



Hemepath Case 2: 3-Year-Old Girl

HISTORY

A 3-year-old girl, who had an upper respiratory tract infection 2 weeks ago, is noted to have purple, pinpoint hemorrhages in her buccal mucosa and several bruises on her legs. She has experienced 4 episodes of nosebleeds in the last week.

On physical exam, the spleen and liver are both non-palpable. No lymphadenopathy is noted.

CBC

Hgb (g/L)	N
MCV	N
WBC	N
Plt	Low

DESCRIPTION OF SLIDE

Peripheral Blood Smear

The peripheral blood smear shows severe thrombocytopenia and the presence of megathrombocytes (see circles). RBCs and WBCs are normal.

*** To see the slide annotations in Imagescope, click on VIEW, then ANNOTATIONS, and then on the "eye" icon adjacent to the word "Layers". In the "Layer Attributes" box, a brief description of the annotations is provided. You may also click on individual layer region (e.g. region 1) in the "Layer Regions" box to locate each annotation – this is especially helpful in identifying annotations when the slide is not zoomed in. ***

MORPHOLOGICAL DIAGNOSIS

Immune thrombocytopenic purpura (ITP)

DISCUSSION

Acute immune thrombocytopenic purpura (ITP, also known as "idiopathic thrombocytopenic purpura") may be seen in children following a viral infection or vaccination. It is also seen in adults, although usually without the associated viral infection. Antibodies produced by the body's immune system cross-react with platelet surface proteins; the platelets are then phagocytosed by splenic macrophages. Spontaneous bleeding may occur if the platelet count falls below $15 \times 10^9/L$. 85-90% of pediatric acute ITP will resolve spontaneously. Pediatric treatment includes IVIG as a first-line therapy, and steroids as a second-line treatment.