Wound Management
Clinical Update

TOE DOPPLER WAVEFORMS AND SOUNDS

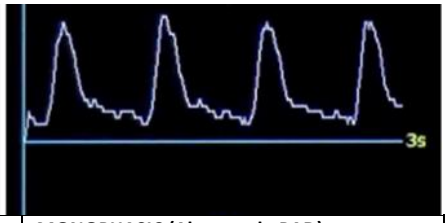
Watch the video at https://tinyurl.com/2f5k8afz

INTRODUCTION

Doppler sounds and waveforms form part of the differential diagnosis of peripheral arterial disease (PAD).

- **Triphasic** sounds and waveforms indicate normal blood supply
- **Biphasic** sounds and waveforms can be either normal or abnormal
- **Monophasic** sounds are indicative of PAD.

Doppler sounds & waveforms should not be used in isolation and should be combined with other parameters.

		
TRIPHASIC (Normal) Sounds and waveforms have 3 distinct components. 1. The systole 2. Early diastolic flow reversal 3. A small forward flow reflective in late diastole	**BIPHASIC (Ambiguous)** Sounds and waveforms have only 2 distinct components. 1. The systole 2. Early diastolic flow reversal There is no late diastole	**MONOPHASIC (Abnormal - PAD)** Sounds and waveforms have only 1 distinct component. 1. The systole There is no early diastolic flow reversal or late diastole The wave form does not cross the baseline.

OUTCOME

The client will have toe Doppler sounds & waveforms evaluated to determine with other parameters the presence of peripheral arterial disease and the safety for,

- Compression of the lower limb
- Wound debridement
- The use of moist wound products

EQUIPMENT

- Vascular probe
- Doppler
- Conducting gel

PREPARATION

- Explain the procedure to the client
- Perform hand hygiene
- Ensure the client has been resting supine with feet at heart level for 5-10 minutes prior
- Connect the vascular probe to the Doppler

PROCEDURE

- Expose feet and ankles (Ensure they are >20^0 C)
- Palpate dorsalis pedis artery and apply a generous amount of conducting gel
- Place probe at 45^0 angle over the artery (probe pointing towards head)
- Listen to the sounds and determine if Triphasic, Biphasic or Monophasic
- Look at the screen and determine if waveforms are Triphasic, Biphasic or Monophasic
- Repeat using the posterior tibial artery
- Record on lower limb chart

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