

Peripheral Artery Testing by Indication and Diagnosis of Critical Disease at St Clare’s Hospital

Choosing Wisely Canada Recommendations

1. Don’t perform percutaneous interventions or bypass surgery as first line therapy in patients with asymptomatic peripheral artery disease (PAD) and in most patients with claudication.
2. Do not suggest a test that will not change the patient’s clinical course.

Practice Points

1. Patients with rest pain, tissue loss, or severe claudication need testing urgently because they may benefit from revascularization if critical Peripheral Artery (PA) stenosis is identified. Follow-up testing after revascularization is often undertaken.
2. Patients with atypical symptoms like numbness, paresthesia, leg cramps, Raynaud’s phenomenon do not need PA testing, nor do asymptomatic patients with absent pedal pulses or digital cyanosis.
3. There is no evidence that screening for PAD is beneficial.

Methods

1. Indications for PA testing (Ankle-brachial index and Doppler ultrasound) and results of testing were obtained from the Vascular Laboratory at St Clare’s Hospital for 2018 (n=937) and 2019 (n=1,027).

Results

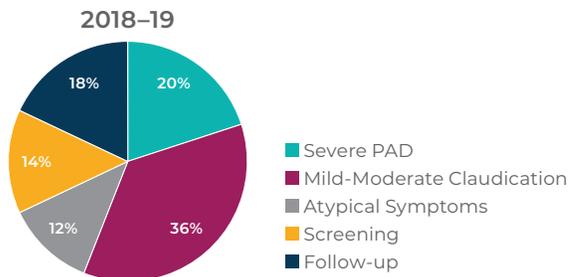


Figure 1. Indications for PA Testing in 2018-19

- There was no difference in indications for 2018 compared to 2019.
- Proportion who needed PA testing because they had manifestations of severe PAD was 20% and who had testing in follow-up was 18%.
- The majority had indications for whom PA testing was not needed.

Table 1. Number of Patients Who had PA Testing by Indication and by Diagnosis of Critical PAD in 2018-19

Indication	Critical Stenosis	Mild-Moderate	Normal	Total
Severe PAD	109	143	138	390
Mild-Moderate Claudication	69	461	190	720
Atypical Symptoms	20	73	141	234
Screening	17	74	181	272
Follow-up	47	187	114	348
Total	262	938	764	1,964

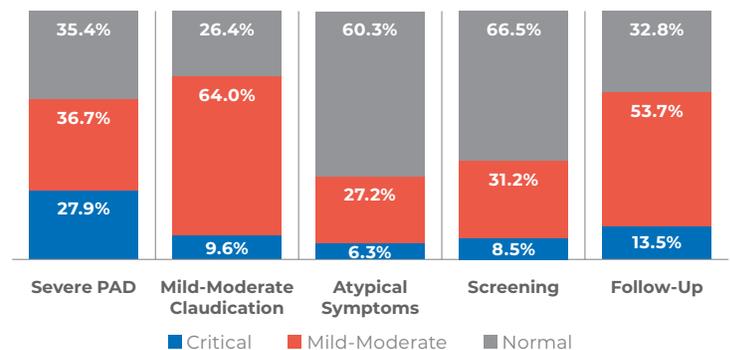


Figure 2. Diagnosis of Critical PAD by Indication

- In patients tested because they had manifestations of severe PAD, 28% had critical stenosis, whereas in patients with mild to moderate claudication, 9.6% had critical disease.
- Critical PAD was identified in 8.5% with atypical symptoms and in 6.3% of those being screened.

Conclusions

1. The majority of patients referred for PA testing did not need testing because they had mild-moderate claudication, atypical symptoms or were being screened. Although cases with critical stenotic disease were identified, intervention with revascularization would be unlikely in the absence of severe clinical manifestations of PAD.
2. No impact on the appropriateness of ordering PA tests was observed following knowledge translation interventions with Eastern Health family physicians in 2018.
3. eOrdering for the vascular laboratory has started with the intent to improve the time to testing in patients with severe PAD and decrease the rate of inappropriate testing.