

intervals between affected individuals and apparently healthy subjects. Gollob, *et al.* [2] proposed a diagnostic criterion for SQTS. SQTS is mostly seen in males and common presentation is aborted SCD (24-32%), arrhythmias and syncope [3]. As the risk of SCD is high in SQTS, ICD placement is strongly recommended for secondary prevention. However, role of ICD in primary prevention is not well defined. Information regarding pharmacological therapy for SQTS is fairly limited, and quinidine has been suggested as one of the therapies. SQTS is considered a rare electrical abnormality associated with SCD in individuals with structurally normal heart. Timely diagnosis and optimal treatment can significantly improve the overall prognosis of the patient and family members. There is a scarcity of data about SQTS in terms of its clinical presentation, diagnosis, genotype-phenotype correlation, risk-stratification and treatment. This case aptly highlights the importance of bystander CPR in saving life in such disorders. Basic life support education should be promoted widely to save many more lives.

\***PRADEEP KUMAR SHARMA** AND #**NEERAJ AWASTHY**  
 \**Pediatric Critical Care and Pulmonology,*  
*Sri Balaji Action Medical Institute; and*

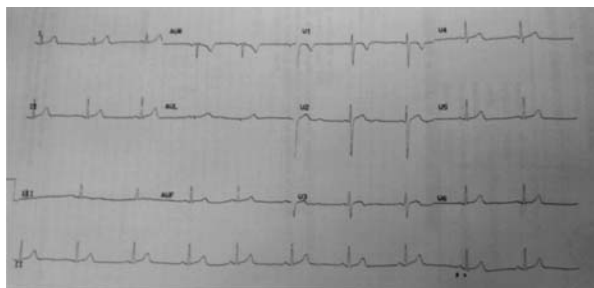


FIG. 1 ECG done at HR-60/min showing QT interval of 280ms.

#*Pediatric Cardiology, Max Super Specialty Hospital, Saket;*  
*New Delhi, India. \*drsharma025@gmail.com*

#### REFERENCES

1. Gussak I, Brugada P, Brugada J, Wright RS, Kopecky SL, Chaitman BR, *et al.* Idiopathic short QT interval: a new clinical syndrome? *Cardiology.* 2000;94:99-102.
2. Gollob MH, Redpath CJ, Roberts JD. The short QT syndrome: Proposed diagnostic criteria. *J Am Coll Cardiol.* 2011;57:802-12.
3. Villafañe J, Atallah J, Gollob MH, Maury P, Wolpert C, Gebauer R, *et al.* Long-term follow-up of a pediatric cohort with short QT syndrome. *J Am Coll Cardiol.* 2013;61:1183-91.

## Immune Thrombocytopenia Following Diphtheria-Pertussis-Tetanus and Oral Polio Vaccine

Post-vaccination immune thrombocytopenia has been reported to occur with a number of vaccines, of which mumps measles and rubella (MMR) vaccine appear to be most common. We report a case of immune thrombocytopenia following concurrent immunization with diphtheria-pertussis-tetanus (DPT) and oral polio (OPV) vaccines.

A 3.5-month-old boy presented with generalized purpuric rash appearing six days following immunization with third dose of DPT and OPV. There was no history of any rash after previous doses of the same vaccines. On examination, there was non-blanching reddish macular rash over trunk and extremities, but no associated fever, lymphadenopathy, hepatosplenomegaly, sternal tenderness or external bleeding manifestations. Investigations revealed a hemoglobin level of 12.4 g/dL, total leucocyte count  $11.3 \times 10^9/L$  (neutrophil 52%, lymphocyte 45%,

eosinophil 2%), and platelet  $8 \times 10^9/L$ . Liver and renal function tests were normal, and tests for anti-nuclear antibody were negative. Peripheral smear examination revealed no significant abnormality. Bone marrow examination showed normal granulocytic and erythrocytic series, with increased numbers of megakaryocytes. The child was treated with a single dose of intravenous immunoglobulin (1g/kg). The rashes gradually disappeared after 3-4 days. Within 3 days, platelet count increased to  $52 \times 10^9/L$  with complete normalization occurring within 7 days. On follow-up, patient was healthy and booster dose of DPT/ OPV at 18 months of age was uneventful.

Immune thrombocytopenic purpura (ITP) is generally rare after immunization. In a study from Canada, 75% of such cases followed a measles-containing vaccine [1]. DTP or OPV vaccines are less commonly associated with ITP. Arya, *et al.* [2] reported thrombocytopenic purpura following DPT vaccination. In their retrospective series of 20 cases, Hsieh, *et al.* [3] also reported 4 cases of ITP after the first dose of diphtheria-tetanus-acellular pertussis-containing vaccine in early infancy. Other authors [4,5] have also

documented the occurrence of ITP after OPV. In our case, it was not possible to implicate the individual vaccine causing thrombo-cytopenia due to concurrent administration of both as per National Immunization schedule.

