

## Splenectomy for Splenic Abscess

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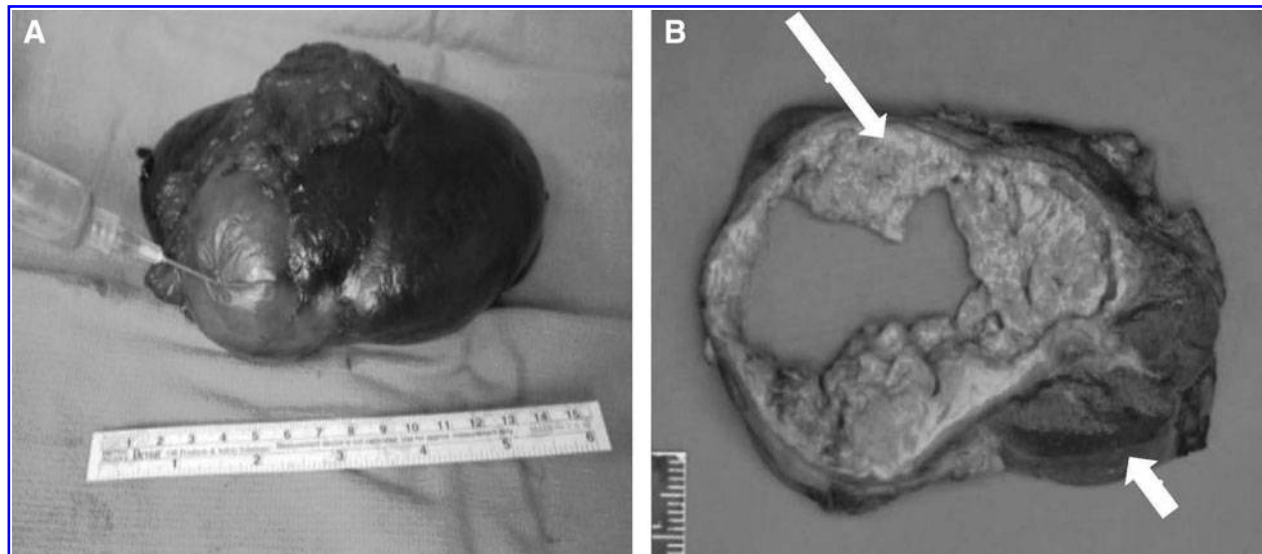
A 63-year-old male presented with abdominal pain and on diagnostic evaluation with computed tomography of the abdomen was noted to have a splenic infarct. The patient had a history of hypertension and repair of a right hip fracture complicated by extensive post-operative deep vein thrombosis in the right lower extremity that was treated with warfarin. Blood cultures were not obtained at the patient's initial presentation, but 2 wks later he was found to have *Enterococcus faecalis* bacteremia. Ultrasound once again demonstrated the splenic infarct with some fluid component. Transthoracic echocardiography confirmed mitral valve endocarditis with severe mitral regurgitation but no symptoms of heart failure. Magnetic resonance imaging of the patient's head showed a punctate, contrast-enhancing lesion in the anterior frontal lobe, raising concern about the possibility of an asymp-

tomatic brain embolus. He was treated with intravenous penicillin and gentamicin, with a plan to undergo mitral valve replacement after completion of his antibiotic regimen. However, interval abdominal ultrasound imaging revealed a splenic fluid collection consistent with a splenic abscess.

The patient was managed initially with a percutaneous drainage catheter placed into the splenic abscess by the interventional radiology service and 6 wks of systemic antibiotic therapy. A repeat abdominal ultrasound examination demonstrated resolution of the splenic abscess, and the drainage catheter was removed. However, a week after this, while the patient was still receiving antibiotics, further imaging showed re-development of the splenic abscess (Fig. 1). The decision was therefore made to proceed with splenectomy. Vaccinations for encapsulated organisms were given



FIG. 1. Craniocaudal (left) and anteroposterior (right) computed tomographic images of splenic abscess (arrows).



**FIG. 2.** (A) Surgical specimen with aspiration of abscess contents for gram stain and culture. (B) Cross-sectional gross specimen showing replacement of normal splenic parenchyma (wide arrow at bottom) by abscess cavity (small arrow at top).

pre-operatively. Because the patient had had no prior abdominal surgery, we were able to perform a hand-assisted laparoscopic splenectomy without complication. Intraoperative cultures of the patient's splenic abscess identified *E. faecalis* susceptible to penicillin, ampicillin, and vancomycin. Surgical pathology confirmed a multiloculated splenic abscess measuring 8.5×6.5×5.0 cm (Fig. 2). The patient went home on post-operative day three and underwent mitral valve replacement 5 wks later. Tissue cultures of his mitral valve were negative.

Splenic abscess is an uncommon disease, usually associated with endocarditis or immunosuppression, with a reported incidence of 0.14%–0.7% in autopsy studies and fewer than 600 cases reported in the literature [1]. Its most common etiology is hematogenous spread of a pathogen from an infective focus elsewhere in the body. Infective endocarditis, associated with systemic embolization in 20%–50% of cases, is accompanied by a 10%–20% incidence of splenic abscess. The causative pathogens are diverse, and the condition is polymicrobial in up to 50% of cases. Treatment consists either of percutaneous drainage or splenectomy (laparoscopic or open) with appropriate concomitant antimicrobial therapy [2]. Percutaneous drainage is indicated for easily accessible abscesses with few loculations and for patients who cannot tolerate surgery with general anesthesia. Multilocular splenic abscesses, ill-defined cavities, septations, and necrotic debris typically do not respond well to percutaneous drainage. Laparoscopic splenectomy for splenic abscess can be performed safely and is associated with a decreased length of stay [3]. In cases of concurrent infective endocarditis, the decision to perform simultaneous rather

than staged splenectomy and valve replacement depends on individual patient factors [4,5].

#### References

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