Vascular Diseases Quiz – Case 9

A 63 year-old female with severe claudication at her left lower extremity was referred to our Department for evaluation and management. The patient reported having the first signs of mild claudication 5 years before current admission to our Department. Her medical history was notable for smoking, hypertension, diabetes mellitus, hypercholesterolemia and chronic renal failure. Physical examination revealed absence of palpable pulses at the femoral, popliteal and pedal arteries of the left lower extremity. Subsequent workup with digital subtraction angiogram (DSA) is shown in figure 1.

Comment

Digital subtraction angiography demonstrated a chronic total occlusion of the left common and external iliac artery (fig. 1). Since the patient had severe co-morbidities, she was judged unfit for surgery. Therefore she was treated percutaneously, with primary iliac artery stenting (fig. 2) that resulted in complete resolution of her symptoms.

Aortoiliac lesions are classified according to the TransAtlantic Inter-Societal Consensus (TASC) guidelines. This is a classification system initially introduced in 2000 and subsequently modified in 2007, for the treatment of peripheral arterial disease. The goal of this classification is to indicate the best form of treatment for each lesion; TASC A are those lesions considered to be best treated by endovascular techniques, while TASC D lesions are those best treated by open surgery. Lesions that are likely to have a good response to endovascular treatment with low morbidity are listed as TASC B and those that are more likely to benefit from an open surgical approach are placed in TASC C category. Thus longer lesions, with severe calcification and without residual lumen (total occlusions) are most commonly best treated by open surgery according to the currently available scientific evidence, and are classified as TASC C or D.

Unilateral occlusions of both common and external iliac arteries

Figure 1. Digital subtraction angiography demonstrating left common and external iliac artery occlusion.

Figure 2. Digital subtraction angiography showing successful recanalization of the left common and external iliac artery after stenting.
Diagnosis: Chronic total left common and external iliac artery occlusion.

are typically classified as TASC D lesions. Thus, if best medical treatment along with exercise programs have failed to resolve symptoms and operative management is required, open surgery represents the gold standard treatment for these patients. Endovascular revascularization including angioplasty + stenting is an alternative treatment less frequently applied in such extended lesions, since it is considered less likely to succeed in restoring blood flow. However, in the last years, the increased clinical experience of endovascular specialists along with the improvements in endoluminal technology have led to a broader utilization of endovascular therapy even in extended TASC D lesions, with good results.

Although to date, open surgery remains the gold standard treatment for TASC D common and external iliac artery occlusions requiring operative management, endovascular techniques should be considered as a viable alternative to surgery. Especially for high risk patients unfit for surgery, endovascular therapy should represent the first line treatment even for TASC D lesions, if interventional management is judged necessary.

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