

## Vaccination Associated Acute Immune Thrombocytopenic Purpura in Children

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### Letter to Editor

Individual case reports and series have subsequently been published describing immune thrombocytopenia after vaccination [1,2]. Herein we report a case with acute immune thrombocytopenic purpura that were developed after DTaP-IPV-Hib combined vaccine (diphtheria/tetanus/acellular pertussis, inactivated poliomyelitis, Haemophilus influenzae type b) and Pneumococcal Conjugate Vaccines (PCV).

A 5-months-old male was brought to emergency department with the complaint of petechial rash, for 1 day, begun 3 days after an DTaP-IPV-Hib combined vaccine and PCV. The personal and family histories were unremarkable for bleeding disorders and events. Moreover, recent history of infectious disease was not described. The physical examination of patient was normal except the presence of bleeding multiple petechiae rash on lower and upper extremities and trunk. The laboratory examinations were found to be normal except severe thrombocytopenia (platelet count 1000/mm<sup>3</sup>) While increased megakaryocytes count was determined on bone marrow examination, no blastic or atypical cell was found on either bone marrow or blood smear examinations. Considering the complete clinical examination and investigations, a final diagnosis of ITP was made. High-dose methylprednisolone (30 mg/kg/day for 3 days and then 20 mg/kg/day for 4 days intravenously) was given. Normal thrombocyte count was achieved on fifth day of treatment on which thrombocyte count was measured as 150,000/mm<sup>3</sup>. In the follow up the platelet count of the patient was within normal levels and the patient diagnosed as acute ITP.

ITP after vaccination is mainly reported in children after MMR immunisation. Interestingly, ITP develops even more frequently after measles, mumps and rubella infections than after MMR vaccination [2]. Between 1992 and 2007, only 115 cases of ITP were reported in Canada, 77 of which (74.7%) occurred after MMR, 28 after DTaP vaccine, and 10 after varicella vaccine. Most of the cases were mild and did not give rise to severe complications [3]. The phenomenon is

mainly explained by an antigenetic similarity of parts of the vaccine and the thrombocytic surface which leads to antibody mediated destruction of platelets [4]. It has been suggested that patients with a history of ITP must be checked for thrombocytopenia after vaccination [5,6]. Rajantie et al. they found that, no patient were reported to have had a recurrent thrombocytopenia following a MMR booster, nor after other repeated immunizations [7]. This suggests that checking the platelet count after immunizations in patients with a history of ITP may not be necessary.

In conclusion, our case showed that acute ITP might be seen after DTaP-IPV-Hib combined vaccine and PCV. Therefore, we suggest that aside from a recent infectious disease and DTaP-IPV-Hib combined vaccine and PCV should also be inquired in children with acute ITP.

### References

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