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ORIGINAL ARTICLE

CHARACTERISTICS OF DISEASE PROFILE OF HOSPITALIZED ADULT PATIENTS REFERRED TO THE CARDIOLOGY DEPARTMENT IN A TERTIARY CARE ORTHOPEDICS HOSPITAL

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Abstract:

Background: *For patients admitted to a tertiary care orthopedic hospital, cardiac consultation is a common practice and almost essential in every country. This is because of the increased morbidity and mortality of cardiac cases, especially during the perioperative period. The study was conducted to understand and evaluate the common causes of referral and to discover the disease profile pattern of referred cases to the cardiology department in this hospital.* ***Methods:*** *This prospective observational study was carried out in the cardiology department, National Institute of Traumatology and Orthopedics Rehabilitation in Sher-E-Bangla Nagar, Dhaka, from July 2022 to December 2022. After data collection, data analysis was done using the SPSS-22 version, and findings were expressed in frequency and percentage.* ***Results:*** *This study revealed that the majority of referred cases were routine and non-cardiac (75%), with normal LV function on echo. on cardiac cases were referred for the fitness of general anesthesia. Among cardiac cases, hypertension (9%) got the highest referral; followed by OMI (4%), ICM (2.4%), congenital heart disease (2.2%), ventricular heart disease (2.4%), arrhythmia (1.8%), ACS (2.4%), pulmonary embolism (0.3%), and others (0.4%).****Conclusion:*** *Cardiac problems, morbidity, and mortality are increasing day by day. So every different tertiary care hospital should have an enriched cardiology department with an efficient team and proper instrumental support.*

Keywords: *Cardiology, Referral, Hospitalized Patients.*

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Introduction:

In a tertiary care specialized hospital, referral and consultation with different units (Subspecialty) is very common for specific diagnosis and treatment. Even Hypertension that is well managed in a primary care setting, still there are many referrals to the cardiology department for uncontrolled one[1].

Internationally there are many recommendations of different institutions and bodies about how and when to refer a patient to cardiology unit. For example, in Queensland, before referring a patient to a cardiologist a confirm diagnosis of cardiac diseases has to made clinically as well as by relevant investigations.[2]

But it is more on less common in every recommendation about urgent referral which includes acute coronary syndrome (ACS) Acute left ventricular failure (ALVF), Fatal arrhythmia (e.g.- ventricular tachycardia, complete heart block etc.) [2-4]

NITOR (National Institute of Traumatology and Orthopedics Rehabilitation) Hospital is the largest tertiary care orthopedic hospital in Dhaka, Bangladesh, (Capital city of Bangladesh) which deals mainly with

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orthopedic cases. We conducted this cross sectional study of six months to discover the disease profile pattern of the referred cases to our cardiology department from different units of this hospital.

Methods:

This is a prospective observational study carried out in cardiology department of National Institute of Traumatology and Orthopedics Rehabilitation, Dhaka, Bangladesh. Our main objectives were to find out the common issues and condition of patients, which compelled a doctor to take opinion from cardiology department. We excluded the patients below 18 years' age (both male and female), known psychiatric patients and whose diagnosis were not confirmed (regarding cardiology consultation) during hospital stay. After excluding these cases, total number of patients referred to our unit was 668. After confirming the diagnosis, we categorized the patients first into following groups Cardiac and Non cardiac cases. According to the condition of cardiac patients, further sub classification was done as bellow Asymptomatic and Symptomatic: stable, unstable / urgent/critical cases. Many non-cardiac and routine cases were referred to us mainly for EGC and echocardiography for evaluation of cardiac fitness for general anesthesia (G/A). All the relevant date was compiled and Analysis was done using SPSS-22.

