

BILATERAL SUBCONJUNCTIVAL HAEMORRHAGE IN CHILDHOOD ENTERIC FEVER

Dear Sir,

Enteric fever is a common infectious disease of the tropical region, with about 80% occurring in the Asian countries.⁽¹⁾ This letter reports an unusual manifestation of bilaterally symmetrical subconjunctival haemorrhage which developed during the course of childhood enteric fever, in the absence of coagulopathy and disseminated intravascular coagulation (DIC).

A seven-year-old boy presented with high-grade, continuous fever of six days' duration. The mother also noticed a sudden appearance of redness in both eyes five days after the commencement of the fever. There was no history of cough, nausea or vomiting. On examination, the child was febrile with a temperature of 39.7°C. His tongue was coated. The liver was palpable 2 cm below the right costal margin, while the spleen tip was just palpable below the left costal margin. On examination of the eyes, bilateral, frank subconjunctival haemorrhage was noted at the lower bulbar conjunctivae (Fig.1). The bleed was sudden in onset and was red in colour. The boy did not complain of pain or an interference with vision. The haemorrhage did not increase during the course of the hospital stay. There was no evidence of bleeding from other sites. He had no history of bleeding episodes in the past, and the family history for such complaints was negative.



Fig. 1 Photograph shows bilateral lower bulbar subconjunctival haemorrhage.

The laboratory tests demonstrated the following: haemoglobin 8 g/dL; white blood cells count 9,200/mm³ (55% neutrophils, 41% lymphocytes) and platelet count 375,000/mm³. The serum urea, creatinine and the urinary sediment analyses were normal. The blood cultures and the Widal test (O titre 1:640) were positive for *Salmonella typhi* (*S. typhi*). The urine and stool cultures for the same organism were negative. The stool for occult blood was negative. The bleeding time, prothrombin time (PT), activated partial thromboplastin time (APTT) and the D-dimer assay were normal, thereby excluding DIC. The slit-lamp examination of the eyes revealed no signs of internal haemorrhage. Intravenous fluids and parenteral ceftriaxone were started. The haemorrhage was managed conservatively. The child was afebrile on the fifth post-admission day. He was discharged on the tenth day, having made a full clinical recovery. At the time of discharge, the haemorrhage had considerably decreased in size. The child had no evidence of bleed at the end of six weeks of follow-up.

The haematological manifestations in typhoid fever are unusual, in contrast to the haemostatic abnormalities, which occur quite often.⁽²⁾ In most series, DIC, either subclinical or florid, was the most common haematological abnormality described. Subclinical DIC is more common than those associated with bleeding manifestations.⁽²⁻⁴⁾ In most reports, DIC with bleeding was associated with a complicated disease course. Abnormalities in PT, APTT, platelet count, serum fibrinogen, fibrin-degradation products, factors VII, VIII, XII, protein C and plasminogen levels are frequently noted.^(3,4) Some studies have correlated the haemostatic abnormalities with clinical evidence of bleeding,⁽⁵⁾ while others have failed to find any such correlation.⁽³⁾ Other significant changes observed are anaemia, leucopenia, eosinopenia and thrombocytopenia.⁽⁵⁾ Lymphopenia and monocytopenia are more frequently noted compared to neutropenia.⁽⁴⁾ Despite an extensive MEDLINE search, no documented instance of childhood enteric fever, complicated by bilateral subconjunctival haemorrhage in the absence of DIC, was encountered.

Yours sincerely,

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REFERENCES

1. Typhoid fever. In: Park K, ed. Park's Textbook of Preventive and Social Medicine. 20th ed. Jabalpur: Banarsidas Bhanot, 2009; 206-10.
2. Miró-Quesada M, Crosby E, Gotuzzo E, Guerra J, Carrillo C. Hemostasis in typhoid fever. *Johns Hopkins Med J* 1981; 148:73-7.
3. Koul PA, Quadri MI, Wani JJ, Wahid A, Shaban M. Haemostatic abnormalities in multidrug-resistant enteric fever. *Acta Haematol* 1995; 93:13-9.
4. Spencer DC, Pienaar NL, Atkinson PM. Disturbances of blood coagulation associated with *Salmonella typhi* infections. *J Infect* 1988; 16:153-61.
5. Khosla SN, Anand A, Singh U, Khosla A. Haematological profile in typhoid fever. *Trop Doct* 1995; 25:156-8.