Abstract: Remarkable technological advances in the past decade, along with patient preference, have shifted aortoiliac occlusive disease revascularization strategies from traditional open surgical approaches toward lower-morbidity percutaneous endovascular treatments. The availability of stents, more than any other advance, has fueled the growth of catheter-based procedures by improving the safety, durability, and predictability of endovascular techniques.

Keyword: iliac stenosis, kissing balloon stenting

CASE STUDY: 54yrs male smoker presented with Complaints of ulcer right great toe with claudication pain both lower limb for 6 months duration. He also has severe rest pain for past one month both lower limb. On Examination Right great toe dry gangrene was present. Bilateral femoral pulses were feeble with bruit heard. Other pulses were absent distally both lower limbs. Ankle brachial index were 0.4 on right and 0.6 on left lower limb.

CT Angiogram showed Common iliac artery critical Stenosis. Management was by Bilateral Common Iliac Artery Stenting; under local anesthesia bilateral common femoral arteries punctured and 7 French sheath placed. Diagnostic angiogram taken and lesion confirmed and located. 0.035 inch guide wire used and negotiated carefully beyond the lesions. Following this balloon catheters were introduced over the wires on both sides and the diseased segment treated by balloon angioplasty followed by deployment of 9x39mm balloon expandable stents. Check angiogram taken which showed successful correction of lesion and there was palpable pedal pulses in both lower limb. Post operatively period was uneventful. Patient was completely relieved of lower limb pain. There was good palpable distal pulses of both lower limbs with ankle brachial index 1.1 both lower limbs. Patient discharged with good palpable both lower limb pulses with complete relief of ischemic pain on third post operative day.
DISCUSSION:
Progress in endovascular surgery has resulted in a continued shift in the treatment of patients with aortoiliac occlusive disease to less invasive forms of therapy. In the early stages of development, surgeons viewed endovascular approaches to the treatment of aortoiliac occlusive disease with suspicion (1). In many respects, this was justified because of relatively high complication rates and poor durability. As improvements in technology such as higher-resolution imaging, lower profile systems, premounted balloon-expandable stents and self-expanding stents have resulted in better outcomes.

The majority of patients with aortoiliac occlusive disease can be safely treated with percutaneous endovascular procedures. In our case report we discuss one such case where endovascular stenting is employed successfully for bilateral common iliac artery occlusion (2). Revascularization options for patients with infrarenal aortic and iliac obstructive atherosclerotic disease are open surgery (ie, endarterectomy, bypass surgery, or extra-anatomic bypass [axillofemoral bypass]) or percutaneous endovascular repair. Aortoiliac and aortofemoral bypass procedures are associated with 74% to 95% 5-year patency rates, respectively, which are comparable but not superior to percutaneous therapies. Because many of these operations involve extensive abdominal incision, morbidity (eg, infection and bleeding) and mortality can become significant in the at-risk patient (3).

The availability of endovascular stents has significantly increased the number of aortoiliac lesions that may be treated percutaneously by providing a larger acute gain in luminal diameter, scaffolding the lumen to prevent embolization of debris, and enhancing long-term patency compared with balloon angioplasty alone. For common iliac bifurcation lesions, kissing-balloon-expandable stents have become the preferred option (4).

Stenting of vascular lesions was introduced to improve on some of the limitations and shortfalls of Percutaneous Transluminal Angioplasty, such as early and late restenosis, and immediate failure due to vessel recoil or dissection (5). In our case balloon expandable stents are used and these stents are typically quite rigid compared with their self-expanding stent counterparts (6). This characteristic typically is beneficial in severely calcified ostial lesions or in vascular territory where there is little vessel mobility as in iliac arteries. Other beneficial characteristics of balloon expandable stents are their high radiopacity and predictable minimal foreshortening, thus making deployment much more accurate (7). Finally, a balloon expandable stent can be dilated beyond its initial mounted balloon diameter. This is beneficial when the stent is erroneously undersized. In 1 series of 48 patients, all stents were placed successfully, and there were no major complications. All of the patients experienced symptomatic improvement, and the 2-year patency rate was 87% (8). Endovascular treatment for infrarenal aorta disease can be performed with lower morbidity than open surgery and with better durability than extra-anatomic bypass (9). Iliac intervention represents a very important skill set as in managing vascular access-site complications or in asymptomatic patients with aortoiliac stenotic or occlusive lesions; the indication for endovascular intervention includes the need for vascular access for angiography/intervention or to place an intra-iliac counterpulsation balloon (10). (11)

Conclusion: Till a decade ago our case would have required major open surgery. Angioplasty and stenting has revolutionized the treatment of aortoiliac occlusive disease patients. These Endovascular therapies offers several distinct advantages over open surgical revascularization for selected lesions (12). It is performed with local anesthesia, which enables the treatment of patients who are at high risk for general anesthesia. The morbidity and mortality from catheter-based therapy is extremely low, especially compared with open surgical revascularization. After successful percutaneous revascularization, patients are ambulatory on the day of treatment, and unlike after vascular surgery, they can often return to normal activity within 24 to 48 hours of an uncomplicated procedure (13),(14). Endovascular therapies generally do not preclude or alter subsequent surgery and may be repeated if necessary. Angioplasty and stenting has revolutionized the treatment of aortoiliac occlusive disease patients (1),(15).

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