

A Rare Case Report of Late Onset Hemorrhagic Disease of Newborn

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Abstract: *Vitamin K deficiency bleeding, referred to as hemorrhagic disease of newborn, results from transient but severe deficiencies in the vitamin K – dependent factors and characterized by hemorrhage that is most frequently gastrointestinal, nasal, intracranial or post-circumcision. Here we report a case of late onset HDN*

Keywords: vitamin K deficiency, germinal matrix hemorrhage, coagulation profile

1. Introduction

Newborn babies are predisposed to develop vitamin K deficiency and hemorrhagic manifestations. Vitamin K is required for the synthesis of coagulation factors 2,7,9,10 by a process of carboxylation of glutamic acid in vitamin K dependent proteins. Late onset-HDN where the bleeding manifestations occur after first week of life. The condition is rare in formula fed infants and in infants who received injectable vit K at birth. The bleeding may occur from any site but more commonly from intracranial vessels, mucous membranes, skin, GI tract.

2. Case Report

The 28 days old male child 3rd born to non consanguineous marriage brought with complaints of excessive cry and vomiting since 2 days and the child is accepting feeds well with no significant past history. The infant was born at home with birth weight of 2.5 kg and cried immediately after birth, was also exclusively breast fed since birth. On examination the infant is alert and accepting feeds well with pallor, pulsatile AF bulge and hemodynamically stable. Systemic examination is also normal.

Investigations revealed anaemia with Hb of 4 gm normal platelet count, with peripheral smear showing dimorphic anaemia with coagulation assay of prolonged PT, APTT time with normal liver function test and also elevated INR. NSG revealed hyperechoic area noted at the germinal matrix-hemorrhagic foci and rest of brain parenchyma normal. The child was given packed cell transfusion and vitamin K. With the completion of vit K doses, infant condition improved and the follow up NSG revealed resolving echogenic foci of 4.5 mm noted in left periventricular region.



Figure 1: Photograph of the baby who is alert active and not sick



Figure 2: Photograph of the neurosonogram showing germinal matrix hemorrhage

3. Discussion

The late hemorrhagic disease of newborn is used to describe the hemorrhagic manifestations of deficiency of vitamin K. The condition is rare in formula fed infants and in infants who had received injectable vit K at birth. The clinical features of late onset HDN are the bleeding manifestations after 1st week of life which can occur from any site but more commonly from intracranial vessels, mucous membranes, skin and GI tract. The association of predisposing factors and age at the onset of bleeding helps in the diagnosis.

Here the infant does not appear ill or toxic which differentiates it from disseminated intravascular coagulation. Also here the laboratory parameters pertaining to vitamin K dependent coagulation factors- prolonged PT, APTT with elevated INR, also with a normal platelet count. Also here the patient's condition improved with the administration of vitK. Also the

serial NSG monitoring showed reduction in the size of hemorrhagic focus with dramatic correction of deranged coagulation profile

The therapeutic dose of Vit K for treatment of HDN is 1 to 2 mg intravenously which is followed by dramatic response with correction of coagulation abnormalities within 24 hrs For life threatening hemorrhage administration of vit K should be followed with 10 to 20 ml/kg of fresh frozen plasma

4. Conclusion

The case is reported because of its rarity and to highlight the importance of administration of prophylactic vit K at birth

References

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