

Embolization of Inferior Pancreaticoduodenal Artery Aneurysms Using the Direxion™ Torqueable Microcatheter

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CASE PRESENTATION

A 77-year-old woman was referred for treatment of two aneurysms (24 X 20 mm and 20 X 18 mm) arising from the inferior pancreaticoduodenal artery (Figure 1). The celiac artery showed chronic total occlusion. The case was discussed with the vascular surgery team before deciding to proceed with coil embolization of both aneurysms.

PROCEDURE DESCRIPTION

Femoral access was achieved and preshaped microcatheters were chosen to reach the target lesions. Many unsuccessful attempts were made to cannulate the aneurysms using a preshaped 45° tip microcatheter and a 90° tip microcatheter (Figure 2).

After several failures, a 2.4-F Direxion™ Torqueable Microcatheter with the Transend™-14 System and a pre-shaped swan neck tip was chosen. The Direxion™ Torqueable Microcatheter was then successfully advanced over a Transend™-14 Guidewire until it reached the two aneurysms (Figure 3). The microcatheter's swan neck-shaped tip was crucial to the success of the procedure because it facilitated access through this challenging anatomy.

A coil packing technique was then performed using Interlock™-18 Fibered Detachable Coils to achieve complete embolization of both aneurysms.

FOLLOW-UP AND DISCUSSION

Final angiography (Figure 4) showed that complete embolization of the two aneurysms was successfully achieved, and the native circulation was preserved. ■



Figure 1.

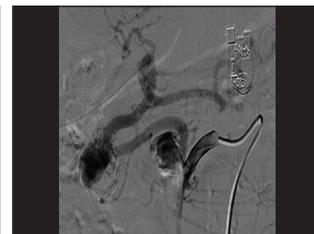


Figure 2.

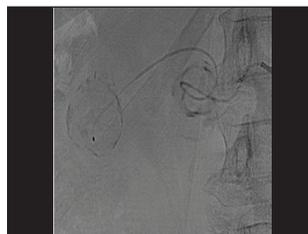


Figure 3.

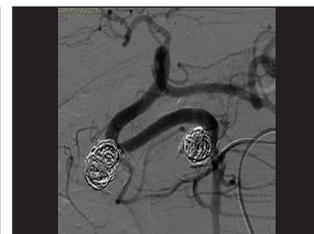


Figure 4.

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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).

Fibred IDC Interlock Fibred IDC Occlusion System IDC Interlocking Detachable Coil

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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 Fibred 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

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INTENDED USE/INDICATIONS FOR USE

Boston Scientific's 0.018 Fibred 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 reactions necessitating medical intervention, hemorrhage, infection necessitating medical intervention, ischemia, pain, recanalization, temporary neurological deficit, tissue necrosis, undesirable clot formation of the vasculature, vasospasm.

Transend Guidewire with ICE Coating

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 Transend Guidewire is intended for general intravascular use, including the peripheral vasculature. The wire can be torqued to facilitate the selective placement of diagnostic or therapeutic catheters.

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CONTRAINDICATIONS

This device is not intended for use in coronary arteries.

PRECAUTIONS

This device should be used only by physicians thoroughly trained in percutaneous, intravascular techniques and procedures.

ADVERSE EVENTS

Complications attributed to guidewire applications are the following:

- Procedural related complications including but not limited to: vessel trauma, vessel damage, air embolism, thromboembolism, post embolization syndrome (abdominal pain, fever, and nausea/vomiting), hematoma at the puncture site, infection, perforation of the vessel, vessel spasm, hemorrhage, vascular thrombosis, death, bleeding
- Failed treatment
- Inability to position guidewire
- Damage to catheter
- Excessive force against resistance may result in separation of the guidewire tip