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DEMOGRAPHIC CHANGES IN PATIENTS WITH CORONARY ARTERY DISEASE WHO HAVE UNDERGONE CORONARY ARTERY BYPASS GRAFTING AT STANLEY MEDICAL COLLEGE HOSPITAL

Cardiology

Dr Sanjeev Pandian. R	M.S. DNB., M.Ch., Department Of Cardiothoracic Surgery, Government Stanley Medical College
Dr Dhamodaran. K*	M.S. M.Ch., Department Of Cardiothoracic Surgery, Government Stanley Medical College *Corresponding Author
Dr Varsha M Totadri	M.B.B.S, Department Of Cardiothoracic Surgery, Government Stanley Medical College

ABSTRACT

OBJECTIVE: To assess the demographic changes in terms of gender and age criteria in patients with coronary artery disease who have undergone coronary artery bypass grafting and to assess the possible risk factors leading to the demographic change.

METHODS: During the time period 2016-2018, 56 patients who underwent coronary artery bypass grafting details were retrospectively collected. Data of patients pertaining to their age, sex, personal habits such as smoking/alcohol consumption and comorbidities such as type 2 diabetes mellitus/hypertension were collected and documented.

RESULTS: Overall 40 out of 56 patients were male (71.42%). The age group between 50 to 64 years was found to have the maximum number of patients, 26 (46.42%) with a notable increase in the demographic trend of the age group of 40-49 yrs; 17 (30.35%); thereby obviating the rising trend in cases in the middle age group.

On study of risk factors contributing to the development of coronary artery disease, smoking was found to be the most common risk factor with a predominance of 66.07% of the total no. of patients found to be chronic smokers. Amongst smokers, largest number of smokers were found to be in the age group of 40-49 years, i.e out of 37 patients who were found to be smokers; 25 were in the age group of 40-49 years (67.56%).

The second most prevalent risk factor was found to be hypertension amongst the study population; i.e 36 patients (64.2%) with the largest group of patients falling in the age category of 40-49 yrs (21 out of 36 patients; i.e 58.3%).

CONCLUSION: There has been a rising trend over the past decade in the number of patients in the age group of 40-49 years (middle age group) with a declining trend in the number of patients undergoing CABG

in the elderly age group (>65 years). The maximum number of patients continues to be in the age group of 50-64 years with the trend remaining the same as compared to other studies.

The rising trend of affected younger population can be attributed to prevalent social habits such as smoking and alcohol consumption. The increase in the number of chronic smokers has had a direct impact on the number of patients diagnosed to have CAD in the age category of 40-49 years.

Amongst chronic illnesses, hypertension prevails to be the commonest associated risk factor amongst patients with CAD.

It has been noted that though there is a rising trend in younger patients being diagnosed with coronary artery disease, the mortality rate in that age category continues to be in a declining trend in the post operative period.

KEYWORDS

INTRODUCTION:

Coronary artery disease is one of the most common causes of morbidity and eventual mortality amongst the middle age population in all countries. Coronary artery disease (CAD) occurring in less than 45 years of age is termed as young CAD. Recent studies show a prevalence of 1.2% of CAD cases in this age group. Ethnic wise south Asians especially Indians are more vulnerable to have CAD in young age group with a prevalence of 5% to 10%. Conventional risk factors such as smoking, diabetes, hypertension, obesity and family history seems to be as important as in older CAD subjects. But the prevalence of these risk factors seems to vary in younger subjects. By far the most commonly associated risk factor is smoking in young CAD. In general CAD in young has better prognosis than older subjects. various studies had considered the age limit varying from 35 years to 55 years in the spectrum of young CAD. This arena of cardiology has gained importance very recently due to increased prevalence in this age group over a last few decades, with varying risk factor profiles and difference in prognosis as well as longevity after an acute coronary episode.

PURPOSE OF STUDY:

To assess the demographic changes (age and sex wise) in patients diagnosed with coronary artery disease in Govt stanley medical college,department of cardiothoracic surgery.

TYPE OF STUDY:

Retrospective study

TIME PERIOD:

Patients admitted from the time period of 2016-2018 in Cardiothoracic surgery Dept of Govt Stanley Medical College with a diagnosis of coronary artery disease.

INCLUSION CRITERIA:

All patients who underwent coronary artery bypass grafting for the first time after diagnosis of coronary artery disease.

EXCLUSION CRITERIA:

Patients who were undergoing bypass grafting more than once.

SAMPLE SIZE:

56

PATIENTS AND METHODS:

During the time period 2016-2018, 56 patients who underwent coronary artery bypass grafting details were retrospectively collected. Data of patients pertaining to their age, sex, personal habits such as smoking/alcohol consumption and comorbidities such as type 2 diabetes mellitus/hypertension were collected and documented.

