Introduction

Despite its rare occurrence, thromboembolic events are more frequent in newborns than in other paediatric age group, and can result of diverse congenital or acquired pro-thrombotic factors. We report a case of deep venous thrombosis (DVT) in a previously healthy newborn admitted with Streptococcus pyogenes infection.

Case Report

7-day old term female infant, born by vacuum delivery (birth weight 3780 g, Apgar 9/10), referred to our NICU with a 24 h history of grunting, anorexia and painful, swollen and purple discoloration of left lower limb. Laboratory findings showed leucopenia (1730/μL), neutrophilia (88%), C Reactive Protein 4.5 mg/dL, normal haematocrit and platelet count. Remaining lab values, including electrolytes and coagulation tests were normal. Soft tissue infection was suspected and antibiotics started. Lower limb ultrasound and Doppler showed extensive DVT in the left side. Subcutaneous enoxaparin was started and dosage was adjusted according with anti-Xa factor levels. Homocystrine, protein S, protein C and antithrombin levels were normal. Factor V Leiden, G2021A prothrombin and antiphospholipid antibodies were absent. Streptococcus pyogenes has been associated with thromboembolic events in adults and older children. Despite being an uncommon cause of infection in neonates, this agent should be considered as the possible aetiology of DVT in previously healthy newborns.

Discussion

Thrombosis in neonatal period can cause significant morbidity and be life threatening. Early diagnosis and optimal treatment strategies are important to avoid complications. Streptococcus pyogenes has been associated with thromboembolic events in adults and older children. Despite being an uncommon cause of infection in neonates, this agent should be considered as the possible aetiology of DVT in previously healthy newborns.

Conclusion

Plasma gelsolin may be a usable marker for severe sepsis. Recovery of decreased gelsolin levels correlated with clinical improvement.

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PRELIMINARY STUDY: IS GELSON LIN POSSIBLE AN EARLY DIAGNOSTIC BIOMARKER FOR NEONATAL SEPSIS?

Background and aims

Gelsolin is an actin-binding plasma protein that has a protective role against tissue injuries. Studies of sepsis are shown that diminish of plasma gelsolin (pGSN) correlates with elevated circulating levels of actin and pGSN changes correlate with clinical improvement in septic patients. The aim of this study investigate pGSN’s importance in preterm infant with sepsis and related with mortality and morbidity.

Methods

Thirty-one patients who were diagnosed with severe sepsis at neonatal intensive care unit were enrolled in sepsis group, twenty patients who were followed for prematurity were enrolled in control group. Plasma gelsolin levels were measured using an enzyme-linked immunosorbent assay from whole blood samples.

Result

The pGSN level at the time of diagnosis in the severe sepsis group was 33.98 ± 11.44 μg/mL, which was significantly lower than that of 20 nonseptic preterm neonates (60.05 ± 11.3 μg/mL, p < 0.001) and after treatment (53.38 ± 31.26 μg/mL, p = 0.003). Toller scors in severe sepsis patients were 12.3 ± 4 and there were negative correlation with gelsolin level. But, it did not detect correlation between postnatal age, gestational age, birth weight, gender and pGSN level in sepsis and control groups.

Conclusion

Plasma gelsolin may be a usable marker for severe sepsis. Recovery of decreased gelsolin levels correlated with clinical improvement.