



# Atraumatic Indications for Splenectomy

# 102

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## Algorithmic Approach

Indications for splenectomy for atraumatic reasons can be divided into several categories: benign, malignant, and others.

Algorithm 102.1. Benign conditions include red blood cell (RBC) disorders (A), hemoglobinopathies (B), and platelet disorders (C). Malignant conditions include white blood cell (WBC) disorders and bone marrow disorders, while other conditions include infectious and other lesions.

A. RBC disorders can be divided into congenital (hereditary spherocytosis [HS], enzyme deficiencies, such as pyruvate kinase and glucose-6-phosphate dehydrogenase deficiencies) and acquired such as warm-antibody autoimmune hemolytic anemia. Among these, indications for splenectomy include recurrent transfusions and intractable leg ulcers in HS and recurrent transfusions in pyruvate kinase deficiencies. Failure of medical therapy is an indication for splenectomy in condition such as warm-antibody autoimmune hemolytic anemia. Splenectomy is not indicated in

glucose-6-phosphate deficiencies.

dehydrogenase

Algorithm 102.2. Hemoglobinopathies include sickle cell anemia (SCA) and thalassemia, and indications for splenectomy are shown in Algorithm 102.2.

- A. In case of SCA, restoration of RBC volume is important. If patient is refractory, then splenectomy is needed.
- B. Transfusions and iron chelation are the treatment therapy for thalassemia. Splenectomy is indicated in case of refractory symptoms.

Algorithm 102.3. Platelet disorders include idiopathic thrombocytopenic purpura (ITP), which is the most common indication for elective splenectomy, and thrombotic thrombocytopenic purpura (TTP).

- A. When platelets are  $<30,000/\text{mm}^3$ , medical therapy is the first step.
- B. Indications for splenectomy in case of ITP include failure of medical therapy and recurrent disease.

Algorithm 102.4.

- A. First-line treatment for TTP is plasmapheresis.

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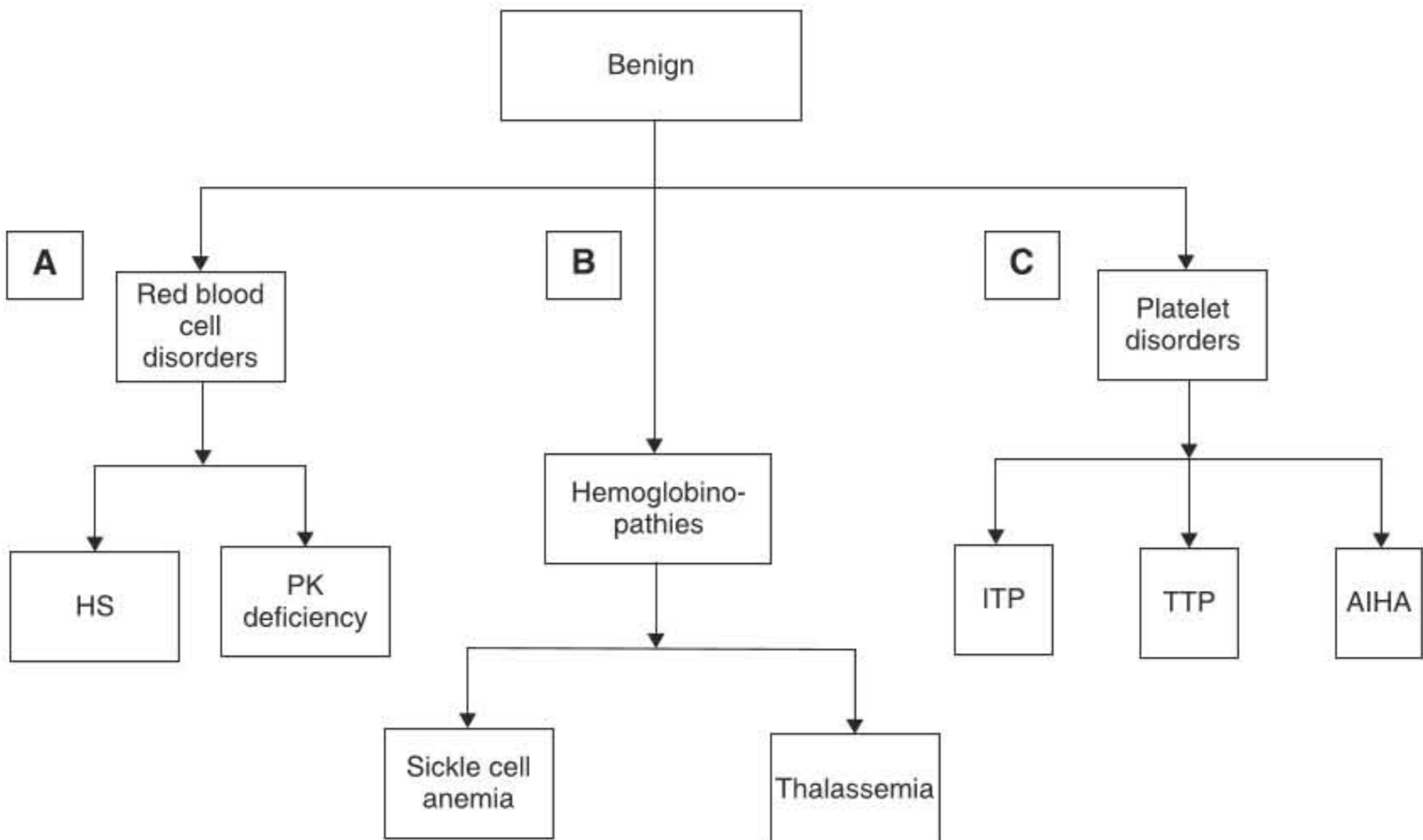
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B. Excessive plasma exchange requirements can be an indication for splenectomy.

Malignant conditions include white blood cell (WBC) disorders and bone marrow disorders. WBC disorders include non-Hodgkin's lymphoma (NHL), Hodgkin's disease, hairy cell leukemia, and chronic lymphocytic leukemia. Indications for surgery for NHL include symptomatic splenomegaly and cytopenia. Bone marrow disorders include acute myeloid leukemia,

chronic myeloid leukemia, chronic myelomonocytic leukemia, polycythemia vera, myelofibrosis, and essential thrombocythemia. Indications for splenectomy in these conditions are usually due to symptomatic splenomegaly.

Other conditions include splenic abscesses, cysts, and metastasis. Splenectomy is the therapy of choice for abscesses and symptomatic parasitic cysts, while symptomatic nonparasitic cysts can be treated with partial splenectomy or unroofing.



Algorithm 102.1