Assess the Patient's Perspicacity Regarding Triple Vessel Disease and Its Management

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Study Protocol

ABSTRACT

Background: The single greatest killer in both females and males globally is cardiovascular disease. Coronary artery disease, commonly known as ischemic heart disease, is described as "impairment of heart function induced by obstructive alterations in the coronary circulation to the heart, caused by inadequate blood flow to the heart relative to its needs." There are 4.5 million persons in India who suffer from coronary artery disease.
Objective: In this study planned to determine the patient's perception regarding triple vessel disease and its management and to associate the demographic variable with the patient's perception regarding triple vessel disease and its management.
Methodology: It is a descriptive research design used in this research study conducted on patients are having triple vessel disease. The purposive sampling technique is used to select samples for analysis. This research study included 45 patients of a selected hospital in Wardha district. Patients must select according to requirements for inclusion and exclusion. For this study, patients who had triple vessel disease would mainly take.
Expected Results: The patients are having good perception or may be having bad perception.
Conclusion: The conclusion will be drawn from the results. The patient's will be having good or bad perception regarding triple vessel disease and its management.

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1. INTRODUCTION

Coronary artery disease (CAD) and its consequences, such as myocardial infarction or heart failure, are among the main causes of mortality in the majority of the world's populations. Coronary artery disease (CAD) is the most common type of heart disease, affecting around 6.7 percent of people over the age of 20 [1,2]. Three-vessel disease (3VD) is the most severe type of coronary artery disease. According to treatment recommendations, patients with 3VD and/or left main stenosis are in a high-risk category [3]. When compared to less severe types of CAD, 3VD has consistently been linked to a poorer long-term prognosis [4]. Within CAD lies an extreme form, Triple Vessel Disease that affects a smaller number of patients. It is an extreme form of coronary artery disease. When the major blood vessels become damage that time coronary artery disease developed. There is main two causes of coronary artery disease that are Plaque (cholesterol deposits) and inflammation. While minor plaque deposits may not obstruct blood flow to the heart, bigger plaque deposits might reduce or even restrict blood flow to the heart. These blockages can result in chest discomfort, shortness of breath, or even a heart attack. While most CAD affects only one of the major coronary arteries, triple vascular disease affects all three major blood vessels that supply blood to the heart (left anterior descending, left circumflex, right coronary artery). The left ventricle's contractile activity is likewise impaired. According to several research, around 26-33 percent of all CAD patients will develop triple vessel disease. This means that one out of every eight males and one out of every twelve women will develop TVD over their lives [5].

The recent statistics shows that Around 50 percent of the three-vessel disease patients died before the completion of the study. The rate of 5-year survival was 88%. Sometimes motivated by insufficient compliance, HF hospitalizations and readmissions continue to increase. We explored the idea that compliance and outcome could be influenced by the understanding of the patient of their illness. The blood supply to the heart comes from the Right Coronary Artery (RCA) and the Left Coronary Artery - the first two branches of the aorta in the Sinus of Valsalva. The Left Coronary Artery is quite short Severe triple vessel disease and Left Main Stem stenosis are both associated with imminent myocardial infarction, and so if present surgical (or percutaneous) intervention is recommended. In the proximal or middle section of all three arteries, a 70 per cent reduction in luminal diameter is needed to classify as a three-vessel disease. Triple vessel disease can be prevented by focusing on how the patients perceived. The main objective of the lifestyle modification is to return the patient to an optimal level of physiological, psychological and vocational functioning as to prevent the progression of ischemic heart disease. A combination of exercise, education in psychological rehabilitation seems to be the most important improvement in life style and requires long-term maintenance of modified habits. There is substantial evidence that correct information guidance during their recovery in wards is one of the most important aspects of nursing and it can be continued even after discharged [6].

2. METHODOLOGY

It is an academic hospital-based study. It will be conducted at the selected hospital of Wardha district respective

2.1 Inclusion Criteria

1) Patients in selected hospitals of the Wardha district who are willing to participate in the study.
2) Patients who are available at the time of data collection.
3) patient's who are having triple vessel disease.

