Pattern of Ischemic Heart Disease Cases Admitted to Coronary Care Unit in Baquba Teaching Hospital

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Abstarct

Objectives : The aim of this study is to show the pattern of ischemic heart disease (IHD) cases admitted to CCU in Baquba teaching hospital and to study IHD cases in relation to certain variables (risk factors) which include age , sex , residency , occupation , physical activity , smoking , diabetes mellitus (DM) , hypertension and obesity.

Methods : The study included 200 patients with IHD who were admitted to CCU in Baquba teaching hospital in a period of 3 months from 1st. February to 30th.   April 2008 . We registered the risk factors of IHD as age , sex , DM , hypertension , smoking , obesity , physical inactivity and residency .

Results : This study showed that most of IHD cases were diagnosed as unstable angina (52%) followed by myocardial infarction (MI) (37%) and the remaining cases were angina pectoris (11%) .

IHD was more in males (56%) .Most cases were between (46-65) years old (57.5%) .

IHD was more in urban (70.5%) . Smokers were (31.5%) , diabetics (25%) , hypertensive (54%) , Obesity (41%) , physical inactivity (59.5%)

Conclusion :This study showed the pattern of IHD cases admitted to CCU in Baquba teaching hospital and the relation of risk factors and there percentage to IHD. So prevention, modification and improvement of risk factors can decrease numbers and severity of IHD in society .

Introduction

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Cardiovascular disease (CVD) is common in the general population, affecting the majority of adults past the age of 60 years. The prevalence of ischemic heart disease (IHD) is approximately one-third to one-half that of total CVD.

IHD is a major public health problem in industrialized nations [1] .In the USA for example IHD is the leading cause of death in adults accounting for approximately one-third of all deaths in subjects over the age of 35 years [2] . Hence emphasis on its primary as well as secondary prevention was given great attention by health authorities in western countries while age adjusted mortality from IHD is gradually falling in developed countries , it is set to become an epidemic in developing countries and over the next 20 years will probably become the most important global health problem .As more developing countries adopt similar lifestyles to the west that result in increasing overweight and obesity, tobacco use, along with the rapid increase in diabetes that is occurring in aging population, it would be expected that their CVD patterns parallel that of the industrialized nations [3] .

IHD continue to be a leading cause of morbidity and mortality among adults worldwide including Jordan [4]. Many of the important risk factors for cardiovascular disease are modifiable by specific preventive measures. In the worldwide INTERHEART study of patients from 52 countries, nine potentially modifiable factors accounted for over 90 percent of the population attributable risk of a first MI. These include smoking, dyslipidemia, hypertension, diabetes, abdominal obesity, psychosocial factors, daily consumption of fruits and vegetables, regular alcohol consumption, and regular physical activity [5] . The past decade has witnessed major strides in the prevention of IHD through modification of its risk factors which include DM , hypertension , smoking , obesity , physical inactivity and hyperlipidemia [6].

Methods

The study included 200 patients with IHD who were admitted to CCU in Baquba teaching hospital in a period of 3 months from 1st. February to 30th April 2008 . The patients were diagnosed as having IHD by specialist physicians depending on clinical history and examination and on ECG change of IHD . What risk factors the patients were having were registered including DM , hypertension , smoking , obesity , physical inactivity ,socio-economic status .

Results

The total numbers of cases during study period were (200). This study showed that most of IHD cases were diagnosed as unstable angina (104) cases i.e. (52%) followed by myocardial infarction

(MI) (74) cases i.e. (37%) and the remaining cases were angina pectoris (22) cases i.e. (11%) as shown in figure (1).

IHD was more in males (112) cases i.e. (56%) , females were (88) cases i.e.(44%) as shown in figure (2) . Most cases were between (46-65) years old (115) cases i.e. (57.5%) as shown in table (1).

IHD was more in urban 141 patients (70.5%) than in rural 59 patients (29.5%) as shown in figure (3).

The distribution of risk factors was as the followings:

Smokers were (63) cases i.e. (31.5%), diabetics were 50 cases i.e. (25%) , hypertensive patients were (108) i.e. (54%) Obese patients were (82) i.e. (41%), patients with positive family history were(54) i.e.(27%), physically active patients were (81) i.e. (40.5%) , physically inactive patients were 119 i.e. (59.5%) as shown in table(2).

Most of IHD patients were from middle socio-economic status (130) patients i.e. (65%), followed by low socioeconomic status (41) patients i.e. (20.5%), followed by good socioeconomic status (29) i.e.(14.5%) as shown in figure (4).

