When undertaking endovascular therapy for the patient with peripheral vascular disease, the operator must offer the patient the highest chance of procedural success at the lowest risk available. Success of the procedure, not cost, must be the ultimate physician goal. For patients with symptomatic iliac artery occlusive disease, this includes the primary use of endovascular stents. Iliac artery occlusive disease may be treated for a number of reasons, including relief of claudication, relief of limb-threatening ischemia, and maintaining vascular access for other vascular-based procedures such as intra-aortic balloon pump placement or cardiac catheterization. In a randomized surgery versus percutaneous intervention study (to treat patients with claudication), open surgery was found to have significantly more risk, with similar improvement in ankle-brachial index and 3-year success, as intervention.\textsuperscript{1} With inherent mortality and significant morbidity, open surgical bypass appears to be relegated to a secondary role for treating patients without an endovascular option.

**ANGIOPLASTY ALONE**

Initially, percutaneous transluminal angioplasty (PTA) was utilized for focal iliac artery stenoses with acceptable success rates. Graor et al.\textsuperscript{2} in a meta-analysis of more than 1,300 patients showed early success rates of >90%, and 2- and 5-year patency of >70%. The definitions of success were not well defined, however, and treatment of complex disease was rarely attempted. Complications associated with PTA include vessel dissection, abrupt closure, spasm, and thrombus formation. Studies evaluating the use of PTA for total iliac artery occlusions generally showed significant embolization that led some to question the usefulness of PTA in this patient subset.\textsuperscript{3-5}

**STENTING OPTIONS**

The development and introduction of vascular stents revolutionized percutaneous treatment for symptomatic obstructive vascular disease. Since its introduction, the use of the Palmaz balloon-expandable stent (Cordis Endovascular, a Johnson & Johnson company, Miami, FL) for opening iliac artery stenoses has been associated with excellent hemodynamic and symptomatic improvement. Primary success was acceptable and secondary patency of >90% was seen.\textsuperscript{6} As self-expanding, stainless-steel stents were introduced, more complex disease was able to be treated with similar rates of success.\textsuperscript{7} Six-year primary patency in patients treated for claudication of nearly 80% has been seen in a more contemporary study utilizing the stainless-steel Wallstent (Boston Scientific Corporation, Natick, MA).\textsuperscript{8}

Advanced engineering has led to the development of more flexible balloon-expandable stents and nitinol self-expanding stents with low profiles and minimal foreshortening. When utilizing endovascular stents for total iliac...
visional stenting for suboptimal angioplasty. However, near-
ence between the direct stent approach compared to pro-
plasty (provisional stenting) did not find significant differ-
entervention was more common in the angioplasty group.12
significant difference between the groups, although repeat
report with 5-year follow-up of this study did not find any
cess rates (approximately 80% for both groups). A later
a mean follow-up of <1 year and low acute technical suc-
importance.
almost doubled (4% vs 7%) in the angioplasty group. Due
during the primary procedure. Complication rates were
plasty necessitated stent placement for a suboptimal result
ly half (43%) of the patients randomized to balloon angio-
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As previously discussed, >40% of balloon angioplasty
procedures for focal disease will be associated with signifi-
cant residual physiologically important stenosis. As in any
medical procedure, the physician operator must offer the
patient the safest, most effective treatment. A primary
sten philosophy offers many benefits, such as improved
technical success, the ability to treat complex disease, and
lower radiation exposure and contrast usage.
Complications from dissection, acute vessel closure, and
distal embolization are significantly decreased and long-
term restenosis rates appear to be significantly improved.
With a failure rate approaching 50%, the only possible rea-
son to not utilize a stent is the associated upfront cost.
However, as the stent market has expanded, prices have

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