**ARJIT BHOWMIK AND \*TAMOGHNA BISWAS**

*Department of Pediatric Medicine,  
Medical College Kolkata, India.  
\*tamoghnab@gmail.com*

#### REFERENCES

1. Jadavji T, Scheifele D, Halperin S; Canadian Paediatric Society/Health Canada Immunization Monitoring Program. Thrombocytopenia after immunization of Canadian children, 1992 to 2001. *Pediatr Infect Dis J*.

2003;22:119-22.

2. Arya LS, Ghai OP, Saraya AK. Thrombocytopenic purpura following DPT vaccination. *Pediatr Hematol Oncol*. 1993;10:381-3.
3. Hsieh YL, Lin LH. Thrombocytopenic purpura following vaccination in early childhood: experience of a medical center in the past 2 decades. *J Chin Med Assoc*. 2010;73:634-7.
4. Jin CQ, Dong HX, Sun ZX, Zhou JW, Dou CY, Lu SH, *et al*. Acute immune thrombocytopenic purpura as adverse reaction to oral polio vaccine (OPV). *Hum Vaccin Immunother*. 2013;9:1739-40.
5. Akbayram S, Karaman K, Ece Ý, Hatice Akbayram T. Acute immune thrombocytopenic purpura following oral polio vaccination. *Platelets*. 2015;26:705.

## Immune Thrombocytopenic Purpura in Typhoid Fever

A 10-year-old boy presented with fever for 5 days along with pain abdomen, headache and anorexia. On examination, there were echymotic spots over soft palate and venepuncture sites. Patient had hepatosplenomegaly; signs of meningeal irritation were absent.

Investigations were as follows: hemoglobin, 11.3 g/dL, total leucocyte count  $8.4 \times 10^9/L$  (N83 L15 M2), Platelet:  $45 \times 10^9/L$ ; C-reactive protein: 123 mg/dL, and ALT 110 U/L. Electrolytes and renal function tests were normal. Urine and stool examination showed 10-15 red blood cells/high power field. Coagulation profile was within normal range.

Patient was started on intravenous Ceftriaxone from the day of admission. Widal test showed titre of 1:320 against *S. typhi*. Blood culture also revealed growth of *S. typhi*, sensitive to Ceftriaxone.

From day three of admission, fever spikes started to decrease in severity as well as frequency. On fourth day, platelet count further decreased to  $26 \times 10^9/L$  whereas CRP decreased to 23 mg/dL. On day 5, patient became afebrile but there were new echymotic spots around elbow joint with platelet count further reducing to  $12 \times 10^9/L$ . Bone marrow examination revealed increased numbers of megakaryocytes with other blood cell-precursors in normal ranges; a picture suggestive of Immune Thrombocytopenic Purpura (ITP).

We started oral prednisolone (2 mg/kg/d) with gradual tapering over 4 weeks. On day-10 of admission, platelet count increased to  $84 \times 10^9/L$ , and at 1-month follow-up, it was  $183 \times 10^9/L$ .

Hematological changes in typhoid fever constitute of anemia, leucopenia, thrombocytopenia and subclinical disseminated intravascular coagulation [1]. Toxin-mediated bone marrow suppression, chronic granulomatous changes and hemophagocytic histiocytosis are among the reported bone marrow changes [2,3]. Isolated thrombocytopenia in typhoid fever has been reported earlier [4], but documented bone marrow changes suggestive of ITP in blood culture proven typhoid fever is rarely documented.

**\*ANIRUDDHA GHOSH AND ARUNALOKE BHATTACHARYA**

*Department of Pediatric Medicine,  
Institute of Child Health, Kolkata, West Bengal, India.  
\*aniruddha179@gmail.com*

#### REFERENCES

1. Khosla SN, Anand A, Singh U. Hematological profile in typhoid fever. *Trop Doctor*. 1995;25:156-8.
2. Lee JH, Lee YH, Ahn SH, Choi HS. Granulomatous bone marrow disease- a review of the hematopathologic analysis of 27 cases. *Kor J Clin Pathol*. 1985;5:515-21.
3. Miller SI, Pegnes DA. Salmonella species, including *Salmonella typhi*. In: Mandell GL, Bennet JE, Dolin R. Principles and Practice of Infectious Diseases. Philadelphia: Churchill Livingstone; 2000. p. 2344-63.
4. Serefhanoglu IK, Kaya E, Aydogdu I, Sevinc A, Kuku I, Ersoy Y. Isolated thrombocytopenia: the presenting finding of typhoid fever. *Clin Lab Haematol*. 2003;25:63-5.