

نمط امراض قصور الشرايين التاجية للمرضى الراقدين في وحدة انعاش القلب في
مستشفى بعقوبة التعليمي

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أجريت هذه الدراسة لبحث نمط امراض القلب للمرضى الراقدين في وحدة انعاش القلب للفترة من 2008/2/1 لغاية 2008/4/30 وتم دراستها من حيث التشخيص وعلاقة المرض مع عوامل الاخطار مثل العمر ،الجنس،السكن،النشاط البدني،التدخين،داء السكري،ارتفاع ضغط الدم والسمنة وتبين من خلال البحث ان عدد الحالات الداخلة 200 واغلب الحالات شخضت على انها ذبحة قلبية غير مستقرة (52%) سجلت الحالات في الذكور (56%) اكثر من في الاناث اغلب الحالات في عمر ما بين 46-56 (57.5%) وكانت عوامل الخطورة هي:

السمنة 41%، قلة الحركة 59.5 %، معظم الحالات سجلت من مناطق الحضر والمدن تم تحليل نتائج البحث ومقارنتها مع الدراسات العالمية التي اجريت على نفس الموضوع يتبين من البحث وكما ان معظم الباحثين متفقين على ان تجنب والوقاية من عوامل الاخطار كالتدخين ،ارتفاع ضغط الدم ،داء السكري ،السمنة وقلة الحركة تقلل من الاصابة بالنوبة القلبية لذا على مخططي السياسات الصحية الانتباه لاهمية ذلك لتقليل الاصابة بامراض القلب والشرايين.

Pattern of ischemic heart disease cases admitted to coronary
care unit in baquba teaching hospital

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Objectives :

The aim of this study is to show the pattern of ischemic heart disease (HD) 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%) , hypertensives (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 :

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 III (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 wives (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 staff (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

