Neonatal Hemorrhagic Syndrome Complicated by Orbital Hematoma

Introduction

Neonatal hemorrhagic syndrome is a concerning condition characterized by an increased susceptibility to bleeding in newborns. Among the various complications that may arise, orbital hematoma is a clinical emergency. This article explores in detail the mechanisms, causes, diagnosis, treatment, and long-term implications of this condition.

Clinical case:

We report the case of newborn A. S, 2 days old, with first-degree consanguinity, presenting with exophthalmos of the right eye since birth, general examination revealed diffuse petechiae, echhymoses in the thighs, stage I exophthalmos, no ophthalmoplegia, normal anterior segment, fundus without particularities, The other eye showed subconjunctival hemorrhage with no other abnormalities; an orbital CT scan was ordered, showing an intraorbital hematoma in the right eye with no compression of adjacent structures; a biological workup was ordered, with a low vitamin K level.

The diagnosis of hemorrhagic syndrome of the newborn was retained, and treatment was instituted with vitamin K and corticosteroids, with good clinical progression.

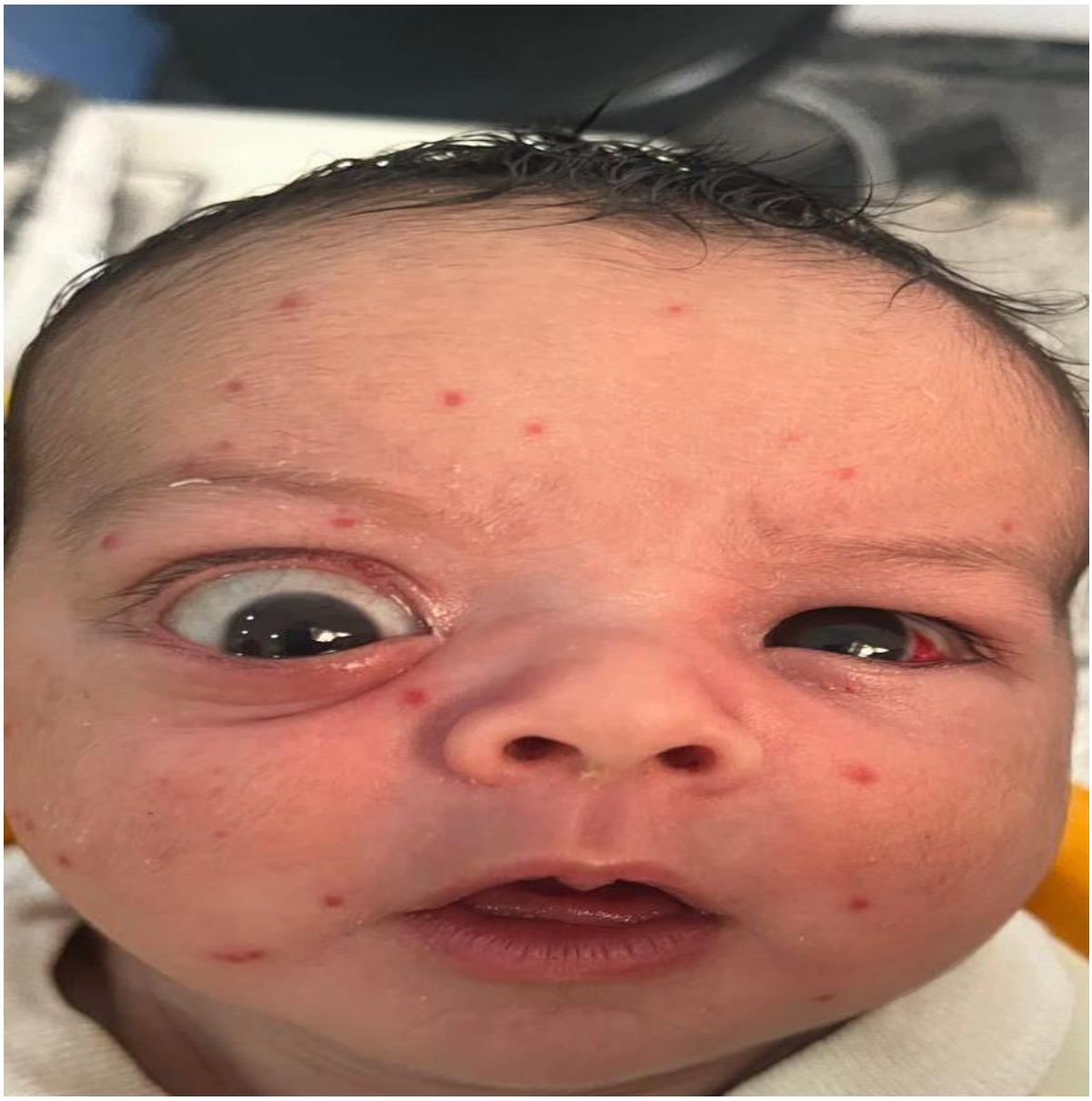

Figure: 2-day-old newborn presenting with exophthalmos of the right eye and subconjunctival hemorrhage of the left eye.

What is Neonatal Hemorrhagic Syndrome?

Neonatal hemorrhagic syndrome refers to a series of clinical conditions characterized by excessive bleeding in infants. Causes may be congenital (hereditary coagulation disorders) or acquired (such as nutritional deficiencies). Clinical manifestations can include:

- **Cutaneous hemorrhages**: Bruising and purpura.
- **Internal bleeding**: Intracranial hemorrhages, hematomas.
- **Mucosal bleeding**: Nosebleeds, gum bleeding.

Orbital Hematoma: Definition and Etiology

An orbital hematoma is an accumulation of blood in the orbital cavity, often caused by trauma or coagulation abnormalities. This condition can arise due to:

Traumatic Causes

1. **Difficult deliveries**: Instrumental delivery methods, such as forceps, are the primary causes of orbital hematomas.
2. **Accidental trauma**: Though rare, trauma occurring after birth can also be responsible.

Hematological Causes

1. **Coagulation disorders**:
    - **Vitamin K deficiency**: Essential for the synthesis of coagulation factors, its deficiency can lead to bleeding.
    - **Hereditary diseases**: Such as hemophilia or other blood coagulation disorders.
    - **Thrombopathies**: Disorders affecting blood platelets.

Other Risk Factors

- **Family history of bleeding disorders**.
