INTRODUCTION

There are multiple facts to pulmonary physiology but most concern to pediatric cardiologest are the factors that influence resistance to blood flow through the lung. The pulmonary vascular bed is normally a low resistance circuit, but it is prone to develop increased resistance to blood flow, which can result in serious disability. As a consequence "the lesser circulation : (1) is a Major factor in the natural history of many cardiac lesions. (2) Determine the type of operative procedure, feasible for many patients with cardiac lesions and (3) Influence the morbidity and mortality of cardiac operations *(Fyler 1992)*

In the past, accurate measurement of pressure gradients across intra-cardiac obstructions required cardiac catheterization with catheter tip manometer. Indirect implications of the severity of valve stenosis can be obtained from the physical examination, electrocardiograph and systolic time intervals. Non of these indirect methods, however, allow direct assessment of the primary question what is the pressure gradient across the stenotic orifice? To provid that direct answer, cardiac catheterization has been required, which has limite cardiologests by the financial expense. The time involved, the potential morbidity, and the finit number of times the procedure can be performed. Thus, the need is evident for an accurate, repeatable, inexpensive non-invasive method for obtaining the same

information. Considrable data are now available to demonstrate that Doppler echocardiography fulfills these criteria ***(Limaco et al., 1983).***

Doppler echocardiography has greatly enhanced the information provided by two-dimensional echocardiography, by providing information concerning pressure gradients, Intra-cardiac pressure, volumetric flow, and diastolic filling of the heart most haemodynamic information that in the past could be obtaine only from cardiac catheterization can now be provided accuratly and non-invasively by Doppler echocardiolgraphy. Future development in instruments technology and understanding of the various Doppler velocity curves should further aid the ability to obtain a complete, non-invasive haemodynamic assessment ***(Nishimura et al., 1994).***