PART I

INTRODUCTION
and
AIM OF THE WORK

Over the last decade, it has become apparent that endothelium of arteries and veins regulates the state of vascular contraction and relaxation, the vascular permeability, and, the adherence of circulating cells such as: platelets, to the intimal surface. The best studied vasorelaxant factors are: endothelium derived relaxing factor (EDRF), and, prostacyclin (prostaglandin I_2, PGI_2) ***(Gryglewski et al, 1988)***.

In 1985-1986, three groups of investigators discovered a vasoconstrictor peptide by the endothelial cells in culture, and, by intact blood vessels subject to hypoxia, stretch, and, other stimuli ***(Hickey et al 1985, Rubanyi et al, 1985, and Gillespie et al, 1986)***.

In 1988, Yangisawa, and, co-workers *characterized a novel potent vasoconstrictor peptide produced by vascular endothelial cells, and, named the compound* ***ENDOTHELIN***. *In addition to the potent vasoconstrictor, and pressor actions, endothelin has been reported to produce a wide spectrum of biological effects* ***(Akihiro et al, 1988)***. ***Peter and Duncan*** *in 1989, showed elevated levels of circulating immunoreactive endothelin (ir-ET) in patients in cardiogenic shock, and, in patients receiving chronic renal dialysis.*

So, the aim of this work*, is to measure the level of ir-ET in patients with acute myocardial infarction (AMI), and ischemic heart disease, and, try to evaluate the value of endothelin as a non-invasive parameter to assess, and, predict the severity of AMI using the wall motion abnormality index (WMAI), and Killip classing as parameters.*