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# **PROGNOSTIC FACTORS IN AORTOILIAC ANGIOPLASTY AND STENTING**

Thesis

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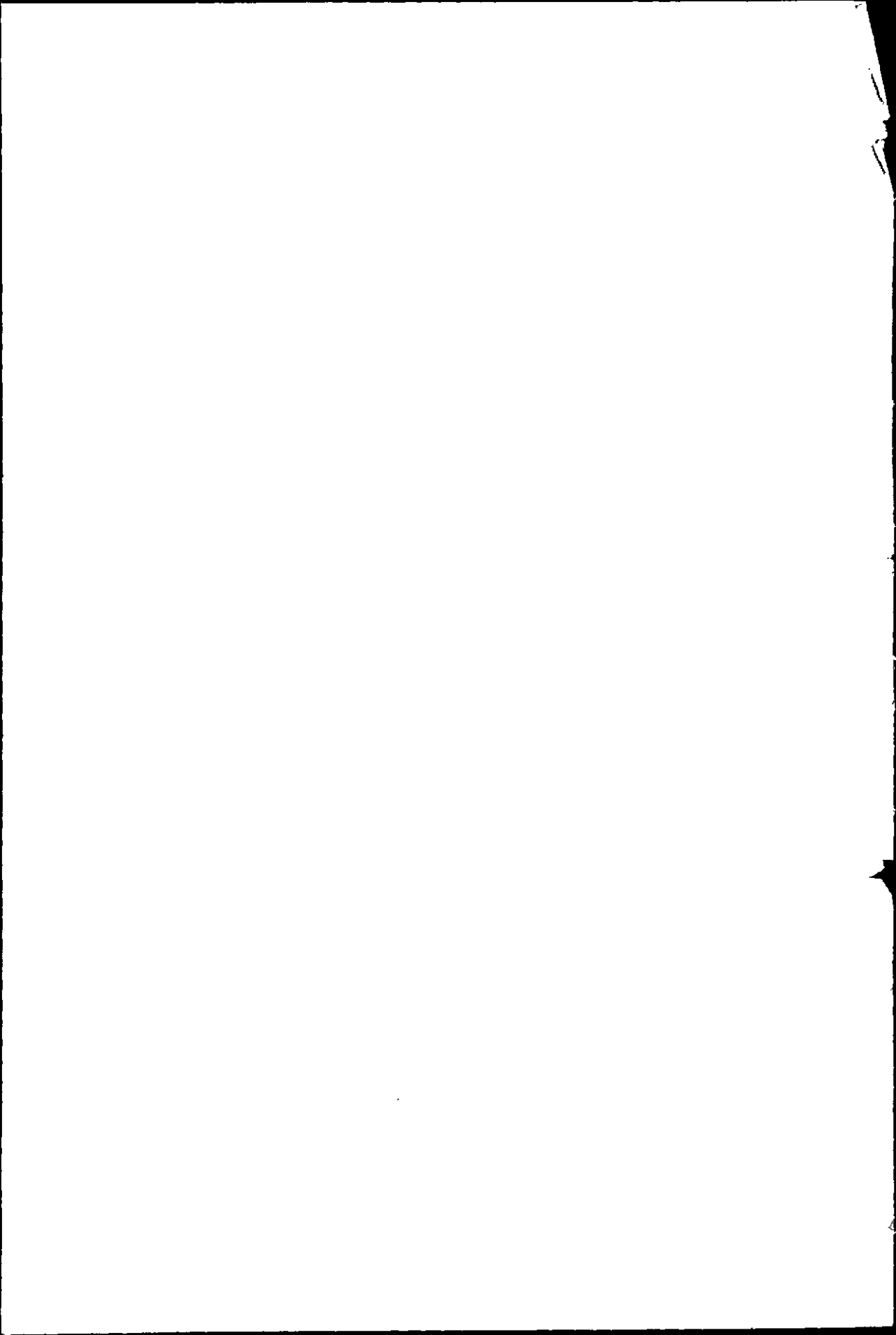
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## LIST OF ABBREVIATIONS

|        |   |
|--------|---|
| ABI    | Ankle-brachial index  |
| ACE    | Angiotensin converting enzyme                                     |
| ADP    | Adenosine diphosphate   |
| AHA    | American Heart Association  |
| AMP    | Adenosine monophosphate   |
| AP     | Ankle pressure  |
| ATM    | Atmospheric   |
| CAD    | Coronary 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 lipoprotein  |
| HPS    | Heart protection study  |
| LDL    | Low density lipoprotein   |
| 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      | Polytetrafluoroethylene  |
| 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*).