The use of microcirculatory techniques in the assessment of pathophysiology, diagnosis and management of critical limb ischemia

de Graaff, J.C.

Link to publication

Citation for published version (APA):
de Graaff, J. C. (2003). The use of microcirculatory techniques in the assessment of pathophysiology, diagnosis and management of critical limb ischemia

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: http://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
## Contents

1. General introduction ........................................... 9
2. The usefulness of laser Doppler in measuring toe blood pressures 27
3. Interobserver and intraobserver reproducibility of peripheral blood and oxygen pressure measurements in the assessment of lower extremity arterial disease 39
4. Optimization of the non-invasive assessment of critical limb ischemia requiring invasive treatment 51
5. Design issues of a diagnostic randomized clinical trial; the value of toe and transcutaneous oxygen pressure measurements in the management of critical leg ischemia 63
6. Evaluation of toe pressure and transcutaneous oxygen measurements in the management of chronic critical leg ischemia: a diagnostic randomized clinical trial 75
7. The feasibility and reliability of capillary blood pressure measurements in the finger nail fold 87
8. Postural changes in capillary pressure in the hallux of healthy volunteers 99
9. The influence of peripheral arterial disease on capillary pressure in the foot 109
10. The impact of peripheral and coronary artery disease on health-related quality of life 121
11. General discussion, clinical implications and suggestions for further research 129
12. Algemene discussie, klinische implicatie, en suggesties voor verder onderzoek 139

Dankwoord ........................................... 149

List of publications ........................................... 151

Curriculum vitae ........................................... 153
List of abbreviations

ABPI ankle brachial pressure index
AP ankle pressure
AVA arteriovenous anastomoses
CAD coronary artery disease
CI confidence interval
CLI critical (lower) limb ischemia
CP capillary pressure
CVA cerebrovascular accident
CVD cerebrovascular disease
D-RCT diagnostic randomized clinical trial
DS duplex scanning
ECD European Consensus Document on Critical Limb Ischemia
ECG electrocardiography
HRQOL health related quality of life
iaDSA intraarterial digital subtraction techniques
IC intermittent claudication
IQR interquartile range
LD laser Doppler
LDF laser Doppler fluxmetry
LR likelihood ratio
MI myocardial infarction
MRA magnetic resonance angiography
OPS imaging orthogonal polarization spectral imaging
OR odds ratio
PAD peripheral arterial disease
PAOD peripheral arterial occlusive disease
PPG photoplethysmography
PTA percutaneous transluminal angioplasty
QOL quality of life
RBCV red blood cell velocity
RBCs red blood cells
RCT randomized clinical trial
RR relative risk
SF-36 medical outcome study form questionnaire with 36 items
TASC 2000 Transatlantic Inter-Society Consensus on the Management of Peripheral Arterial Occlusive Disease 2000
TcpO₂ transcutaneous oxygen pressure
TP toe systolic blood pressure
VAR venoarteriolar reflex
VAS visual analogue scale