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Background

Screening for Peripheral Arterial Disease (PAD) during routine diabetic foot screening (DFS) involves obtaining history of claudication symptoms, and peripheral pulses palpation.

Studies have revealed inter-observer variability, and dorsalis pedis pulse reported to be absent in up to 8.1% of healthy individuals. Therefore, incorporating vascular screening using toe pressure could be an important screening to gauge the appropriateness of the results, and to determine the referral for specialist intervention.

Aim

To educate and identify patients on the need for PAD screening.

To right-site referral to specialist for negative pressure and reduce inappropriate referrals.

Methodology

Intervention

Training on toe pressure measurement was conducted for DFS nurses.



Workflow and vascular assessment algorithm were developed and piloted at 2 SingHealth Polyclinics from 2013 to 2015.

The team continue to apply PDSA to improve patient care outcome.

Result

64% of referrals were avoided, and **30%** of those referred had timely surgical intervention.

Smartdop 30EX for Toe Pressure reading machines were purchased for all SHP clinics.

Toe pressure screening was rolled out to all SHP in 2016. Out of 35.4% of high risk cases seen, only 0.6% was screened for toe pressure.

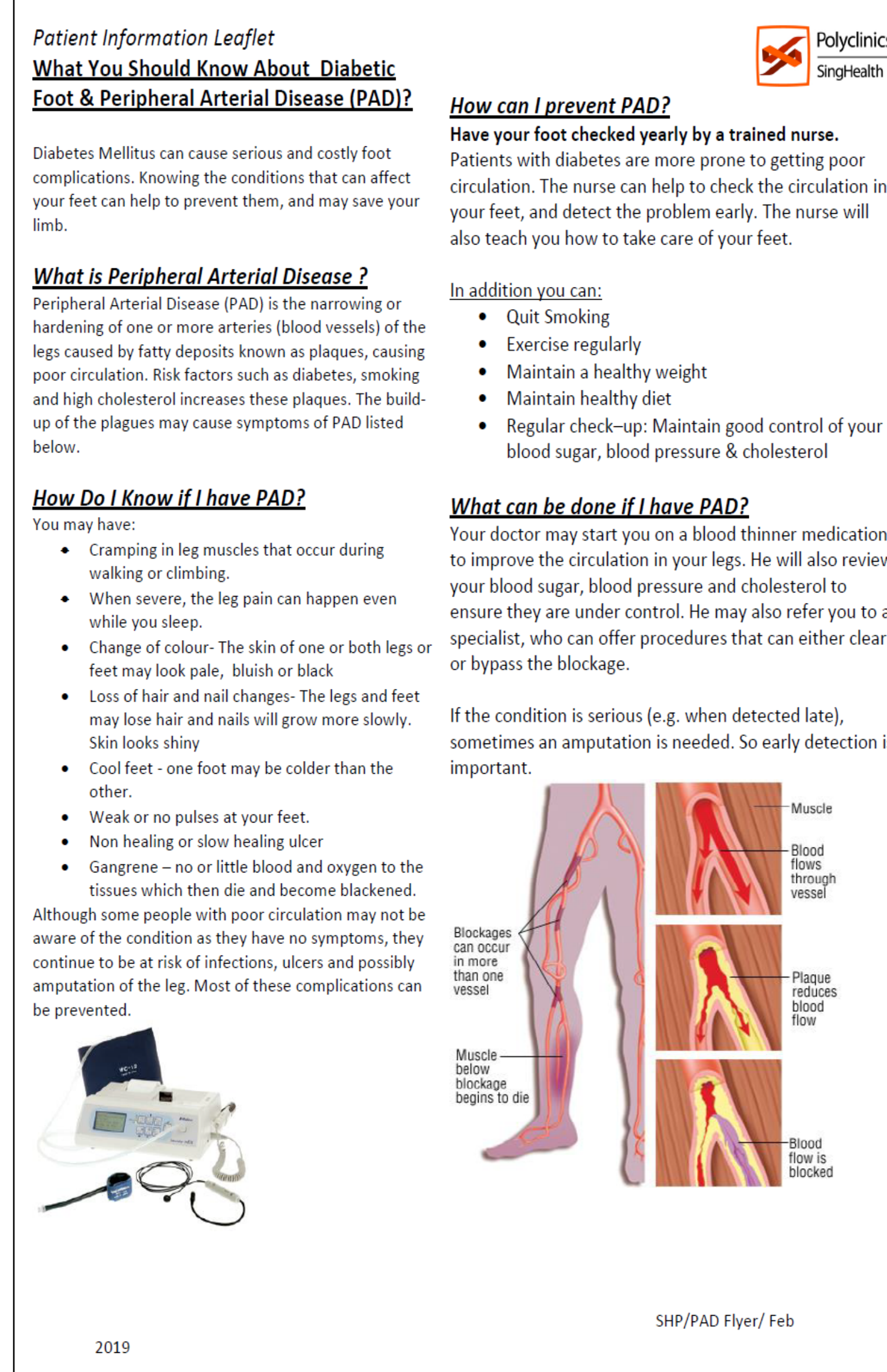
Those with weak pedal pulses were offered toe pressure screening, but patient declined due to ignorance on benefit of PAD screening.

A survey was carried out on 12 patients to determine the understanding of PAD.

Majority have not heard of PAD, only 10% of them vaguely verbalised the sign and symptom of PAD.

Patient Education

Patient information leaflet "What you should know about Peripheral Arterial Disease" was developed to educate the patients.



Conclusion

Toe Pressure screening and the understanding of patients with PAD had successfully added the importance of steps to early detection of high risk foot during DFS assessment, reduce inappropriate referrals to the vascular service due to false positive screen for PAD and had assisted patient in the right site-care.

Reference

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2. Aiello A, Anichini R, Brocco E, Caravaggi C, Chiavetta A, Cioni R, Da Ros R, De Feo ME, Ferraresi R, Florio F *et al*: **Treatment of peripheral arterial disease in diabetes: A consensus of the Italian Societies of Diabetes (SID, AMD), Radiology (SIRM) and Vascular Endovascular Surgery (SICVE).** *Nutrition, Metabolism and Cardiovascular Diseases* 2014, **24**(4):355-369