Congenital Hypothyroidism Presenting with Seizures and Pseudo-Hirschsprung's Disease in Newborn

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Abbreviations

CH	Congenital Hypothyroidism
HD	Hirschsprung's Disease
TSH	Thyroid Stimulating Hormone
USG	Ultrasonogram

To the Editor: Congenital Hypothyroidism (CH) is one of the most common preventable causes of mental retardation. Thyroid screening is done in an infant with post maturity, macrosomia, wide open posterior fontanel, prolonged unconjugate jaundice, constipation, poor feeding, hypotonia, hoarse cry, umbilical hernia, macroglossia and dry or edematous skin and in a child with growth delay and thyroid swelling [1]. In this report, we describe a rare association of seizures and pseudo Hirschsprung's disease with hypothyroidism in a neonate.

A male newborn, 3 kg at birth presented on day 4 of life with abdominal distension and bilious vomiting. On abdominal examination, there was divarication of recti, prominent veins; visible bowel loops and bowel sounds were present on auscultation. C-reactive protein was negative, serum electrolytes, kidney and liver function tests were normal. Plain abdominal radiograph and USG abdomen revealed dilated gas filled bowel loops. Barium enema revealed faint opacification of rectum and descending colon with air distended proximal colon. At the 2nd hour of admission, the infant was noted to have recurrent seizures that got controlled with Phenobarbital. Seizure workup was normal. As the infant had persistent unexplained abdominal distension, thyroid function tests done on day 4 showed low T3

(0.10 ng/mL), low T4 (0.8 µg/dL) and high Thyroid Stimulating Hormone (TSH >150 µIU/mL). Maternal thyroid profile was normal. Baby responded well to thyroxine started at 15 µg/kg/day on the 6th day. Thyroid nuclear scan showed non visualization of thyroid gland consistent with congenital Athyrogenesis.

Persistent clinical features with sluggish bowel motility on the ultrasound, abnormal thyroid profile, and good clinical response to oral thyroxine are suggestive of an association of congenital hypothyroidism with pseudo intestinal obstruction [2] Transient neonatal seizures have previously been reported to be associated with congenital hypothyroidism [3]. The likelihood of an accidental association between hypothyroidism and seizures in this infant was low as metabolic parameters, sepsis screen, blood cultures and neuroimaging were all normal. The purpose of this case report is to encourage pediatrician to investigate for hypothyroidism in clinically suspected pseudo intestinal obstruction and as a routine screening in all sick newborns.

Contributions SM: Conceptualized the case report, reviewed and revised the manuscript and approved the final manuscript as submitted. DS: Drafted the initial manuscript and approved the final manuscript as submitted. GD: Critically reviewed the manuscript, and approved the final manuscript as submitted. Dr. Srinivas Murki will act as guarantor for this paper.

Conflict of Interest None.

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