Patients were divided into age categories: <40; 40-49; 50-64 and >65 years and the number of patients in each age group were quantified. Each patient was identified with respect to their risk factors-smoking/alcohol consumption/hypertension/diabetes mellitus/family history and thereafter percentage patients of the total was calculated to identify the commonest risk factor as well as to identify highest number of patients in each age group.

STUDY:

TOTAL NO. OF PATIENTS ADMITTED WITH CAD/ WHO HAVE UNDERGONE CABG: 56
NO. OF MALE PATIENTS: 40 (71.42%)
NO. OF FEMALE PATIENTS: 16 (28.57%)

NO. OF PATIENTS >/=65 yrs of age: 10 (17.85%)
- MALE: 6
- FEMALE: 4

NO. OF PATIENTS BETWEEN 50-64yrs of age: 26 (46.42%)
- MALE: 15
- FEMALE: 11

NO. OF PATIENTS BETWEEN 40-49 yrs of age: 17 (30.35%)
- MALE: 14
- FEMALE: 3

NO. OF PATIENTS <40 yrs of age: 2 (3.5%)
- MALE: 2
- FEMALE: 0

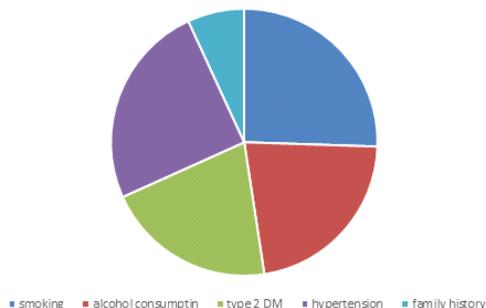| Age Group (years)	Percentage Of Patients With Cad (%)
>/= 65	17.85
50-64	46.42
40-49	30.35
<40	3.5

TABLE SHOWING PERCENTAGE OF PATIENTS WITH RISK FACTORS PREDISPOSING TO CORONARY ARTERY DISEASE IN THE STUDY OF 56 PATIENTS

SMOKING	37 (66.07%)
ALCOHOL CONSUMPTION	32 (57.14%)
TYPE 2 DIABETES MELLITUS	30 (53.57%)
HYPERTENSION	36 (64.28%)
FAMILY HISTORY	10 (17.85%)

AGE DISTRIBUTION OF CAD

■ >/=65 ■ 50-64 ■ 40-49 ■ <40
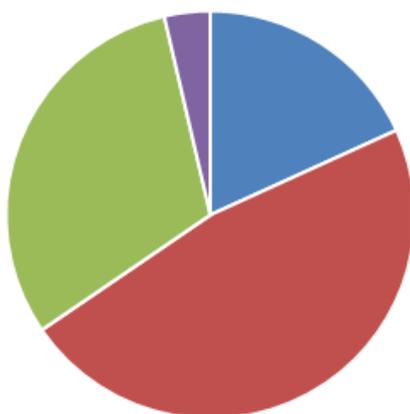
PIE CHART DEPICTING THE NUMBER OF PATIENTS WITH EACH PREDISPOSING RISK FACTOR

percentage

■ smoking ■ alcohol consumptin ■ type 2 DM ■ hypertension ■ family history

RESULTS:

Overall 40 out of 56 patients were male (71.42%). The age group between 50 to 64 years was found to have the maximum number of patients, 26 (46.42%) with a notable increase in the demographic trend of the age group of 40-49 yrs; 17 (30.35%); thereby obviating the rising trend in cases in the middle age group.

On study of risk factors contributing to the development of coronary

artery disease, smoking was found to be the most common risk factor with a predominance of 66.07% of the total no. of patients found to be chronic smokers. Amongst smokers, largest number of smokers were found to be in the age group of 40-49 years, i.e out of 37 patients who were found to be smokers; 25 were in the age group of 40-49 years (67.56%).

The second most prevalent risk factor was found to be hypertension amongst the study population; i.e 36 patients (64.2%) with the largest group of patients falling in the age category of 40-49 yrs (21 out of 36 patients; i.e 58.3%).

DISCUSSION:

Coronary artery disease continues to be a major cause of morbidity and mortality particularly in the Indian sub continent. There has been a rising trend in the number of patients in the middle age group, between 40-49 yrs of age. The maximum number of patients diagnosed continue to be in the age group of 50-64 yrs of age as depicted in the study above.

The rising trend can be attributed to an alteration in social habits such as smoking and alcohol consumption amongst particularly the younger population between the age groups of 35-45. The increase in social trends has further indirectly contributed to the rise in chronic illnesses such as hypertension and diabetes mellitus which as shown above have a strong correlation with development of coronary artery disease.

Though there is a rise in the number of patients in the younger age group, the mortality rate amongst this population has been found to be lower than that of the elderly with better post operative outcome clinically.

The above study takes into consideration only patients admitted in the cardiothoracic department of Stanley medical college during the period of 2016-2018 and therefore to further understand the change in demographic trends, requires a larger randomized controlled study over medical institutions.

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