Most patients with hypertension were having mild hypertension (53) cases i.e. (49%) followed by severe hypertension (42) cases i.e. (38.5%) followed by moderate hypertension (13) cases i.e. (12.5%) as shown in figure (5).

Most patients were grade I (40) obese cases i.e. (48%) followed by grade II (36) obese cases i.e.   (44%) followed by grade ш (6) obese cases i.e. (8%) as shown in figure (6).

Distribution of cases according to the job was as the following :

Most of the cases were house wifes (96) patients i.e. (48%) followed by retired patients (32) i.e.(16%) followed by workers (22) patients i.e. (10.5%) followed by no work (17) patients i.e. (8.5%) followed by clerks (11) patients i.e. (5.5) followed by farmers (9) patients i.e. (4.5%) followed by teachers (8) patients i.e. (4%) followed by medical stuff (2) patients i.e. (1%) , Drivers (2) patients i.e. (1%) ,military (2) patients i.e. (1%) as shown in table (3) . Among females 19.5% were using oral contraceptive pills.
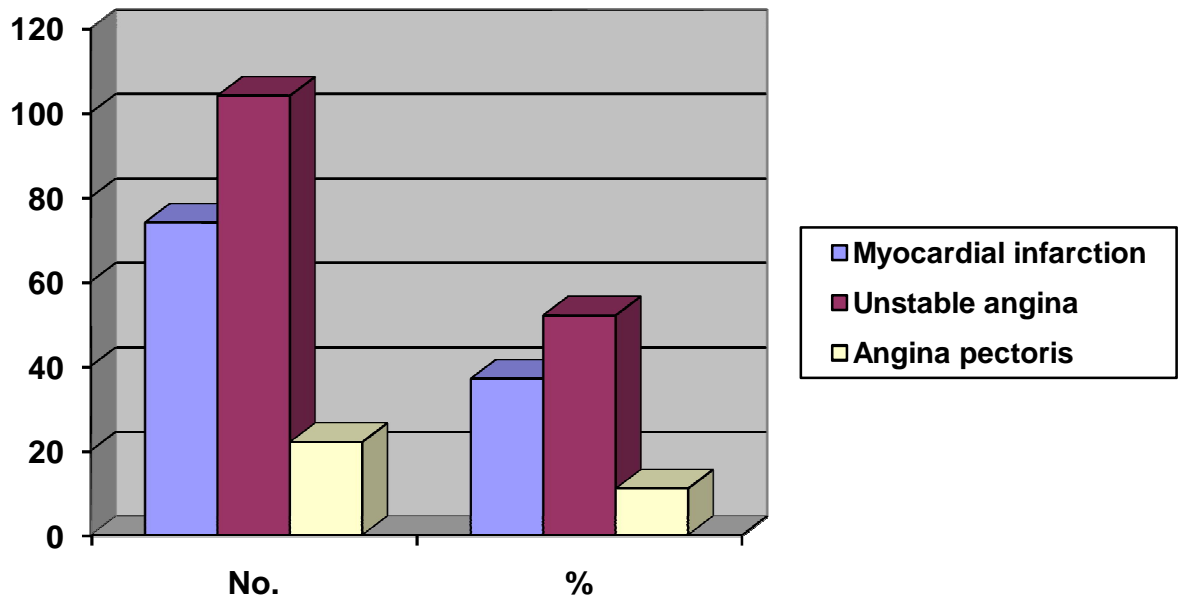
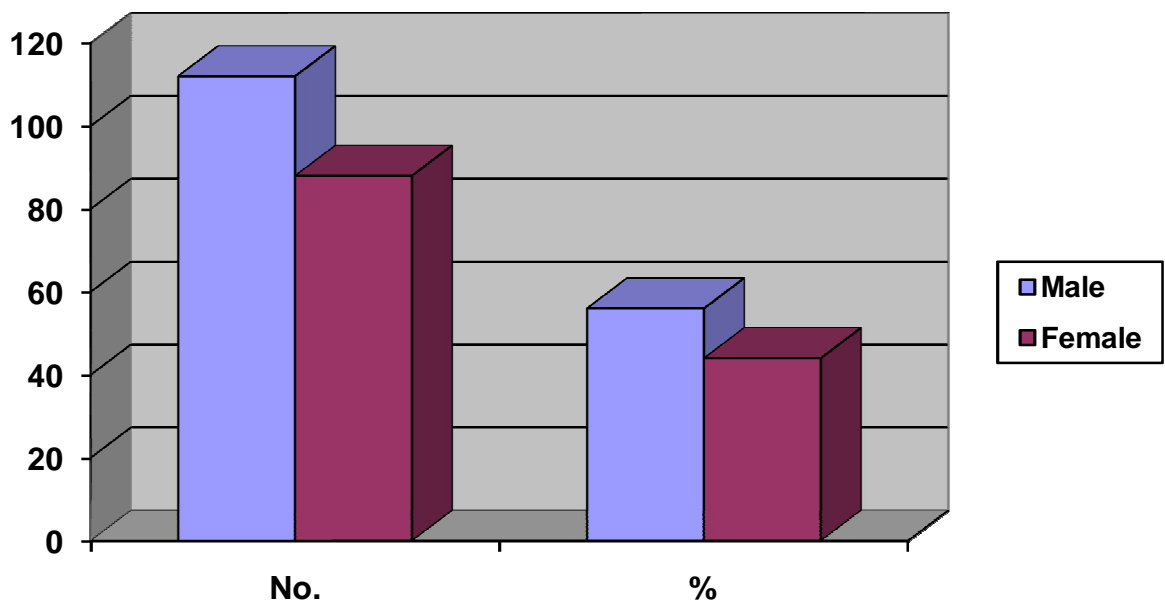**Figure (1) : Distribution of cases according to diagnosis**

