# Intermittent Claudication Treatment Guidelines Handout

Intermittent claudication, a symptom of peripheral artery disease (PAD), manifests as muscle pain or cramping in the lower limbs during physical activity, which alleviates with rest. This handout outlines evidence-based recommendations for managing and treating intermittent claudication.

# **Treatment options**

This handout's treatment options are based on the 2016 AHA/ACC Guideline on the Management of Patients with Lower Extremity Peripheral Artery Disease.

#### Cilostazol

Cilostazol is an effective medical therapy for the treatment of leg symptoms and walking impairment due to claudication. However, side effects include headache, diarrhea, dizziness, and palpitations, and in 1 trial, 20% of patients discontinued cilostazol within 3 months.

#### Supervised exercise

Trials with long-term follow-up from 18 months to 7 years have demonstrated a persistent benefit of supervised exercise in patients with claudication. Training involves intermittent bouts of walking to moderate-to-maximum claudication, alternating with periods of rest.

### Revascularization

Revascularization is reasonable when the patient who is being treated with GDMT (including structured exercise therapy) presents with persistent lifestyle-limiting claudication. Lifestyle-limiting claudication is defined by the patient rather than by any test. It includes impairment of activities of daily living and/or vocational and/or recreational activities due to claudication.

An individualized approach to revascularization for claudication is recommended for each patient to optimize outcomes. Revascularization is but one component of care for patients with claudication, inasmuch as each patient should have a customized care plan that includes medical therapy, structured exercise therapy, and care to minimize tissue loss. If a strategy of revascularization for claudication is undertaken, the revascularization strategy should be evidence-based and can include endovascular revascularization, surgery, or both.

#### Endovascular revascularization

Endovascular techniques to treat claudication include balloon dilation (angioplasty), stents, and atherectomy. These techniques continue to involve and now include covered stents, drug-eluting stents, cutting balloons, and drug-coated balloons. The technique chosen for endovascular treatment is related to lesion characteristics (e.g., anatomic location, lesion length, degree of calcification) and operator experience.

### **Surgical procedures**

Surgical procedures are an effective treatment for claudication and have a positive impact on QoL and walking parameters but have identified sparse evidence supporting the effectiveness of surgery compared with other treatments.

Although symptom and patency outcomes for surgical interventions may be superior to those for less invasive endovascular treatments, surgical interventions are also associated with a greater risk of adverse perioperative events.

Treatment selection should, therefore, be individualized on the basis of the patient's goals, perioperative risk, and anticipated benefit. Surgical procedures for claudication are usually reserved for individuals who a) do not derive adequate benefit from nonsurgical therapy, b) have arterial anatomy favorable to obtaining a durable result with surgery, and c) have acceptable risk of perioperative adverse events.

Acceptable risk is defined by the individual patient and provider on the basis of symptom severity, comorbid conditions, and appropriate GDMT risk evaluation.

# Reference

Gerhard-Herman, M. D., Gornik, H. L., Barrett, C., Barshes, N. R., Corriere, M. A., Drachman, D. E., Fleisher, L. A., Fowkes, F. G. R., Hamburg, N. M., Kinlay, S., Lookstein, R., Misra, S., Mureebe, L., Olin, J. W., Patel, R. A. G., Regensteiner, J. G., Schanzer, A., Shishehbor, M. H., Stewart, K. J., & Treat-Jacobson, D. (2017). 2016 AHA/ACC guideline on the management of patients with lower extremity peripheral artery disease: Executive summary: A report of the american college of cardiology/american heart association task force on clinical practice guidelines. *Circulation*, *135*(12). https://doi.org/10.1161/cir.00000000000470