CHAPTER I

INTRODUCTION

Measurement of pulmonary artery pressure in clinical practice is very important because patients who have elevated pulmonary artery pressure may cause right ventricular pressure overload and consequent failure. Pulmonary artery hypertension also leads to pulmonary atherosclerosis , decreased lung compliance and in severe cases, intrapulmonary venous admixture.

For many years the measurement of pulmonary artery pressure and diagnosis of pulmonary artery hypertension require cardiac catheterization, which is invasive and performed only in the referring centers. Cardiologists had attempted to anticipate the level of pulmonary artery pressure on the basis of abnormalities of heart sound and data from the electrocardiogram and chest x - ray film. However no more than gross approximations of pulmonary artery pressure can be made from these parameters.

The development of echocardiography represents a noninvasive, repeatable diagnostic technique which role is well established in the determination of cardiac chamber sizes and structural abnormalities. Hemodynamic information derived from echocardiography has markedly increased with advance in doppler study and intracardiac pressures can also demonstrated with good correlations.

In the present study, various measurements from echocardiography of patients who underwent cardiac catheterization in Chulalongkorn University Hospital were analized to assess the pulmonary artery pressure. The purpose of this study is to find the best parameter from echocardiography to estimate the pulmonary artery pressure and may develop a new index that would facilitate good quantitative prediction in adult patients.