Figure (2) : Distribution of cases according to gender

Table (1) : Distribution of cases according to age

Age (years)	No.	%
25-35	10	5
36-45	22	11

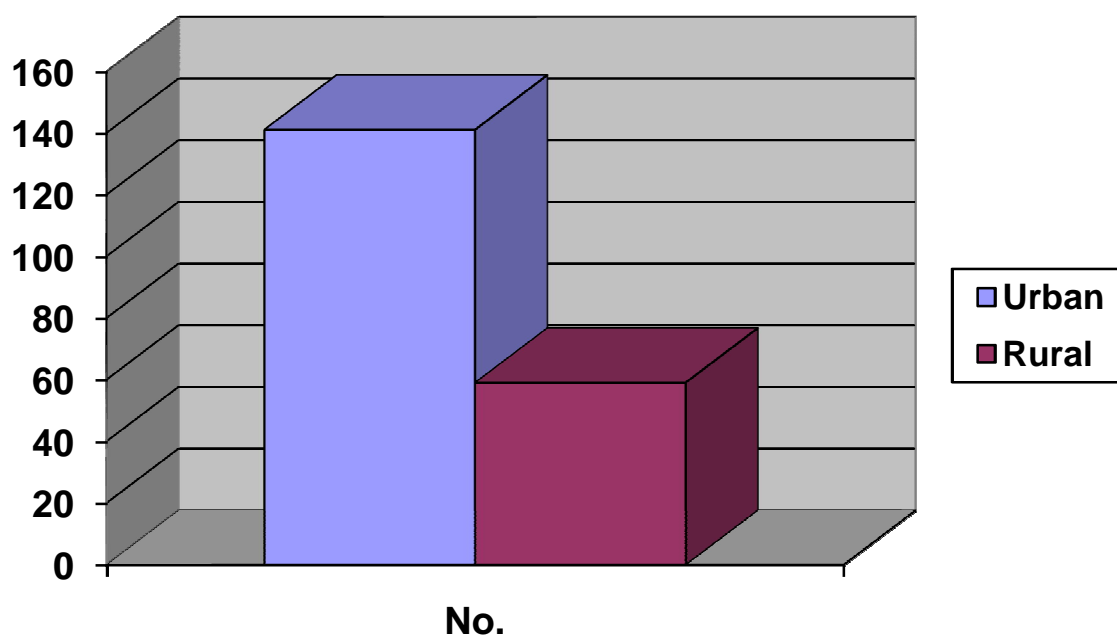|		
46-55	53	26.5
56-65	62	31
66-75	37	18.5
>75	16	8
Total	200	100

