Monitoring of Lower Extremity Perfusion status in Peripheral Arterial Disease patients

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Prevalence of peripheral arterial disease is increasing in both developed and developing countries. Severe peripheral arterial disease of the lower limb resulting in lower extremity ulcer or gangrene is the main cause for non-traumatic major limb amputation. To salvage at risk patients from major limb loss, investigational tools are required to diagnose the disease, evaluate severity, guide treatment, assess success of revascularization (restore perfusion) and monitor longer term perfusion status. In particular, after surgical or endovascular revascularization, restenosis is common, investigational tool to monitor perfusion status is important to guide limb salvage service. Basic pressure study has been used to monitor perfusion status but with large margin of error. Tissue partial pressure of oxygen measurement provides tissue level information however with various limitations in its application. Scanning laser doppler provides better evaluation of lower extremity tissue perfusion nevertheless is too costly to most institution. Ideal investigational tool for lower extremity perfusion assessment is still in quest.

References: