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Balloon Occlusion and Stent Graft for Aortic Trauma

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TITLE PAGE

Title:

Balloon occlusion and stent-graft for aortic trauma

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None

Balloon occlusion and stent-graft for aortic trauma

A 27-year-old skier fell from a cliff and landed on a frozen river. On admission, he had no traumatic brain injury or penetrating trauma, but focused assessment sonography for trauma showed a large retroperitoneal hematoma. Despite resuscitation and transfusion of 14 units of red blood cells, arterial blood pressure remained 50/30 mm Hg. A 20mm occlusion balloon (Equalizer; Boston Scientific, Natick, Massachusetts) was inflated in the supra celiac aorta, restoring his pressure to 90/40 mm Hg. Aortography showed extravasation from the infra-renal aorta (Figure 1a). The most readily available stent graft, a 14mm x 80mm Wallgraft (Boston Scientific) was deployed (Figure 1b). Postprocedural computed tomography revealed an anterior wall fracture of the second lumbar vertebra (Figure 2). After decompressive laparotomy, the patient was extubated on day 7 and was discharged from the hospital 2 months later, without any balloon-related complications.

Figure legends

Figure 1. (a) after partial deflation of the occlusion balloon (arrowhead), aortography showed a large infra renal aortic injury with rapid extravasation (arrow). (b) after deployment of a covered stent, repeat aortography confirmed successful treatment of the injury, and patency of renal arteries.

Figure 2. Sagittal reconstruction of postprocedural computed tomography angiography revealed fracture of the second lumbar vertebra responsible for the aortic injury (star), and satisfactory placement of the covered stent (arrowhead).