Figure (3) : Distribution of cases according to residency

Table (2) : Distribution of cases according to certain risk factors

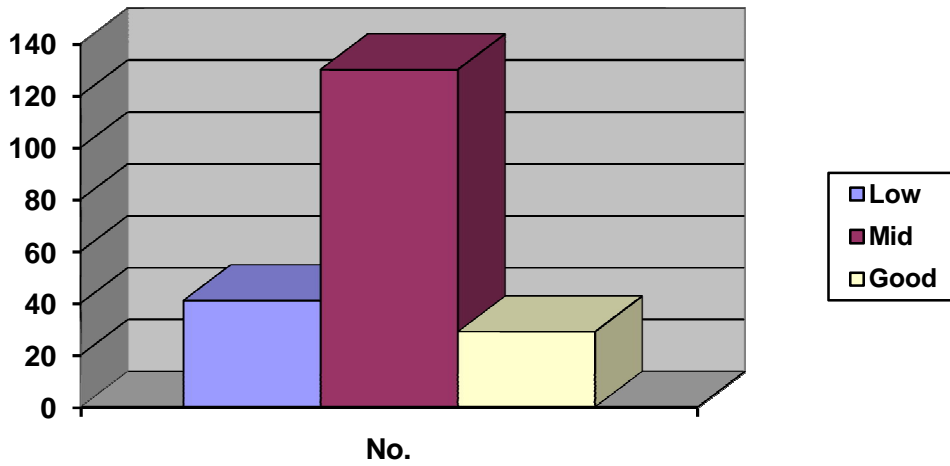| Risk factor	No.	%
Smoking	63	31.5
DM	50	25
Hypertension	108	54
Obesity	82	41
Family history	54	27

Physical activity	81	40.5

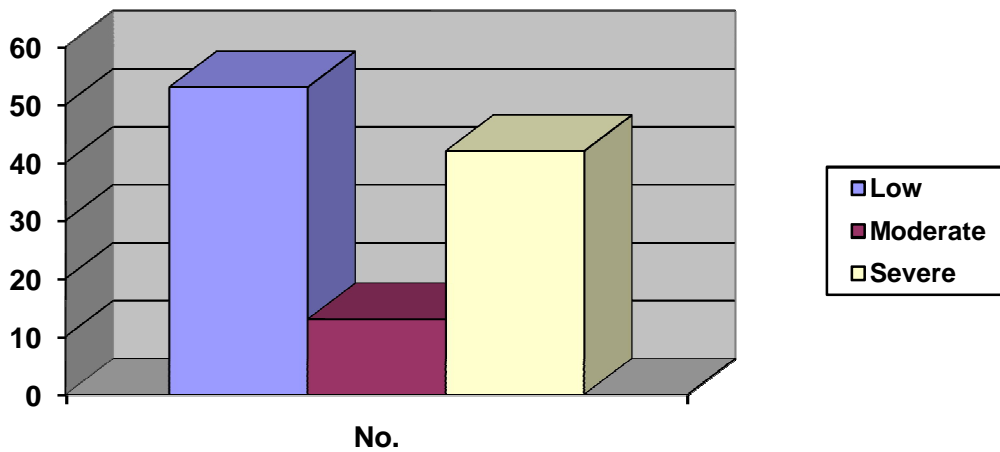**Figure (4) : Distribution of cases according to socio-economic status**

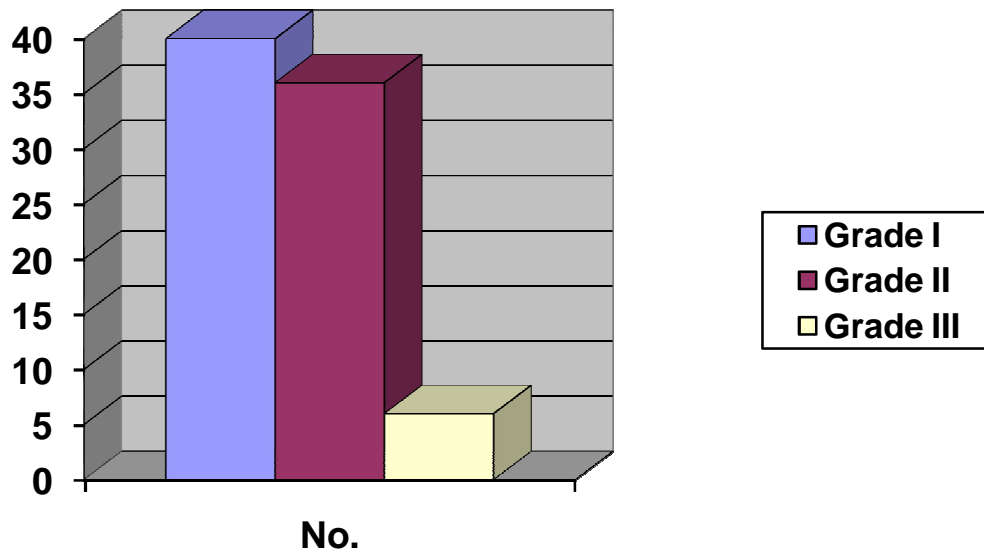**Figure 5 : Distribution of hypertensive patients according to severity**

Figure (6) : Distribution of obese patients according to grades of besity

Table (3) : Distribution of cases according to the job

Type of job	No.	%
House wife	96	48%
Retired	32	16%
Workers	22	10.5%
No work	17	8.5%
Clerk	11	5.5%
Farmer	9	4.5%
Teacher	8	4%
Medical stuff	2	1%
Driver	2	1%
Military	2	1%
Total	200	100%

Discussion

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This study show the pattern of patients who were admitted to CCU in Baquba teaching hospital in Diyala governorate in Iraq. And provides data on the relationship of IHD and its risk factors.

