



PHYSICIAN
Mark Wholey, MD

ACCESS SITES

- Femoral.

DIAGNOSTIC DEVICES USED

SHEATH SIZES

6 F.

FLUSH DIAGNOSTIC CATHETERS

5-F pigtail positioned in the ascending aorta; dilute contrast media (50%) 20 mL at 15 mL/sec.

SELECTIVE DIAGNOSTIC CATHETERS

HN1 for all type I and type II aortic arches; type III aortic arches may require HN5, Simmons 1, Vitek, or Simmons 2 for deep-seated innominate adnominal artery or complex left carotid artery origin.

DIAGNOSTIC GUIDEWIRES

Wholey High Torque neuro; occasionally .035-inch guidewire regular.

DIAGNOSTIC TIPS

- Choose catheters with anatomical configurations that correspond to the great vessels off the aortic arch.
- Do not excessively manipulate.
- If a certain catheter configuration does not work within a few minutes, change the catheter.
- Linear catheter configurations (ie, H-1, JR4) track more easily than a complex curve.

INTERVENTIONAL DEVICES USED

INTERVENTIONAL GUIDEWIRES

The interventional guidewires we use for types I or II aortic arches are the Wholey Standard and Wholey Plus. For type III or complex origins, we use a tapered guidewire (6 cm) Amplatz wire. If the external artery is occluded, we use a 1-cm, tapered Amplatz wire.

INTERVENTIONAL SHEATHS OR GUIDE CATHETERS

We use the multipurpose 8-F guide in at least 85% to 90% of all carotid stenting procedures. Occasionally, we use an AR2 or a Lima guide. Rarely, and only in a complex innominate in a type III arch or our most recently described type IV arch, will we use an AL3 for positioning and support.

PTA BALLOONS

The prestant balloon that we use for the initial dilatation is a 4-mm X 20-mm, low-profile coronary balloon.

STENTS

We use self-expanding nitinol stents; the most common configuration is a 6-mm X 8-mm, tapered, self-expanding nitinol stent. Occasionally, for lesions longer than 2.5 cm, we use a tapered, 4-cm-long, 6-mm X 8-mm-wide stent. A 7-mm X 10-mm stent may also be used when the common carotid diameter is greater than 8 mm.

OTHER DEVICES

We use a recovery sheath for the distal protection filter. We have recently introduced the recovery sheath integrated into the postdilatation balloon. For the poststent-deployment angioplasty balloon, we utilize is 5.5 mm, occasionally 6 mm, although most of the postdilatation procedures are done with 5-mm and 5.5-mm balloons.

For intracranial angioplasty, we use a 6-F, soft tip guide with a diameter of at least 0.66 inch passed to the cervical segment of the internal carotid artery in close proximity to the petrosal segment. For those petrosal lesions, as well as basilar skull and the middle cerebral artery, we use a steerable, .014-inch wire across the target lesions, and subsequently position a low-profile coronary stent at that site. For the middle cerebral artery, we confine the stents to 2 mm, and occasionally 2.5 mm, preceded by predilatation with a 1.5-mm, low-profile coronary balloon. For the petrosal segment and basilar skull internal carotid proximal to the cavernous sinus, we frequently use a low-

profile coronary balloon for predilatation and subsequently a 3-mm to 3.5-mm stent or coated stent at this level.

CONTRAST RECOMMENDATIONS

Low- or iso-osmolar iodinated contrast media. If renal insufficiency is a problem, we will also use 1/3 saline, 1/3 contrast medium, and 1/3 gadolinium.

PHARMACEUTICALS

Atropine, bivalirudin or heparin, Neosynephrine, labatolol, nitroglycerin, Fentanyl, Versed. ■