Results:

Among the study male were 82% and female were18%

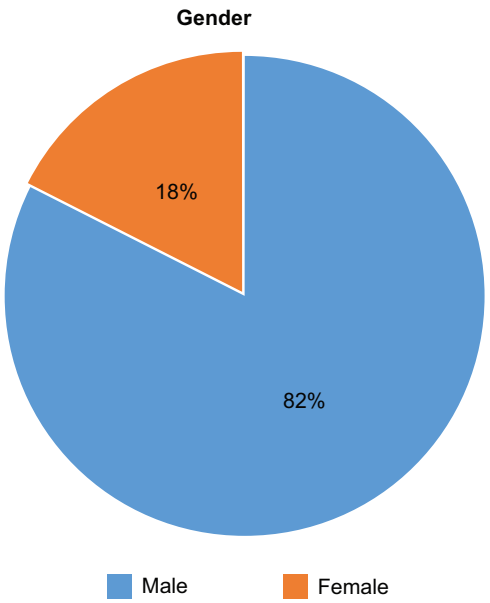

Figure-1: *Distribution of respondents in the referrals*

Among total referral cases, most of them were routine and non-cardiac (n=501, p= 75%). Total number and percentage of critical patients were (n=167, p= 25%); most of them were AMI, LVF, ICM, acute pulmonary embolism. the top most common causes of referral were as follows:

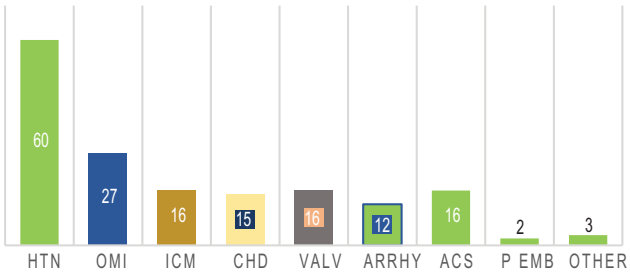

Figure-2: *2 Among the respondents cardiac diseases was hypertension : 60, OMI: 27,ICM:16,CHD: 15, valvular heart disease: 16,arrhythmia: 12,acs: 16,pul embolism: 02 and others: 03*

Discussion:

Taking cardiology consultation from a non-cardiac case in common in every hospital [5]. This is because of not only for excluding any cardiac Disease of atypical presentation is missed which can be fatal for the patients 6-8, 9.

Among all the referrals, number of cardiac cases were (n=167, p= 25%). majority of referred cardiac cases were in stable clinical condition. Large number of referred non cardiac cased is likely to avoid any case fatality, because of atypical presentation of cardiac cases in elderly and in diabetic patients, which is very common worldwide [6, 7,9,] and specially diagnosis of chest pain of various reasons may need to identify and exclude cardiac disease first[9].

As a universal rule, the frequency of taking cardiology consultation before going to surgery (specially under GA) was much higher than other reasons[5].This is why, in our study interpreting ECG was also an interesting cause of referral; - Because all those patients were completely asymptomatic and there ECG findings were alsonormal. We think these were as a part of routine cardiac checkup before OT. Some referred non cardiac cases drew our attention. Among them – pneumonia, hypothyroidism, bronchial asthma, COPD, COPD with cor-pulmonale, were common. Interestingly a good number of cardiac cases with atypical presentation were also found. 04 (four) cases of AMI were found with upper abdominal pain and vomiting, 02 (two) cases were silent ischemia. It is common for long term diabetic and elderly patients to present with atypical symptom of ACS[7]. There are some

observations, regarding referred cases of hypertension – Initial drug selection and doses were not according to the international guidelines, practiced in our country. Some patients were referred to control BP without any initial primary drug. But it can be practiced by all registered graduate physician.

Conclusion:

This study can give an idea to both the cardiologists as well as other doctors about the pattern of referral. We emphasize the non-cardiology doctors to identify the cardiac emergencies as well as non-cardiac critical conditions mimicking cardiac disease to avoid catastrophe. This will synchronize the workload among all departments, regarding patient management in a tertiary care hospital like National Institute of Traumatology and Orthopedics Rehabilitation.

Limitations:

This study has some study limitations. First, this was an observational study. Analytical study may reveal some associations, which may alter the management plan. Second, this was a single center study. Third, no associated co - morbidities were included in our study. If these were included, the magnitude of the problem and prognosis of many cases could be predicted.

Conflict of interest:

The authors stated there is no conflict of interest in this study.

Funding:

No funding.

Ethical consideration:

Ethical measures were taken throughout the study period to maintain a high standard of confidentiality and anonymity of the participants. Formal approval was taken from the ethical committee of National Institute of Traumatology and Orthopedics Rehabilitation, Dhaka, Bangladesh

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