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Erratum

Selected Abstracts of the 2nd International Workshop "Intensive Care of the Newborn" – Erratum

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This is an erratum to: Selected Abstracts of the 2nd International Workshop "Intensive Care of the Newborn"; Verona (Italy); March 9-10, 2018. J Pediatr Neonat Individual Med. 2018;7(1):e070125. doi: 10.7363/070125. Correct version of ABS 10 appears below. Inadvertently, we introduced errors into the abstract during the editing process. To correct those errors, we are now publishing a corrected version of the entire abstract.

HOW TO CITE

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ABS 10

NEONATAL/INFANTILE PYKNOCYTOSIS. AN UNUSUAL CASE OF HAEMOLYTIC ANEMIA

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INTRODUCTION

Neonatal pyknocytosis is a rare cause of neonatal haemolytic anemia (9.4% of unexplained haemolytic anemia), more common among males (2/1). The etiology of infantile pyknocytosis remains unknown. However, the underlying cause could be an extra blood factor that is yet to be identified. Affected newborns present with early jaundice without splenomegaly and transient hemolytic anemia, which peak at 3-4 weeks of life and resolve by the age of 4-6 months. Treatment is symptomatic and supportive. Prognosis is excellent in most cases. The disease is characterized by the a transient haemolytic anemia and detection of increased number of pyknocytes in the peripheral blood smear. Pyknocytes are erythrocytes with an irregular shape, densely stained with several spiny projections. The diagnosis is based on their finding in peripheral blood smear at > 6-23% after excluding the most common causes of haemolytic anemia. It is noteworthy that the presence of pyknocytes in peripheral blood of term and preterm neonates in the first week of life, at rates of 0.3-1.9% and 0.3-5.6% respectively, is a normal finding. We present the case of a newborn with severe anemia and pyknocytosis.

CASE REPORT

A male, full-term neonate, weighing 2,820 g, was brought to our unit for paleness and jaundice, at 18 days of age. Upon clinical examination we noticed jaundice, paleness, absence of hepatosplenomegaly and poor weight gain (formula fed). The hematologic tests showed: Hgb 8.5 mg/dl, Hct 24.4%, reticulocytes count 1.76%, bilirubin (total/direct) 8.5/2.4 mg/dl, normal hepatic and thyroid function. Sepsis related indicators were negative. There was no blood group or Rh incompatibility, direct Coombs was negative and G6PD activity normal. On the fourth day of hospitalization: Hgb 5.6 mg/dl, Hct 16.3%, reticulocytes count 4.66%, bilirubin (total/direct) 5.5/1.3 mg/dl. Small-sized, dense, dysmorphic erythrocytes (pyknocytes) in the peripheral blood smear were countered > 10%. The neonate was transfused with RBCs and Hgb raised up to 11.2 mg/dl, Hct 34.3%. The neonate was discharged with iron and folate. On follow-up examination at 6 months of age, the infant was free of symptoms.

CONCLUSIONS

Neonatal pyknocytosis should be added to the differential diagnosis of neonatal unexplained haemolytic anemia, especially in those cases where the latter is not associated with splenomegaly or infection. A high level of suspicion remains the only way to confirm this diagnosis. Routine peripheral blood smear review in all cases of haemolytic jaundice/anemia is warranted.