

ONE YEAR FOLLOW UP OF POST PERCUTANEOUS TRANSLUMINAL CORONARY ANGIOPLASTY IN PATIENTS OF CORONARY ARTERY DISEASE

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ABSTRACT--percutaneous coronary intervention is an accepted first-line therapy in acute ST elevation myocardial infarction (STEMI) and ischemia in general population, only limited data is available on outcomes of PTCA patients. Our aim is to follow up patients with myocardial infarction who underwent PTCA for one year. patients who have underwent PTCA and one year followup of those patients were taken. All prospective patients who underwent percutaneous transluminal coronary angiography at this tertiary care rural hospital will be entered in the study. These patients will undergo detailed clinical examination with observation on signs of unstable angina and congestive cardiac failure. Those patients who died during the study either in the hospital or outside will be considered for mortality data. The patients who died during the study period in the hospital the data will be taken from the admission file and those who died outside the hospital information will be telephonically collected those patients coming for follow up at 3 , 6, and 12 months will be undergoing ECG, 2D echo and x ray chest. Those patients unable to come for follow up will be considered loss to follow up. Patients will be attending cardiology follow up OPD and the reporting of clinical end points will be by the cardiologist. From august 2018 to august 2020, 204 patients underwent PTCA (PTCA group n = 204) .Patients were followed 12 months. Results show mortality in ejection fraction of less than 35%(P = 0.04). Although patients underwent PTCA mortality was more in patients who have LV ejection fraction of <35% and age more than 70 years

Keywords-- Myocardial Infarction, Primary Percutaneous Intervention

I. INTRODUCTION

percutaneous coronary intervention is an accepted first-line therapy in acute ST elevation myocardial infarction (STEMI) and ischemia in general population, only limited data is available on outcomes of PTCA patients. Our aim is to follow up patients with myocardial infarction who underwent PTCA for one year.

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II. OBJECTIVES

The myocardial infarction patients who underwent PTCA will be followed up at 3 , 6 , 12 months.

- The clinical end points like unstable angina , congestive cardiac failure and death will be observed during the follow up
- Patients who attend the cardiac OPD will undergo clinical examination , ECG , 2 D echo and x ray chest.
- The clinical outcomes will be correlated with risk factors like diabetes mellitus, hypertension and dyslipidemia.

III. METHODS

The study will be carried out in department of medicine, at Acharya Vinoba Bhave Hospital, Sawangi (Meghe). The duration of the study will be from august 2018-2020

IV. STUDY DESIGN

Design: prospective observational study

V. STUDY PARTICIPANTS

Inclusion criteria:

Adult patients of myocardial infarction who have underwent PTCA in cardiology department of AVBRH

Exclusion criteria:

Critically ill admitted patients

Patients with comorbidities like chronic kidney disease, hepatic failure, respiratory failure, stroke patients and ventilated patients.

Patients who have underwent previous CABG

Variables: quantitative variables included in my study gender 67% male and 33% female, hypertension, kidney function test, fasting lipid profile, 2d echo, ECG

Data sources/ measurement : from cardiology department

Bias: lost to follow up.

Study size: 204.

Statistical methods: Clinical data, angiographic findings and type of vessel and no. of vessels involved in PCI intervention was recorded in data entry sheet and analyzed by Mean standard deviation, percentage and chi-square test. The 'p' value < 0.05 was considered as statistically significant.

VI. EXPECTED OUTCOMES/RESULTS

From august 2018 to august 2020, 204 patients will undergo PTCA (PTCA group n = 204). Patients were followed 12 months. Results show mortality in ejection fraction of less than 35% ($P = 0.04$).

VII. DISCUSSION

In 2010 there was 47 million Indians who were suffering from coronary artery disease.¹ During the last three decades Coronary Artery Disease is a leading cause of morbidity and mortality in India. Among urban population of India the rate of coronary heart disease has been raised drastically from 1% in 1960 to 14% in 2011. CAD rates have doubled in India during the past 3 decades. As compared to Westerners, Indians have almost twice the incidence of coronary artery disease and in those especially youth is particularly suffering from coronary artery disease. Medication to modify atherosclerosis, anti-anginal medication and aggressive treatment of risk factors were included in the treatment of stable CAD. Patients who require coronary angiography and percutaneous or surgical revascularization are those patients who have stable CAD even after treated medically. Less invasive modality for revascularization was started due to Percutaneous coronary Angioplasty (PTCA) which was started in 1980 and coronary artery stents in 1990. In India the prevalence of coronary artery disease is increasing and there is need for interventional procedures like PTCA. Percutaneous Coronary Interventions which were directed at stenotic lesions are highly effective in relieving angina.

There has been a steady 25-30 percent yearly increase in the number coronary procedures over the past several years.²

VIII. PTCA DATA IN INDIA

Total coronary interventions in 2013 in 216,817 and 248,152 in 2014.³

Coronary intervention data collected from 396 centers which was increased to 404 centers in 2013 showed that the total coronary interventions reported in 2014 have been increased by over 14% compared to 2013 also in India along with few other countries.³

Three out of thousand coronary heart disease patients get treated with PCI in India whereas thirty two out of thousand coronary heart disease patients get treated with PCI in western countries.³

Patients under 40 years of age showed a marginal decline in coronary interventions in 10% in 2014 and 11% in 2013, but women reported a rise in coronary artery disease 25.3% in 2013 and 28.3% in 2014.⁴

In a study by Prakash Chandwani et al on outcome of primary PCI death was 1%; mechanical complications was 0%; CABG of 0%; major bleeding of 0.1%.⁵

In a study by Ashraf Safiya et al a study from India, higher rates of restenosis were found in 747 cases of CAD who underwent primary PCI.⁶

A Clinico-angiographic Study by S Gera et al states that PCI procedure follow up reveals a Success rate of 97% and Failure rate of 3% which includes death of 1%; MI of 1% and tamponade of 1%.⁷

There is limited data on PTCA in rural tertiary care hospital, therefore this study was done to know the one year follow up of patients who underwent PTCA.

Patients who are contraindicated for PTCA underwent CABG have low success rate than PTCA.⁸

Alirocumab given in Patients With Polyvascular Disease and having acute coronary syndrome have no role⁹. Patients taking alirocumab have some effect and might cause or aggravate acute coronary syndrome¹⁰. alirocumab mostly causes anterior wall myocardial infarction with or without subclinical risk factors^{11,14}.

Metabolic healthy obesity causes acute coronary syndrome with risk factors including smoking and alcohol^{12,13}.

Non cardiac risk factors in village level increases the risk for cardiovascular disease and rate of increase in percutaneous intervention at village level also increases now a days¹⁵.

Patients of Psoriasis with Relation to Smoking and Alcoholism might cause coronary syndrome and undergo PTCA¹⁶.

Psychological dependence on smoking is the most common cause of acute coronary syndrome and patients who have underwent PTCA also might get into reinfarction due to the dependence of their smoking habit¹⁷. A number of different studies on this issue and related factors were reviewed¹⁸⁻⁷⁷.

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