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"ASSESSMENT OF RIGHT ATRIAL FUNCTION IN ACUTE PULMONARY THROMBOEMBOLISM PATIENTS"

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ABSTRACT

Background

Pulmonary embolism is the physical blockage of pulmonary artery by thrombus, fat or an air emboli and a
tumor tissue. PTE is a life-threatening disease. PTE patients who are referred for TTE will be recruited for the study

Objectives

To assess the right atrial function variables in the prediction of in-hospital outcomes of patients and to assess how RA dysfunction predicts the mortality and hospitalizations in patients with acute pulmonary thrombo-embolism

Methods

PTE patients who are referred for TTE will be recruited for the study standard views and RA/RV focused modified view ,IVC and hepatic venous doppler will be taken. Standard 12 lead ECG will be taken and Patient's data of blood test like D-dimer test, PT-INR, ultrasound, Computed Tomography will be collected. Data will be analysed offline in workstation and all readings will be documented.

Results

Right heart function significantly reduced in patients diagnosed with acute PTE. It is gives valuable information about the severity of clot burden in the pulmonary arteries.

INTRODUCTION

Pulmonary embolism is the physical blockage of pulmonary artery by thrombus, fat or an air emboli and a tumor tissue. PTE is a life-threatening disease. Mortality rate for unrecognised PTE is about 30% whereas for the diagnosed and treated PTE is 8 % [1].

The incidence rate of VTE among European people is 104 to 183/ 100,000 person [2] .
In India, the incidence is 22/10,000 admissions. [3] Around the world PE is the 3rd leading cause of death.
Risk factors :
Deep venous thrombosis (DVTs)
"Obesity, smoking cigarette, cancer, orthopaedic procedures like hip and knee replacements, trauma, pregnancy, usage of oral contraceptives and a history of PE or previously known coagulation disorders"[4].
Generally common complication seen in hospitalized patient. Commonly occurs at 60-70 age. Women aged> 30 years with OCPS and pregnancy.
Diagnosis: Once Pulmonary embolism is suspected, the pretest probability can be determined. For predicting it we can use Wells and Geneva scores. When the point scoring is between zero to one. It is a low pretest probability.
The range for intermediate probability is between two to four. When the score is more than five (>5) it is considered as a high pretest probability. For the low pretest situation, D Dimer test should be indicated if its result is negative, we can rule out pulmonary thromboembolism. When the D-dimer test shows a positive result. The patient will be indicated for CT.

Pathophysiology

Eventually, when the right heart function deteriorates because of some form of obstruction of the vascular bed and this changes the afterload of the right ventricle. Beginning of the cascade : Increase in a RV afterload and then it leads to RV dilatation and it eventually leads to a reduction in RV output, preload of LV and Systemic blood