Intussusception Following Rotavirus Vaccination

We report a case of acute intussusception following administration of Rotavirus vaccine. A 3½-month-old who was administered the second dose of pentavalent rotavirus vaccine presented twelve hours later with persistent vomiting. On hospitalization, he was noticed to have an abdominal lump which was confirmed by ultrasonography to be an intussusception. Hydrostatic reduction was attempted but failed. Laparotomy revealed an ileocolic intussusception which was relieved. The first dose of rotavirus vaccine given to this child at 6 weeks of age was not associated with any adverse effects.

We are aware of rare event of intussusception following rotavirus vaccine but encountering it first hand is a different experience altogether. In the monovalent human-bovine (116E) rotavirus vaccine trial, out of 4532 infants who received the vaccine, 6 developed intussusception in comparison to 2 out of 2267 in the placebo group [1]. All these took place after administration of the third dose [1]. The natural incidence of intussusception varies between <1 case per thousand in developed countries to >3 per thousand in developing counties like Vietnam in children less than 1 year of age [2]. In our patient, intussuception following rotavirus vaccine may be a chance association although the temporal sequence of events makes causal association likely. Currently, as per WHO data the risk of intussusception is 1-2 per 100,000 rotavirus immunizations. [3]

Launching this vaccine nationwide will be a challenge as good medical facilities to diagnose and manage intussusception are not available in many parts of the country. In this case, we were able to explain to the attendants this complication after the child had recovered. We did not have any discussion prior to the vaccination about it's potential complications. However, we feel that discussing the small but serious risk of intussusception should be part of pre-vaccination counseling and mentioned in the immunization record.

SUNIL TANEJA AND RAKHI JAIN
Department of Pediatrics,
Madhuraj Hospital, Kanpur, UP
tanejasunil17@gmail.com

REFERENCES

1. Bhandari N, Rongsen-Chandola T, Bavdekar A, Jacob John T, Antony K, *et al*. Efficacy of a monovalent human-bovine (116E) rotavirus vaccine in Indian infants: A randomized, double-blind, placebo-controlled trial. Lancet. 2014;383:2136-43.
2. Tate J, DuncanSteele A, Bines JA, Zuber PF, Prashar UD. Rota virus vaccines for children in developing countries. Vaccine. 2012;30:A179-84.
3. World Health Organization. Rotavirus and Intussusception: Report from an Expert Consultation. Weekly Epidemiology Rec. 2011;86:317-324.