Regarding the type of IHD most of the patients admitted to our CCU were unstable angina (52%) followed by MI (37%) followed by stable angina pectoris (11%) and this is simply due to that most cases admitted to CCU are the urgent and risky cases as the cases of unstable angina and MI but the stable angina are less urgent treated mostly by cardiologist as outpatient cases so to lesser extent they were admitted to CCU .

Most of the patient admitted to CCU were males (56%) more than females (44%) because it is said and well known that IHD affect males more than females specially before the age of 60 years This shown in study in Finland (Coronary heart disease CHD is markedly more common in men than in women. In both sexes, CHD risk increases with age, but the increase is sharper in women. The study cohort consists of 14786 Finnish men and women 25 to 64 years old at baseline. The following cardiovascular risk factors were determined: smoking, serum total cholesterol, HDL cholesterol, blood pressure, body mass index, and diabetes. Risk factor measurements were done in 1982 or 1987, and the cohorts were followed up until the end of 1994. The Cox proportional hazards model was used to assess the relation between risk factors and CHD risk. CHD incidence in men compared with women was approximately 3 times higher and mortality was approximately 5 times higher. Most of the risk factors were more favorable in women, but the sex difference in risk factor levels diminished with increasing age. Differences in risk factors between sexes, particularly in HDL cholesterol and smoking, explained nearly half of the difference in CHD risk between men and women. Differences in serum total cholesterol level, blood pressure, body mass index, and diabetes prevalence explained about one-third of the age-related increase in CHD risk among men and 50% to 60% among women.)[12].

As noted above increasing age make increase incidence of IHD. So in our study most cases were between (46-65) years old .

Regarding distribution of cases of IHD according to residency (141) cases (70.5%) were from urban area , (59) cases (29.5%) were from rural area this is due to that in urban area people have more complicated life, more psychological stress and more sedentary work i.e. less physical activity and so affected more by IHD than people in rural area .

Our study shows that significant number of patients had different risk factors for IHD (54%) having hypertention , (41%) are obese ,(25%) are diabetics ,(31.5%) are smokers , (59.5%) are

physically inactives .And all that are well known risk factors increasing affection by IHD , many studies prove that, as Framingham Study (Long-standing risk factors for the development of coronary artery disease (CAD) have typically included age, blood levels of total and high-density lipoprotein (HDL) cholesterol, blood pressure, cigarette use, diabetes mellitus, and left ventricular hypertrophy on electrocardiography.)[13].

In BMC puplic health – bovet   study the prevalence of risk factors were hypertension 39.6% , DM 9.3% , smoking 17.5% , obesity 25.1% .(8)

In Balearic Island study, hypertension 47.8% , smoking 27% , DM 11.7% , obesity 27% [9].

In another study done in Tabriz heart centre in Iran ,obesity was the most common abnormality (93.5%) followed by diabetes (58.4%),low HDL(45.4%), low physical activity (41.6%) hypertension 28.4% , smoking 20% .

Regarding distribution of cases of IHD according to the job our study show IHD affect house wives (48%) and retired cases (16%) more as those have less physical activity so become more liable for affection by IHD and other jobs like farmers , military , workers having more physical activity will be less affected by IHD .

Contraceptive pill use by women increase the risk of IHD affection specially if combined with smoking .They cause thrombi more than causing atherosclerosis in coronary vessels as an aetiology for IHD and MI .

In our study the risk factors for IHD were hypertension 54%, DM 25% , smoking 31.5% , obesity 41% ,physical inactivity (59.5%) and these percentage of risk factors indicate the importance and significance of urgent attention to these risk factors , most researchers agree that modifying these risk factors can influence the control and decrease the affection by IHD . So urgent measures should be taken by health personnel and policy makers to modify lifestyles including alteration in diet , calories , lipid and cholesterol intake , increase in physical activity , cessation of cigarette smoking and decrease in psychological stress .

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