

## Laboratory disease: Case of pseudothrombocytopenia

Respected Sir/Mam,

This is with respect to an article published in your journal, "Laboratory disease: Case of pseudothrombocytopenia." I would like to discuss a similar case of pseudothrombocytopenia observed at our tertiary care hospital of northwestern part of India.

A 17-year-old male patient was referred to our hospital with complaints of fever and a provisional diagnosis of thrombocytopenia under evaluation. On our workup of the patient, his blood tests showed Hb – 14.1 g/dL, red blood cell count –  $5.30 \times 10^6$ /uL, white blood cell (WBC) count –  $5.33 \times 10^3$ /uL, and platelet count –  $4 \times 10^3$ /uL. His creatinine was 0.7 mg/dl and serum glutamic pyruvic transaminase was 55 U/L. On examination of peripheral blood smear, numerous clumps of platelets were observed [Figure 1]. This created suspicion of ethylenediaminetetraacetic acid (EDTA)-induced thrombocytopenia as the cause of low platelet count on automated hematology analyzer in the sample. To confirm the observation, patients' blood sample was taken in sodium citrate-containing vial instead of EDTA vial. The sample in sodium citrate showed Hb – 14.1 g/dL, red blood cell count –  $5.30 \times 10^6$ /uL, WBC count –  $5.33 \times 10^3$ /uL, and platelet count –  $150 \times 10^3$ /uL. Examination of peripheral blood smear showed a regular dispersed pattern of platelets present in adequate numbers [Figure 2]. On

repeated sampling, similar results were obtained in EDTA and sodium citrate-containing vials, respectively. Finally, a diagnosis of pseudothrombocytopenia attributed to EDTA was made.

The diagnosis of EDTA-induced thrombocytopenia is hubristic but tenacious adherence to peripheral blood smear examination remains the gold standard. Our findings repudiate the blindfolded dependence on automated hematology analyzer, particularly in case of low platelet counts. I hope my case discussion will further strengthen the aforementioned article and emphasize the need to cross-check spuriously low platelet counts reported by automated analyzers with manual peripheral blood smear examination.

### Declaration of patient consent

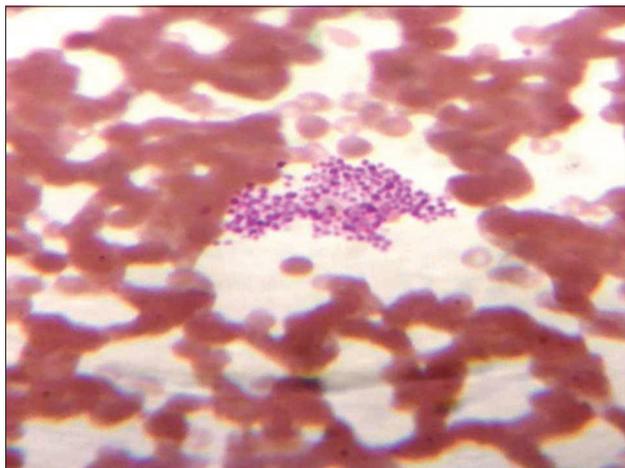
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

### Financial support and sponsorship

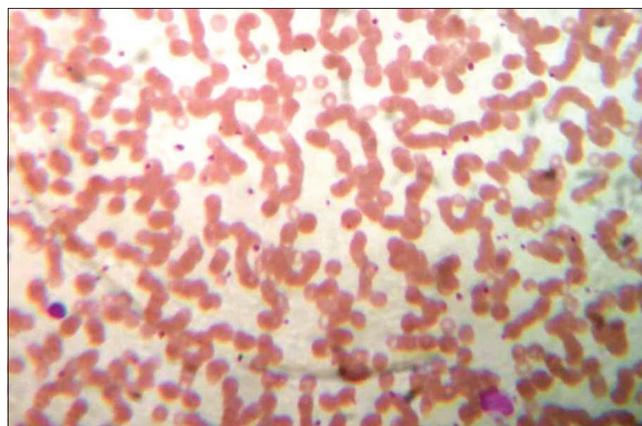
Nil.

### Conflicts of interest

There are no conflicts of interest.



**Figure 1:** Leishman-stained peripheral blood film ( $\times 100$ ) showing platelet clumps in sample of ethylenediaminetetraacetic acid vial



**Figure 2:** Leishman-stained peripheral blood film ( $\times 100$ ) showing normal dispersed pattern of platelets in sample of citrate vial

Letter to Editor

Sohil Nakra, Ashmeet Kaur, Rateesh Sareen,  
Menka Kapil

Santokba Durlabhji Memorial Hospital and Research Centre,  
Jaipur, Rajasthan, India

**Address for correspondence:**

Dr. Rateesh Sareen,  
Santokba Durlabhji Memorial Hospital and Research Centre,  
Jaipur, Rajasthan, India.  
E-mail: [drrateeshsareen@yahoo.com](mailto:drrateeshsareen@yahoo.com)

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