بسم الله الرحمن الرحيم

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PROGNOSTIC FACTORS IN AORTOILIAC ANGIOPLASTY AND STENTING

Thesis

Submitted for Partial Fulfillment of the M.D. Degree in General Surgery

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LIST OF ABBREVIATIONS

ABI	Ankle-brachial index
ACE	Angiotensin converting enzyme
ADP	Adenosine diphosphate
AHA	American Heart Association
AMP	Adenosine monophosphate
AP	Ankle pressure
ATM	Atmospheric
CAD	Cronary artery disease
CAPRIE	Clopidogrel versus Aspirin in patients at risk of ischemic events
CFA	Common femoral artery
CIA	Common iliac artery
CIRSE	Cardiovascular and interventional radiology society of Europe
EIA	External iliac artery
FAP	Femoral artery pressure
HDL	High density lipoprotien
HPS	Heart protection study
LDL	Low density lipoprotien
MRA	Magnetic resonance angiography
MWD	Maximum walking distance
NO	Nitric oxide
PAD	Peripheral arterial disease
PFWD	Pain free walking distance

POSCH	Program on the surgical control of hyperlipidemias
PTA	Percutaneous transluminal angioplasty
PTFE	Polytetrafluroethylene
PVR	Pulse volume recording
SFA	Superficial femoral artery
SMCs	Smooth muscle cells
SVS/ISCVS	Society of vascular surgery/ International society of cardiovascular surgery
TASC	Trans Atlantic Inter-society Consensus
TM	Transmetatarsal
TP	Toe pressure

INTRODUCTION

The number of patients who have peripheral artery occlusive disease is steadily increasing worldwide, primarily as a result of the aging of the population. It is estimated that 10% to 20% of individuals more than 70 years of age sustain some degree of chronic, lower extremity ischemia. This percentage is greater in some subgroups of patients, such as those having diabetes or end-stage renal failure ***(Michel Henry et al., 2000).*** The infrarenal abdominal aorta and iliac arteries are among the most common sites of chronic atherosclerosis in patients with symptomatic occlusive disease of the lower extremities ***(DeBakey et al., 1985).*** Although obliterative disease in the aortoiliac segment frequently coexists with disease below the inguinal ligament, however aortoiliac disease is usually segmental in distribution and therefore amenable to effective treatment ***(Brewster DC., 1991).***

During the past 40 years surgery for aortoiliac occlusive disease has been established as a reliable treatment and a successful measure at relieving ischemic symptoms, but less invasive forms of treatment have the benefits of decreased morbidity, mortality and hospital stay ***(Nawaz et al., 1999).***

Endovascular therapy, inspired by the work of Dotter and Judkins in the united states in the mid-1970s and Gruntzig and Hopff in Europe in the mid-1980s, is however, a relatively new field of vascular medicine. Only within the last decade has this new concept of treatment become widely recognized and accepted. During that time, the applications of endovascular therapy have been broadened dramatically in all vessels, including those at the aortoiliac level ***(Bosch & Hunink, 1997).***

Currently, interventional procedures are the first treatments to be proposed for most patients who have peripheral artery disease, and for this reason iliac angioplasty and stenting have become an established procedures *(Vorwerk et al., 1996).*

Although the availability of these alternative therapies is certainly beneficial, enabling the surgeon to select a procedure appropriate to the individual anatomy and risk status of each patient, decision making is frequently complex and difficult. Substantial differences in reported early and late results of alternative methods have contributed to confusion, however reported benefits and advantages, particularly of endoluminal techniques, have accentuated in recent years by the explosive growth of cost and length of stay considerations and the implication by some that less invasive treatment is inherently superior *(David & Brewster, 1997).*