

their suffering; but, a call to the research community to generate evidence so that any potential benefits are not discredited. The science must provide evidence to dispel myths and focus efforts on evidence-based management of dengue.

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Reversible Corneal Clouding in Neonatal Hyperglycemia

Corneal clouding, a rare observation in neonates, has been linked to causes such as infections and metabolic disorders. We describe a case of an extreme preterm with bilateral, reversible corneal clouding – possibly due to hyperglycemia.

This preterm (25 weeks) male infant was born vaginally to a primigravida mother; birth weight was 840 g. The child was managed with surfactant, ventilation, parenteral nutrition, cefotaxime and amikacin. On 4th day, baby developed seizures requiring phenobarbitone. Neurosonogram revealed grade-I germinal matrix hemorrhage.

On 6th day, infant developed hyperglycemia, which was managed by insulin infusion. Hyperglycemia lasted for 22 hours (highest blood glucose: 890 mg/dL). Antibiotics were changed to vancomycin and meropenem. Child also developed bilateral diffuse corneal clouding suggestive of corneal edema. There was no conjunctival or circumciliary congestion or eye discharge. View to the anterior chamber and fundus was hazy; a red glow was present. Iris details could not be visualized. Cornea became clearer in the next few days. Mild haze persisted till 28 days and cleared completely

by 39 days. The infant was diagnosed to have retinopathy of prematurity (ROP) at 28 days which progressed bilaterally requiring laser treatment at 41 days. At discharge (81st day) and at 6 months, the cornea remained clear.

Opacification of the cornea in a newborn may occur in congenital glaucoma, corneal dystrophies, Peter's anomaly, sclerocornea, infection, trauma, limbal dermoids and metabolic disorders like mucopolysaccharidoses [1]. The case presented had no signs of ophthalmic infection or dysmorphism. Corneal clouding was reversible unlike in mucopolysaccharidoses. ROP is an unlikely cause since cornea had cleared when ROP had progressed. Drugs given to this infant are also not known to cause corneal edema.

In this infant, severe hyperglycemia could have caused endothelial dysfunction and corneal edema. The Na,K-ATPase in the basolateral membrane of the cornea, is responsible for the pump function [2]. Animal studies show that hyperglycemia reduces Na,K-ATPase activity of cornea [3,4]. In adult humans, acute hyperglycemia affects corneal hydration control [5]. Another mechanism could be hydration of lens, leading to angle closure and rise in intra-ocular pressure resulting in corneal edema. However, digital tonometry was normal in this infant.

We could not find any reported case of corneal clouding in neonates due to hyperglycemia. Although 60-80 percent of extreme preterms develop hyperglycemia, very high levels as observed in this case are rare. We hypothesize that severe hyperglycemia may have an

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adverse effect on the cornea of extreme preterms. With early optimization of blood glucose levels, the corneal prognosis appears to be good.

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