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Embolization of a Large Hypogastric Ostium Aneurysm With Interlock™-18 Fibered Detachable Coils

BY ALBERTO SIRONI, MD

CASE PRESENTATION

A 77-year-old man presented with a large aneurysm located in the ostium of the hypogastric artery, which was diagnosed during CT control imaging. The angiographic control imaging confirmed a saccular aneurysm that was hemodynamically unstable (Figure 1).

PROCEDURE DESCRIPTION

Using a 155-cm Bern-tip Direxion™ Microcatheter preloaded with a Fathom®-16 Guidewire, we were able to engage the hypogastric artery directly from the iliac artery and place the tip inside the aneurysm. The angiographic sac evaluation confirmed the saccular anatomy and showed a large vessel feeding the gluteus (Figure 2).

In order to preserve the hypogastric artery, we chose to embolize with Interlock™-18 Fibered Detachable Coils. The initial framing of the aneurysm was performed using two 22-mm X 60-cm coils. The empty space was packed with two 20-mm X 50-cm coils and three 10-mm X 30-cm coils (Figure 3).

FOLLOW-UP AND DISCUSSION

The last angiographic control showed a complete occlusion of the aneurysm, leaving the gluteus feeding vessel patent (Figure 4).

The Interlock™-18 enabled us to use fewer coils, and the Dacron® fibers allowed us to perform a fast and effective occlusion. ■

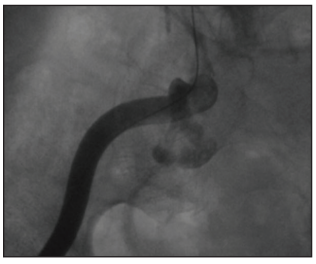

Figure 1.

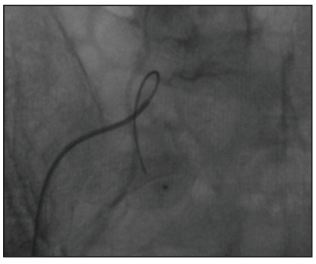

Figure 2.

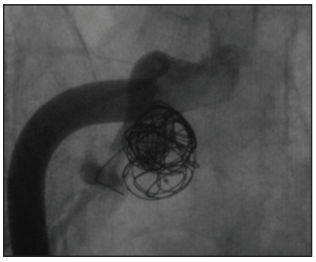

Figure 3.

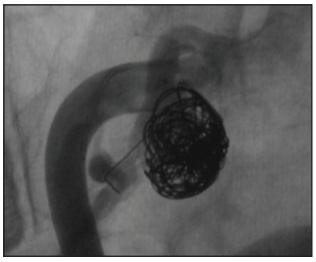

Figure 4.

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Disclosures: None.

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Direxion Direxion HI-Flo

CAUTION: *Federal law (USA) restricts this device to sale by or on the order of a physician. Rx only. Prior to use, please see the complete "Directions for Use" for more information on Indications, Contraindications, Warnings, Precautions, Adverse Events, and Operator's Instructions.*

INTENDED USE/INDICATIONS FOR USE

The Direxion and Direxion HI-FLO Torqueable Microcatheters are intended for peripheral vascular use. The pre-loaded Fathom and Transend Guidewires can be used to selectively introduce and position the microcatheter in the peripheral vasculature. The microcatheter can be used for controlled and selective infusion of diagnostic, embolic, or therapeutic materials into the vessel.

CONTRAINDICATIONS

None known.

WARNINGS

- Never advance or withdraw an intravascular device against resistance until the cause of resistance is determined by fluoroscopy. Movement of the microcatheter or guidewire against resistance may result in damage or separation of the microcatheter or guidewire tip, or vessel perforation.
- This Direxion Microcatheter family is not intended for use in the coronary vasculature or neurovasculature.
- The Direxion HI-FLO Microcatheter is not designed for the delivery of embolic coils.
- Use of excessive force to manipulate the microcatheter against resistance can cause a fracture in the nitinol shaft. Take care not to over-torque the microcatheter, and to relieve any tension before withdrawal by rotating the microcatheter in the opposite direction.

PRECAUTIONS

• This device should be used only by physicians thoroughly trained in percutaneous, intravascular techniques and procedures.
• Do not introduce the microcatheter without guidewire support as this may cause damage to the proximal shaft of the catheter.
• Because the microcatheter may be advanced into narrow sub-selective vasculature, repeatedly assure that the microcatheter has not been advanced so far as to interfere with its removal.