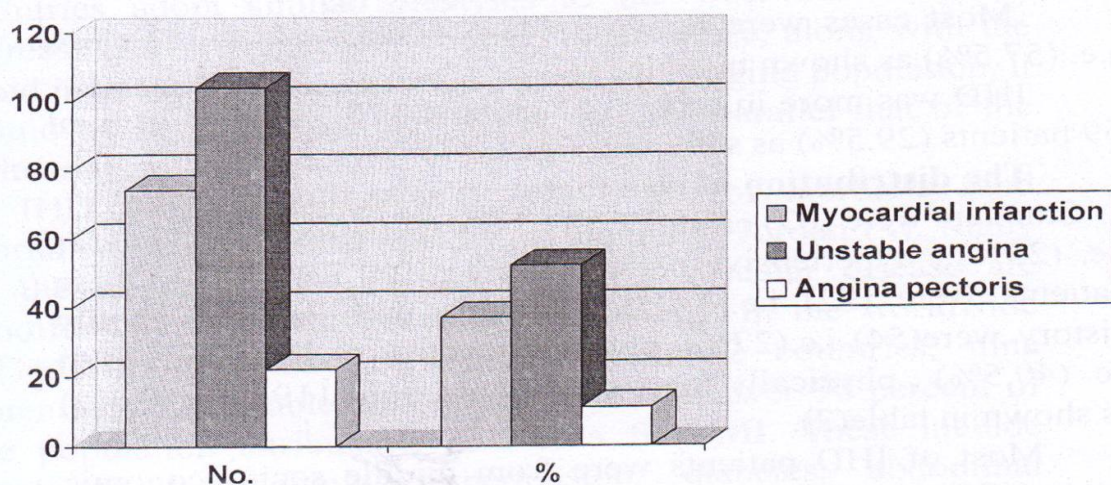


Figure 2 : Distribution of cases according to gender

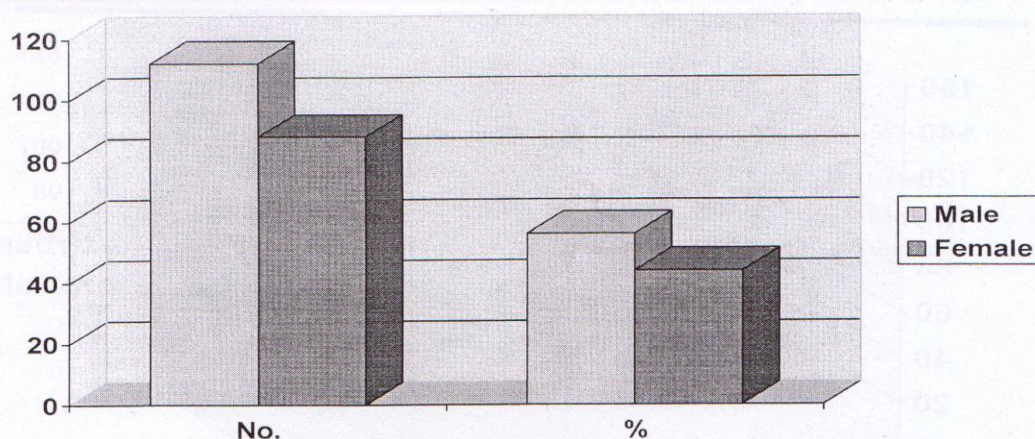


Table 1 : Distribution of cases according to age

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

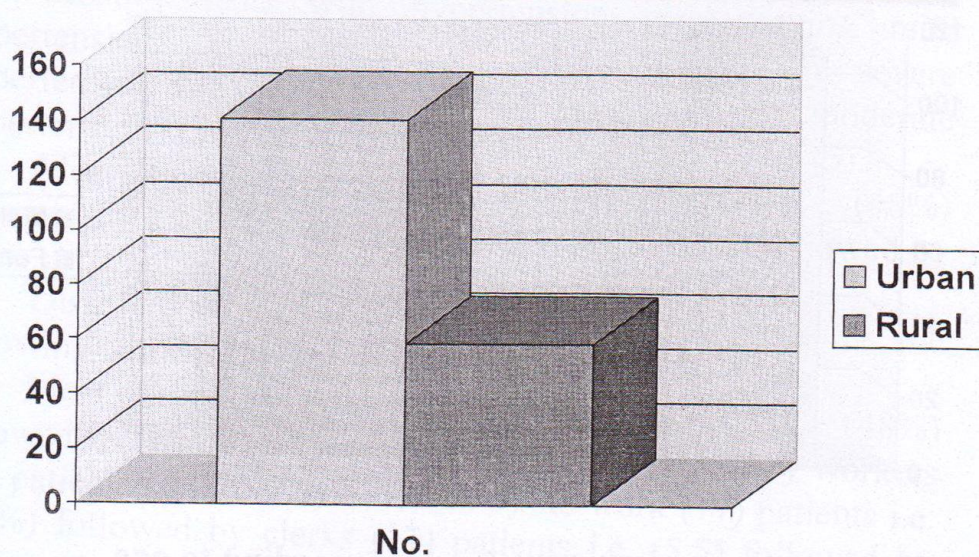


Table 2 : Distribution of cases according to certain risk factors

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

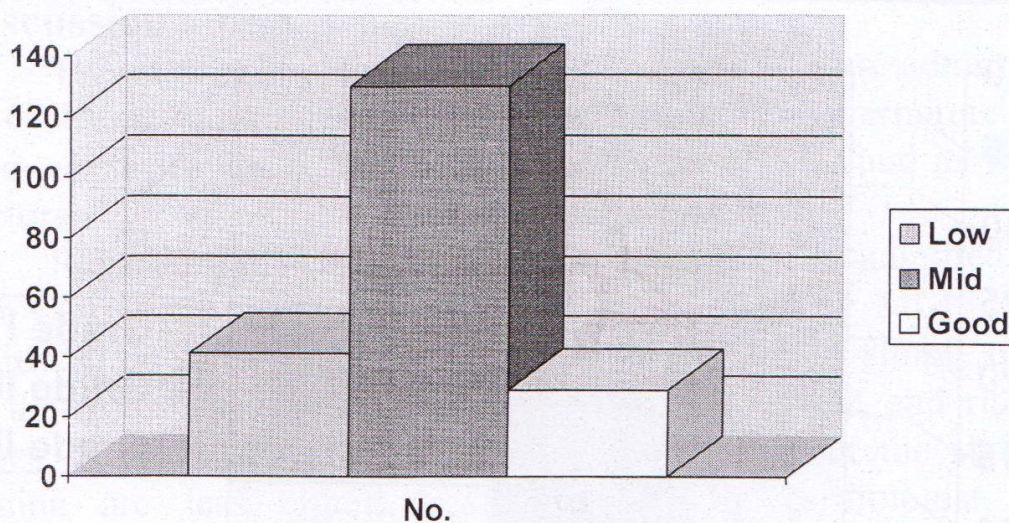


Figure 5 : Distribution of hypertensive patients according to severity

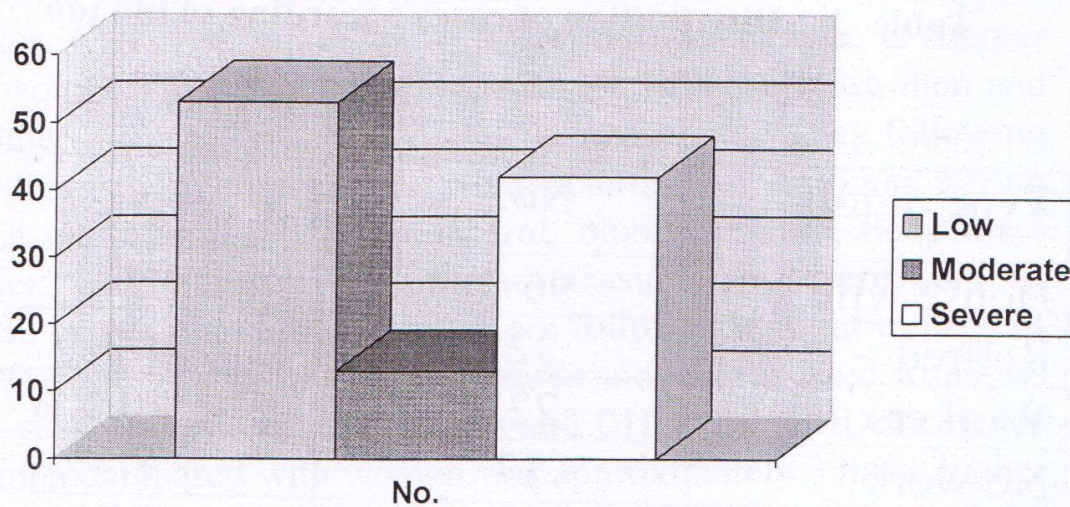


Figure 6 : Distribution of obese patients according to grades of obesity

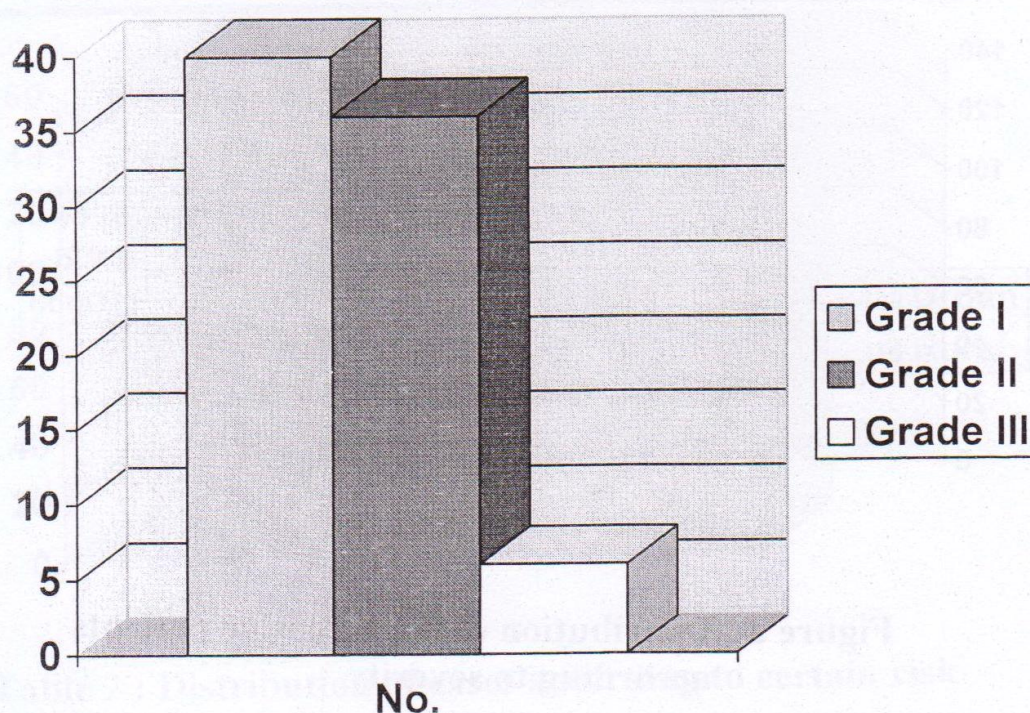


Table 3 : Distribution of cases according to the job

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 :

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 argent and risky cases as the cases of unstable angina and M.I but the stable angina are less argent 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 hypertension , (41%) are obese ,(25%) are diabetics ,(31.5%) are smokers , (59.5%)

