Platelet Disorders by Electron Microscopy

Platelet electron microscopy may be performed in cases in which patients present with apparent defects in primary hemostasis or abnormal platelet aggregometry results. The most common indication for the test is a suspected storage pool deficiency (SPD) secondary to a hereditary or acquired decrease in specific platelet organelles called granules. Deficiencies in the substances that alpha granules and/or dense (delta) granules contain may lead to bleeding disorders characterized by easy bruising, epistaxis, and prolonged bleeding times. Primary SPD is seen in several conditions including: Hermansky-Pudlak, Wiskott-Aldrich, Grey Platelet, and Chediak-Higashi Syndromes. In addition, other diseases such as Paris-Trousseau/Jacobsen and MYH9-related disorders are associated with other ultrastructural platelet abnormalities.
At UNMC, platelets are examined both by whole mount electron microscopy to assess the number of dense granules (normally more than 2 per platelet) and conventional transmission electron microscopy to evaluate platelet morphology.

SPECIMEN REQUIREMENTS

Blood: 9 ml whole blood in ACD (acid citrate dextrose) /yellow-top tubes, solution A or B. Minimum submission: 5 ml of whole blood.

STORAGE

Acceptable specimens: Peripheral blood at room temperature

TRANSPORT

Local Courier Delivery Address:
Regional Pathology Services
Dept of Pathology & Microbiology
University of Nebraska Medical Center
981180 Nebraska Medical Center
Omaha, NE 68198-1180

FedEx/UPS Shipping Address:
UNMC Shipping & Receiving Dock
Regional Pathology Services MSB 3500
University of Nebraska Medical Center
601 Saddle Creek Road
Omaha, NE 68198-1180

SPECIAL INSTRUCTIONS

If possible, notify the UNMC EM Lab via telephone as to when to expect a specimen or with any questions: 402-559-7729

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