
Transcatheter closure of a large abdominal aortic pseudoaneurysm with a septal occluder device

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A 15-year-old boy with a pulsating abdominal mass was admitted to our department. Six months ago, he had suffered a knife stab injury in the right upper abdomen and had undergone an emergency laparotomy (involving the stomach, retroperitoneum, and superior mesenteric vein repair) in a local hospital. On clinical examination, the patient was emaciated and dyscrasic, and a grade III systolic murmur was audible over the abdomen. Multislice computed tomography (MSCT) scan showed two abdominal aortic pseudoaneurysms among visceral arteries, completely occluded left renal artery, and atrophied left kidney; this observation indicated that the knife stab had penetrated both the anterior and posterior walls of the abdominal aorta at the level of the origin of the right renal artery. The diameter of the anterior pseudoaneurysm was 80 mm, with a 10.9 mm neck, and that of the posterior pseudoaneurysm was 16 mm, with a 6.1 mm neck (Panel A). Open surgery was not considered because of the inaccessibility of the vascular lesion and the high morbidity and mortality rates. Endovascular stent-graft placement was also found unsuitable due to the location of entry points of the pseudoaneurysms.

Therefore, an 8 mm Heatr Septal Occluder (Lifetech Medical, Shenzhen, China) was deployed percutaneously into the anterior false aneurysm. The small posterior pseudoaneurysm was not operated concomitantly in order to avoid a possible aortic stenosis. Final angiogram (Panel B) and computed tomography angiogram (Panel C) verified the effective occlusion of the larger defect. The patient had an uneventful recovery and was discharged 14 days after surgery. At 3 month follow-up, the patient was symptom free, and the MSCT showed satisfactory results (Panel D).