LOBO™ Vascular Occlusion System

CASE REVIEW
Abdominal Hematoma

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Patient History

A 91 year old male with a past medical history of COPD, CAD, dementia and DVT on Eliquis presented to the ED for severe abdominal pain and a large bruise over his left anterior abdominal wall. The patient was hypotensive and his hemoglobin was 7g/dL, a drop from a baseline of 11g/dL. An abdominal and pelvic CT with contrast showed a large anterior abdominal hematoma wall

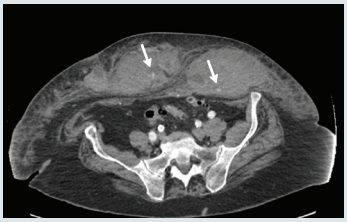

Figure 1. Contrast enhanced CT of the pelvis shows large anterior abdominal wall rectus sheath hematoma with active extravasation (arrows).

rectus sheath with active extravasation (Figure 1). Interventional Radiology was consulted for angiography with possible embolization. Conservative measures including pressure dressing and fluid resuscitation failed to control his symptoms.

Intervention

The patient was subsequently brought to the angiography suite because of dropping hemoglobin and low blood pressure. The suspected source of bleeding was the left inferior epigastric artery. Left common femoral access was chosen and a 5F sheath was placed following ultrasound guided vascular access. A 5F Sos Omni catheter was used to select the left inferior epigastric artery. Arteriography demonstrated no active bleeding (Figure 2). Coaxially a 2.8F PROGREAT microcatheter was advanced into the left inferior epigastric artery where repeat arteriography was performed.

Figure 2. Selective angiogram of the left inferior epigastric artery revealing patent vessel with no active extravasation within the distal or proximal branches.

Embolization

The embolization technique utilized a gelfoam slurry to target tiny distal vessels and to ensure distal hemostasis. Proximally, a permanent occlusion was necessary to prevent recurrent bleeds. The flexibility of the LOBO-3 occluder enabled smooth delivery through the tortuosity of the reverse curve catheter and 2.8mm left inferior epigastric artery. The deployment was precise and stable without migration (Figure 3). LOBO-3 provided rapid and complete occlusion of the target artery with a single device (Figure 4).

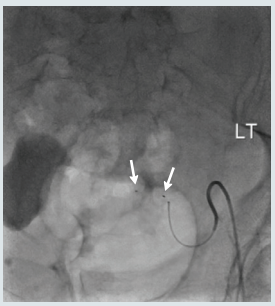

Figure 3. Spot image demonstrates a microcatheter within the proximal left inferior epigastric artery. Delivery of LOBO-3 can be seen via the proximal and distal radiopaque markers (arrows).

Follow-up

A contrast enhanced CT post embolization demonstrated the large abdominal hematoma without active extravasation and LOBO-3 within the target artery (Figure 5). The patient remained bleed free during his hospitalization. His hemoglobin improved and blood pressure normalized. He left the hospital 3 days following the embolization procedure.

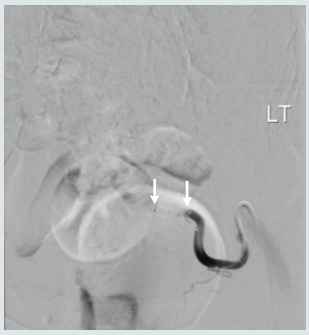

Figure 4: Selective post embolization angiogram revealing complete occlusion of the left inferior epigastric artery following deployment of the LOBO-3 (arrows).

Conclusion

The LOBO-3 occluder provides for smooth trackability and delivery in a tortuous environment. Placement of a single device resulted in rapid and accurate target vessel occlusion without migration. The device generates minimal CT artifact which is of benefit during follow-up imaging.

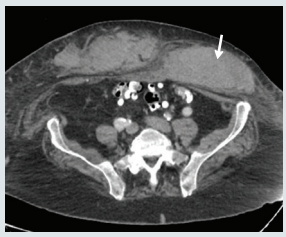

Figure 5: Contrast enhanced CT post embolization shows large anterior abdominal wall rectus sheath hematoma (single arrow) without active extravasation and LOBO-3 (double arrows) within the left inferior epigastric artery.

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See Instructions for Use for a complete list of warnings, precautions, and contraindications.