

# Clinical Update

## 6F Angio-Seal™ Deployment Between Left Heart Catheterization and Intraaortic Balloon Pump Placement Procedures



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**INTRODUCTION:** Dr. Frank Bunch is a graduate of the Meharry Medical College in Nashville, Tennessee and a P.D. McGehee Award winner for Scientific Writing. He completed his interventional cardiology training at Oschner Clinic in New Orleans, Louisiana, and is currently an Attending Physician with Cardiology Associates of Mobile, P.C. in Mobile, Alabama.

**PATIENT HISTORY:** The patient is a 62-year old male with a history of severe coronary artery disease. His treatments include two prior bypass surgeries and a carotid endarterectomy. He is admitted for a cardiac catheterization for ongoing chest pain.

**DIAGNOSTIC CATHETERIZATION PROCEDURE:** The patient underwent a left heart catheterization and graft study using a 6F JL-4 and JR-4 catheter for the left and right native coronary arteries. A 5F pigtail was then placed in the left ventricle and a left ventriculogram was performed. The catheter was then positioned in the aortic root and an aortic arch angiogram was completed. A graft and LIMA study was performed using the 6F multipurpose and IMA catheters.



*Femoral Angiogram*

**IMPRESSION:** The coronary angiogram revealed 100% occlusion of all native and graft vessels except for the left internal mammary artery to his LAD, which subtends his LAD and supplies his entire heart. The aortic arch angiogram revealed a normal sized arch with the great vessels coming off in a normal fashion. A 30% stenosis of the proximal subclavian was noted and pullback pressures were performed which were unremarkable. The aortic and left ventricular pressures were within normal limits. The left ventriculogram revealed the base of the inferior wall was akinetic with moderate dilation. The ejection fraction was in the 30-35% range.

During the procedure, the patient had an episode of atrial fibrillation as well as some chest discomfort and subsequently developed heart failure. The patient was given Lasix® and intracoronary nitroglycerine, the catheters were removed and the arteriotomy site was successfully closed with the 6F Angio-Seal™ Device.

The patient was subsequently admitted for pulmonary edema and persistent hypotension post catheterization. An intraaortic balloon pump (IABP) was attempted via the left femoral artery without success, and the guidewire appeared to stop approximately at the level of the iliac bifurcation. It was believed a significant lesion existed, so the right femoral artery was cannulated 1 cm above the site where the Angio-Seal™ Device had just been placed. The guidewire was passed and the intraaortic balloon pump was successfully placed. The balloon pump was positioned at the level of the carina, under fluoroscopic guidance, and adequate augmentation and sensing was obtained. The patient tolerated the procedure well with no further complications.

**CONCLUSION:** The Angio-Seal™ Device played a vital role in providing immediate hemostasis after sheath removal, post catheterization and prior to placement of the IABP. Later, when the IABP insertion was attempted in the contralateral side and found unusable, the IABP was able to be successfully placed in the right femoral artery by cannulating 1 cm above the initial Angio-Seal™ Device deployment site. The Angio-Seal™ Device worked as expected without complication in this unusual case.

#### Rx Only

**Brief Summary:** Prior to using these devices, please review the Instructions for Use for a complete listing of indications, contraindications, warnings, precautions, potential adverse events and directions for use.

**Indications:** St. Jude Medical Angio-Seal™ Vascular Closure Device product family, including the STS, STS Plus and VIP platforms, is indicated for use in closing and reducing time to hemostasis at the femoral arterial puncture site in patients who have undergone diagnostic angiography procedures or interventional procedures using an 8 French or smaller procedural sheath for the 8F Angio-Seal™ Device and a 6 French or smaller procedural sheath for the 6F Angio-Seal™ Device.

The Angio-Seal™ STS, STS Plus and VIP platform devices are also indicated for use to allow patients who have undergone diagnostic angiography to safely ambulate as soon as possible after sheath removal and device placement, as well as to allow patients who have undergone an interventional procedure to safely ambulate after sheath removal and device placement.

Possible adverse events for vascular closure devices include, but are not limited to: bleeding or hematoma, AV fistula or pseudoaneurysm, infection, allergic reaction, foreign body reaction, inflammation or edema.

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