ADVERSE EVENTS

The Adverse Events include, but are not limited to: allergic reaction, death, embolism, hemorrhage/hematoma, infection, pseudoaneurysm, stroke, vascular thrombosis, vessel occlusion, vessel spasm, vessel trauma (dissection, perforation, rupture).

Fathom-16 Steerable Guidewire

CAUTION: *Federal law (USA) restricts this device to sale by or on the order of a physician. Rx only. Prior to use, please see the complete "Directions for Use" for more information on Indications, Contraindications, Warnings, Precautions, Adverse Events, and Operator's Instructions.*

INTENDED USE/INDICATIONS FOR USE

The FATHOM -16 Steerable Guidewire is intended for general intravascular use in the peripheral vasculature. It can be used to selectively introduce and position catheters and other interventional devices within the peripheral vasculature. This device should be used only by physicians trained in percutaneous, intravascular techniques and procedures.

CONTRAINDICATIONS

None known.

WARNINGS

The FATHOM Steerable Guidewire is not intended for use in the coronary vasculature or the neuro vasculature.

ADVERSE EVENTS

Complications attributed to endovascular procedures are the following: vessel trauma, vessel damage, embolism (catheter/device, air bubble, plaque, thrombus, air embolism, thromboembolism), pseudoaneurysm, seizure/stroke, vessel dissection, hematoma at the puncture site, nerve injury, infection, perforation of the vessel, vessel spasm, hemorrhage, vascular thrombosis, vessel occlusion, death, bleeding, failed treatment, inability to position guidewire, damage to the catheter.

Fibered IDC
Interlock Fibered IDC Occlusion System
IDC Interlocking Detachable Coil

CAUTION: *Federal law (USA) restricts this device to sale by or on the order of a physician. Rx only. Prior to use, please see the complete "Directions for Use" for more information on Indications, Contraindications, Warnings, Precautions, Adverse Events, and Operator's Instructions.*

INTENDED USE/INDICATIONS FOR USE

The Interlock IDC Occlusion System is a modified interlocking detachable coil. The Interlock IDC Occlusion Systems are indicated for obstructing or reducing blood flow in the peripheral vasculature during embolization procedures. These devices are not intended for neurovascular use.

CONTRAINDICATIONS

None known.

PRECAUTIONS

Do not attempt to use the Interlock - 35 Fibered IDC Occlusion System with a soft-walled delivery catheter.
Do not advance the Interlock IDC Occlusion System if it becomes lodged within the catheter. Determine the cause of the resistance and replace the catheter and coil if necessary.

ADVERSE EVENTS

The complications that may result from a peripheral embolization procedure include, but are not limited to: complications related to catheterization (e.g., hematoma at the site of entry, clot formation at the tip of the catheter and subsequent dislodgement, nerve and vessel dissection or perforation, etc.), pain, hemorrhage, infection necessitating medical intervention, foreign body reactions necessitating medical intervention, emboli, ischemia, vasospasm, tissue necrosis, undesirable clot formation of the vasculature, recanalization, death, temporary neurological deficit.

Coils 18-Vortx Dia Strt Fig8 MultiLp CH

CAUTION: *Federal law (USA) restricts this device to sale by or on the order of a physician. Rx only. Prior to use, please see the complete "Directions for Use" for more information on Indications, Contraindications, Warnings, Precautions, Adverse Events, and Operator's Instructions.*

INTENDED USE/INDICATIONS FOR USE

Boston Scientific's 0.018 Fibered Platinum Coils are intended for arterial and venous embolizations in the peripheral vasculature.
The Coil Pusher-16 is intended to be used in conjunction with a microcatheter to deliver and deploy 0.018 pushable occlusion coils.

CONTRAINDICATIONS

None known.

PRECAUTIONS

- The long-term effect of this product on extravascular tissues has not been established, so care should be taken to retain this device in the intravascular space.
- Do not advance the coil with force if the coil becomes lodged within the microcatheter. Determine the cause of resistance and replace the microcatheter and the coil when necessary.
- Replace the microcatheter if increased resistance is noted during coil delivery.

ADVERSE EVENTS

The complications that may result from a peripheral embolization procedure include, but are not limited to: complications related to catheterization (e.g., hematoma at the site of entry, vessel injury, etc.), death, emboli, foreign body re actions necessitating medical intervention, hemorrhage, infection necessitating medical intervention, ischemia, pain, recanalization, temporary neurological deficit, tissue necrosis, undesirable clot formation of the vasculature, vasospasm.