2.2 Exclusion Criteria

1) Patients who have already attended a similar type of study.
2) Patients who are critically ill.

2.3 Sample Size

$$N = \frac{2\alpha/2^2 . P(1-p)}{d^2}$$

$2\alpha/2^2$ It is the level of significant at 5% i.e. 95% confidence interval = 1.96
P - Prevalence of triple vessel disease = 6 % = 0.06

D - Derived error of margin = 7% = 0.07

$$n = \frac{(1.96)^2 \times 0.06 \times (1-0.06)}{0.07^2}$$

$$= 44.21$$

$$n = 45$$

2.4 Outcome Measures

Primary outcome: The primary outcome will be to assess the patient's perception regarding triple vessel disease and its management.

Secondary outcome: It consists of the perception of patients regarding triple vessel disease and its management.

2.5 Data Management and Monitoring

Data collection will be conducted for a single month span. This research will be carried out after receiving authorization from the authorities concerned.

2.6 Tool for Data Collection

Section A – Demographic Variable
Demographic information gives baseline information obtained from patients such as age, gender, education, family income, bad habits, and any other disease.

Chart 1. Section B – perception assessment scale

Level of perception	Score Range
Neutral	0%
Strongly Disagree	0-25%
Disagree	26-50%
Agree	51-75%
Strongly Agree	76-100%

2.7 Statistical Analysis

2.7.1 Descriptive method

For analysis of demographic data will be going used frequency and mean, mean percentage and standard deviation will be used for assessing the patient's perception regarding triple vessel disease and its management.

Inferential statistics: For the association between patient's perception regarding triple vessel disease and its management Chi-square going to use.

2.8 Expected Outcomes/Result

In this present study, the output includes patient's perception regarding triple vessel disease and its management will Neutral, Strongly Disagree, Disagree, Agree, Strongly Agree of perception regarding triple vessel disease and its management by using self-made perception assessment scale.

3. DISCUSSION

A study will be conducted to assess the patient's perception regarding triple vessel disease and its management. Cross sectional descriptive research design will be selected for this study. There will be 45 patients of AVBRH Hospital Sawangi (m), Wardha will going to selected for this study. The Sample will be purposively selected those are having triple vessel disease and with the perception assessment scale will be used to assess the perception of patients from subject and obtained data will analyzed using descriptive, inferential statistics and will interpreted in terms of objective of the study. There are some evidences to suggest that one similar study conducted on "Perception and behavior in patients with coronary heart disease about risk factors and life style modification in tertiary care hospital, Bhavnagar" Among Patients of coronary heart disease attending OPD in tertiary care hospital, Bhavnagar. 174 samples are included in the study, the researcher used a cross-sectional study design with a questionnaire that included personal details, BMI, history of risk factors, behavior improvement, and medical counselling. Epi info evaluated the data and applied the appropriate statistical tests. The results showed that a total of 73 patients were addicted to either tobacco or alcohol. Addiction lasted an average of 22.43 years. Doctors gave therapy to 94 percent of patients at the time of their illness. In this study indicated that patients had good perception about all risk factors except stress and sedentary life style [7].

A study conducted on "Public knowledge and perception of heart disease: A cross- sectional study of two communities in Delta State, Nigeria" The study questionnaire was adapted from the heart disease fact questionnaire (HDFQ). Respondents with knowledge scores <50%, 50–69.9%, and ≥70% were assigned poor, moderate, and good knowledge, respectively. Eight hundred and sixty-six adults with a mean age of 42.6 years were recruited for the study. Majority (56.0%) of the respondents were females and urban dwellers. Knowledge score ranged between 0.0% and 95.7% with a mean score of 39.8(±22.5) %. Majority (65.1%) had poor knowledge of heart disease. Knowledge of heart disease was significantly associated with

place of residence [OR (95%CI) = 0.544 (0.408–0.727); P<0.001], age group [OR (95%CI) = 0.437 (0.314–0.607); P<0.001], duration of formal education [OR (95%CI) = 3.805 (2.755–5.255); P < 0.001] but not sex (P = 0.871). Majority (75.2%) perceived heart disease to be an extremely serious condition. However, 74.7% of the respondents were not concerned at all about getting heart disease. The association between knowledge of heart disease and place of residence, age group, sex, duration of formal education, and marital status [8].

