

Iliac

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According to ACC/AHA guidelines, aorto-iliac (AI) intervention is recommended in patients with lifestyle limiting claudication where the risk benefit ratio of the intervention is favorable. Due to its high success rates, endovascular intervention may be considered as a first line treatment strategy in select cases of AI disease.

1. Vascular access according to lesion location and type

Generally, ipsilateral retrograde access is recommended for common iliac artery (CIA) and proximal and mid external iliac artery (EIA) stenotic lesion. For CIA occlusions, contralateral antegrade route is useful but sometimes may fail to provide enough support and a retrograde approach may be favored. In the case of EIA occlusion, an antegrade crossover approach is feasible. For distal EIA lesion contralateral approach is feasible, as the stent may need to be placed very close to the ipsilateral access site. In the case of ostial bilateral CIA lesions, bilateral common femoral artery (CFA) access is often used in order to facilitate kissing angioplasty or stent placement.

2. Technique for crossing iliac chronic total occlusions

Crossing of the occlusion can be attempted with a 0.014-inch Command wire (Abott Vascular) or in more rigid occlusion my preferred wire is a 0.018-inch Treasure 12 wire (Asahi intecc). during passage, it is advisable to support the catheter with a diagnostic catheter to improve its pushability. Careful attention should be paid to reenter the patent vessel directly at the point of reconstitution to avoid propagation of a dissection into the CFA. Recently in the case of very hard cases, I use IVUS guided retrograde crossing with 0.014 inch Astato XS 20g (Asahi intecc).

3. Angioplasty and Stenting

1) External iliac artery

After successful passage, the entire segment should be stabilized with stent deployment. EIA is typically curved and close to the hip joint, prefer self expanding nitinol stents. Because the EIA is a relatively fragile region with a certain potential for perforation, careful attention should be paid.

2) Common iliac artery

In the case with ostial lesions, balloon expanding stent is preferred. But all devices that are typically needed for an iliac recanalization procedure, including balloon and self expanding stents, are available as 6F compatible products, transbrachial and transradial (in some cases) procedures can be accomplished without the needs for additional access sites

4. Complications

In the literature, complications after iliac artery interventions occurred with a frequency of 7.9% to 23.7%. The majority of complications are access site related, but many procedure related and device related complications have been reported such as access

site complication, dissection, perforation, late aneurysm, pseudoaneurysm, distal embolization, stent thrombosis, stent embolization, stent crush and infection.