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50 Years Ago in *THE JOURNAL OF PEDIATRICS*

Overwhelming Infection in Children Following Splenectomy

Lucas RV, Krivit W. *J Pediatr* 1960;57:185-91

The first recorded splenectomy was performed more than 450 years ago, but the infectious complications were not described until 1952 when King and Shumacker¹ reported on 5 splenectomized infants in whom either fatal or life-threatening bacterial infections developed within 3 years of splenectomy. In that era, accepted indications for childhood splenectomy included leukemia, aplastic anemia, and neutropenia, which suggested that the underlying disease, rather than splenectomy itself, might be the predisposing risk factor for serious infection. Fifty years ago in *The Journal*, Lucas and Krivit describe 74 children without underlying infection susceptibility who underwent splenectomy for spherocytosis, immune thrombocytopenic purpura, or traumatic splenic rupture. Four children (5%) died of overwhelming infection within 2.5 years of surgery. The authors recognized a “slight, but real” increased risk and keenly pointed out that early identification and treatment of infection are crucial for preventing this usually fatal complication.

Much has changed over 50 years; however, these insights are still quite relevant today, particularly recommendations to delay surgery until later childhood and to aggressively identify and treat infections in children after splenectomy. The widespread use of penicillin prophylaxis and development of effective vaccinations against bacteria typically responsible for sepsis have markedly decreased the risk and incidence of overwhelming post-splenectomy infection. The 23-valent pneumococcal polysaccharide vaccine (PPSV23) and the more recent pneumococcal conjugate vaccine (PCV7) have also reduced the risk and incidence of overwhelming infection, but even today there remains a “slight, but real” risk because of antibiotic resistance and serotypes not covered by the vaccines.

Splenectomy is still performed today for spherocytosis and immune thrombocytopenic purpura, but unlike most of the patients described by Lucas and Krivit, the specific diagnosis alone is no longer an indication for surgery. For example, splenectomy is usually recommended only for symptomatic splenomegaly in spherocytosis. Moreover, partial (subtotal) splenectomy can relieve the underlying hematological problems while preserving some splenic immune function to minimize infectious risks.² ■

Patrick T. McGann, MD
 Russell E. Ware, MD PhD
 Department of Hematology
 St. Jude Children Research Hospital
 Memphis, Tennessee
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