A study conducted on "Elders' Knowledge About Risk Factors of Coronary Heart Disease, Their Perceived Risk, and Adopted Preventive Behaviors" a researcher uses a descriptive research design. The research study was conducted in four governmental and two private elderly homes in Alexandria, Egypt, which were

chosen at random by ballot out of all the elderly homes in Alexandria. There were 150 participants in the sample. The findings revealed a correlation between educational level and mean scores on CHD risk factors, risk perception, and preventive behaviors adoption. The elders' educational level was found to have a substantial relationship with their awareness of CHD risk factors, risk perception, and adopted preventive behaviors, with p=0.000*, p=0.017*, and p=0.000*, respectively. The higher the educational level, the greater the increase in knowledge of CHD risk factors, risk perception, and adopted preventive behaviors. The degree of education was found to be positively and substantially linked to the perception of CHD risk in the report. As a result, they conclude that having a high level of education and knowing someone who has CHD has a positive influence on awareness, risk perception, and preventive behaviors adoption [9].
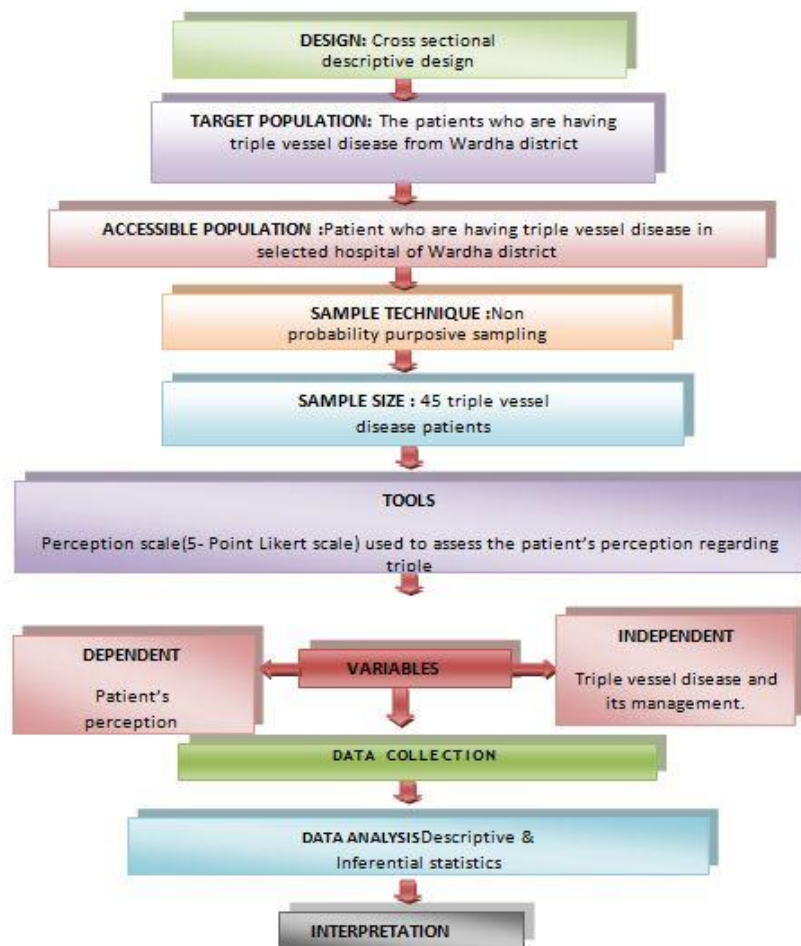

Fig. 1. Schematic presentation of research design

4. CONCLUSION

Conclusion will be drawn from the statistical analysis.

ETHICAL APPROVAL AND CONSENT

This study will approve by the Institutional Ethics Committee of DMIMS (DMIMS. All participants will be asked to read and sign informed consent. Proper explanation about the purpose of the study and the nature of the adjustment scale involved in the study will be given to the samples. Information about the samples will handle properly so that confidentiality and anonymity will maintain. Information will not use or release outside the terms of the agreement.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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