wake Forest Baptist Medical Centre, Wake Forest University, United States. Goh *et al.* [7] associated the RES and SBF in 52% cases. Kral *et al* [8] displayed 21% association of RES with that to frontal fractures.

In a more recent study [9] done in 100 patients of SBF, RES and CSF leakage were observed in 19% and 32% of the patients, respectively.

The above statistics clearly show that there is significant association with PE/RES in a case of SBF but also shows there is relation with soft tissue injuries (i.e., without fractures). All cases of PE need not be a sure sign of SBF or be it any fracture. Nearly 20% cases needed surgical interventions, about 75% were treated as our patients and absolutely no cases of death who presented with PE. This again reinforces the fact that all cases of PE are not associated with skull fractures or facial bone fractures. There is no need to emphasize the importance of investigations in the present medical era, but also keep in mind that investigations when indicated are to be done as clinical presentation takes the foremost priority that will decide the urgency and type of investigation for a particular patient [1, 7-9].

Danger Symtpoms [2]

- CSF Rhinorrhoea.
- Cranial nerve palsies (I, II, III, IV, VI).
- Eyeball injury.
- Maxillofacial injuries.
- Diffuse axonal injury.
- Later stage meningitis.
- Altered GCS.

Any of the above mentioned symptoms present in a case of PE should alarm the physician to probe into the depth of causation in the particular patient. It is also to be kept in mind that an uncomplicated case periorbital ecchymosis usually gets resolved without medication by 3-4 weeks of time.

Homoeopathic Management [10]

- **Natrum sulphuricum:** ILL effects of falls and injuries TI the head and mental troubles arising therefrom; Valuable in spinal meningitis
- **Arnica Montana:** After traumatic injuries, overuse of any organ, strains; Disposed to cerebral congestion; Ecchymosis and hemorrhage; Relaxed blood vessels, black and blue spots
- **Ledum palustre:** For punctured wounds, produced by sharp pointed instruments or bites particularly if the wounded parts are cold to touch; Extravasation of blood in lids, conjunctiva, aqueous or vitreous; Contused wounds
- **Acidum Sulphuricum:** Tendency to gangrene following mechanical injuries, Purpura hemorrhagica, Cerebral concussion where skin is cold body bathed in cold sweat; Intraocular hemorrhage following traumatism; Great chemosis on conjunctiva with aching and sharp pain
- **Symphytum officinale:** Pain in eye after a blow of an

obtuse body. For traumatic injuries of the eyes, no remedy equals this

- **Belladonna:** Eyelids swollen; Conjunctiva red, dry, burn, Producing active congestion and pain; Marked action on vascular system, skin and glands, Belladonna stands for violence of attack and suddenness of onset

Case Study

Chief Complaint

A 7 year old male child named Mast. IA came to OPD on 27th May 2024 and he had presented with the complaint of pain and bruising over the right orbital region and redness in eyes since 4 days.

History of Chief Complaint

Patient had slipped and fall before 4 days and the impact was on the right temporal region head due to which patient had localized pain on the area where he had fallen. The next day he had developed bruising over the right orbital region (above and below the eyes) as well as mild hemorrhagic lesion in the right eye. Patient had kept warm compress over the head and orbital region. The left eye is normal and is unaffected.

There is no history of severe headache, vision related symptoms, seizures, nausea, vomiting, stiffness of the neck, any type of discharge from nose and ears.

Past History

Medical History: Nothing particular

Surgical History: Nil

Treatment History: Not on any medications

Family History: Mother: Nutritional Anemia

Allergic History: Nil

Personal History

Diet-Mixed

Appetite-Normal

Thirst-Normal, 1.5 Liters/day, No preferences

Desire/Craving: Ice-cream, Pizza, Burgers

Dislike/Aversion: Nothing particular

Bladder Habits-4-5 Times/day; No difficulties

Bowel Habits-Once a day, No difficulties

Perspiration-Generally on back of the body, Non-odorous, Non-staining

Sleep-Good sound sleep

Covering-Desires light covering

Bathing-Prefers tepid water

Thermals-Chilly patient

General Physical Examination

Weight-19.7 kg

Height-107 cm

MUAC-More than 13.5 cm

No pallor, icterus, cyanosis, clubbing, lymphadenopathy, edema

Local Examination

No bruising seen externally on scalp

Extensive bruising over right orbital region-both eyelids bluish red in appearance

2cm *1cm *0.5cm hemorrhagic lesion seen in infratemporal part of right sclera

Mild swelling felt in right fronto-temporal region

Moderate pain in right fronto-temporal region on touch

Systemic Examination**Respiratory system**

Normal Vesicular Breath sounds bilaterally
No added sounds

Cardiovascular system

Normal S1 S2 heart sounds heard, No murmurs

Abdomen

Soft, Non tender; Bowel sounds heard

Central Nervous System

Alert Conscious; GCS-15/15

No sensory and motor neurological deficits.

Investigations Done

None; Advised CBC, Serum Electrolytes, Plain CT-Head;
but patient's parents did not consent for it.

Provisional Clinical Diagnosis

Traumatic periorbital ecchymosis of right eye with subconjunctival hemorrhage.

Differential Diagnosis

Fracture of Anterior Cranial Fossa (ACF)-A boxer getting a heavy blow on the chin may transmit the impact through maxilla to the base of skull and may result in contre-coup fracture of the cribriform plate of ethmoid bone. Pathognomic clinical features include CSF rhinorrhoea and Raccoon Eye Sign (RES) ^[11].

Totality

- Bruising over eyes
- Ailments from head injury
- Sub conjunctival hemorrhage
- Pain over orbital region and temporal region < touch

Repertorial Totality and Results

HEAD			
1 HEAD -			
INJURIES of the head; after			
EYE			
2 EYE - ECCHYMOSIS •			
3 EYE - ECCHYMOSIS - Lids			
4 EYE - PAIN - Orbits			
Remedies	ΣSym	ΣDeg	Symptoms
arn.	4	9	1, 2, 3, 4
led.	4	7	1, 2, 3, 4
bell.	3	5	1, 2, 4
calc.	3	4	1, 2, 4
con.	3	4	1, 2, 4
lach.	3	4	1, 2, 4
sul-ac.	3	4	1, 2, 4



Prescription

Date: 27/05/2024

Rx

1. Natrum Sulph 200 Single dose stat
 2. Arnica 200 4 pills BD for 3 days (from next day)
 3. Ferrum phos 6X 2 tablets BD 3 days
- Advised review after 3 days/as required

Follow Ups

29/05/2024



Rx

Rubrum met 200 4 pills BD 3 days

Advised review after 3 days/as required

03/06/2024



Rx

Rubrum met 200 4 pills BD 3 days

Advised Review after 3 days/as required

05/06/2024



Rx

Rubrum met 200 4 pills BD 5 days

Conclusion

This study reveals the quicker resolution of a traumatic periorbital ecchymosis with subconjunctival hemorrhage with homoeopathy and the result is clinically significant. Therefore, homoeopathy can be thought as a line of treatment in such traumatic cases without further neurological complications and resolves the hemorrhagic lesions without any side effects.

Declaration of Parent Consent

We certified that the patient had given his verbal assent and his parents had given consent to provide their child's image and clinical information to be published in the journal. We assured the patient and the family that the personal details of the patient will not be disclosed in the public domain.

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Conflict of Interest

Not available

Financial Support

Not available

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