- **Maternal medical conditions**: For example, the use of certain anticoagulant medications during pregnancy.

Diagnosis

Clinical Evaluation

The diagnosis relies on a thorough clinical assessment. Key elements include:

- **Obstetric history**: Details regarding the type of delivery and interventions performed.
- **Clinical signs**:
    - **Periorbital edema**: Swelling and discoloration of the skin around the eye.
    - **Difficulty closing the eye**: Indicating pain or discomfort.

Complementary Examinations

1. **Medical Imaging**:
    - **Ultrasound**: Useful for visualizing hematomas without radiation exposure.
    - **CT or MRI**: In complicated cases, to assess the extent of the hematoma and rule out other pathologies.
2. **Coagulation tests**: Analysis of coagulation factors to identify potential underlying disorders.

Management

Initial Approach

1. **Observation**: In many cases, especially if the hematoma is limited and does not compress ocular structures, simple observation may be sufficient.
2. **Assessment of the infant's overall condition**: Monitoring vital signs and comfort level.

Medical Treatment

1. **Correction of coagulation disorders**:
    - **Administration of vitamin K**: If deficiency is suspected.
    - **Specific coagulation factors**: In cases where disorders are identified.
2. **Anti-inflammatory medications**: To manage pain and inflammation.

Surgical Intervention

In cases where the orbital hematoma exerts significant pressure on the eyeball or causes visual complications, surgical intervention may be necessary. This can include:

- **Surgical drainage of the hematoma**: To relieve pressure and improve blood flow.

Follow-Up and Long-Term Implications

Clinical Follow-Up

Regular follow-up is essential to assess the resolution of the hematoma and monitor for potential complications. This includes:

- **Ophthalmological evaluations**: To ensure that the infant’s vision is not affected.
- **Growth and developmental assessments**: To monitor for any delays or complications.

Psychological Implications

Birth trauma can have psychological repercussions for parents, including concerns about their child’s future health. Psychological support may be beneficial.

Conclusion

Neonatal hemorrhagic syndrome, especially when complicated by orbital hematoma, requires immediate medical attention. A thorough understanding of the causes, appropriate diagnostics, and effective management are essential to ensure the safety and well-being of affected newborns. Prevention, through the management of obstetric risks and parental education, also plays a key role in reducing the incidence of this condition.

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