



## Hemepath Case 50: 22-Year-Old Woman

### HISTORY

A 22-year-old woman has a routine CBC as part of an annual physician's visit. She feels well, and has no complaints. Her past medical history is notable only for an automobile accident she had as a toddler: at that time she was hospitalized for several weeks, but she has no memory of the accident itself.

### CBC

Hgb (g/L)	N
MCV	N
Reticulocyte Count	N
WBC	N
Plt	N

### DESCRIPTION OF SLIDE

#### Peripheral Blood Smear

The RBCs show several abnormalities, including Howell-Jolly bodies (see arrows), acanthocytes (see rectangles), and Pappenheimer bodies (see circles). Leukocytes and platelets are unremarkable.

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### MORPHOLOGICAL DIAGNOSIS

Hyposplenism

### DISCUSSION

This is a case of hyposplenism: the patient presumably had her spleen removed following her car accident. Hyposplenism refers to a decreased function of the spleen, and may be due to surgical splenectomy or a variety of medical conditions including sickle cell anemia, congenital agenesis, and autoimmune disorders (e.g. systemic lupus erythematosus, rheumatoid arthritis, etc).

The presence of Howell-Jolly bodies, Pappenheimer bodies, and acanthocytes are all consistent with hyposplenism. Other peripheral blood findings in hyposplenism include

target cells and Heinz bodies (although these latter bodies require special stains to identify them).

Patients with reduced splenic function are at an increased risk of bacterial infections and lethal septicemia, as opsonized organisms are no longer removed by splenic reticuloendothelial macrophages. This is particularly true for such encapsulated bacteria as pneumococci, meningococci, and *Haemophilus influenzae*.