are physically inactions .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 public health - covet 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 1 1.7% , 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 -l'11()L(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 vesseles as an audiology 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 .

References :

1 - Castelli WP . Epidemiology of coronary heart disease the Framingham . Amj mod. 1984;76:412.

2- Thom TJ , Kannel WB , Silbershatz HD , Agostino RP . incidence , prevalence and mortality of cardiovascular the heart . 9th Alexander RW , disease in the US. Hurst s the Schlant RC , Fuster v, editors . new york (ny). McGrow Hill ; 1998 . p 3 .

3- Freedman SB. Global cardiology comes to Australia

proceeding the 14th world congress of cardiology , 2002
may 5-9 ; Sydney , Australia . 2002 .

4- Ministry of health . Annual statistical year book , Amman .
Jordan 2001 Available from URL- : <http://www.moth.gov.io>

5- T1 - Effect of potentially modifiable risk factors associated
with myocardial infarction in 52 countries (the INTERHEART
study): case-control study.

6- AU - Yusuf S; Hawken S; Ounpuu S; Dans T; Avezum A;
Lanas F; McQueen M; Budaj A; Pais P; Varigos J; Lisheng
L

7- SO - Lancet 2004 Sep 1 1.,364(9438):937-52 De Backer G ,
Ambrosioni E , Borch-johnsen K , Brotons C , Cifkova R ,
Dallongeville J et al . European guidelines on cardiovascular
disease prevention in clinical practice ; Third joint task force of
European and other societies on cardiovascular disease
prevention in clinical practice . Eur.
Heart J. 2003 ;24: 1601-1610.

8- Bovet P. Shamlaye C , Gabriel A , Riesen W , Paccaud F ,
prevalence of cardiovascular risk factors in a middle-income
countries and estimated cost of a treatment strategy . BMC
public health 2006;6:9.

9- Rigo Carratala F , Frontera Juan G, Llobera Canaves J,
Rodriguez Ruiz T, Borrás Bosch I, Fuentispina E.
prevalence of cardiovascular risk factors in the Balearic islands
(CORSAB study) Rev. Esp. cardiol 2005;58:1411,1419.

10-Mohammed Aghaeishahsavari , Massood Noroozianovval,
Pegah viesi. Cardiovascular disease risk factors in patients with
confirmed cardiovascular disease shaheed madani hospital,
Tabris University of Medical Sciences Tabris , Iran ; Saudi

mod. J. 2006 ; vo1.27(9), 1385-1361.

11 -sami A Al-shammary . prevalence of risk factors of coronary heart disease among diabetic patients in medina city , Saudi mod. J. 2007 ; vo1.28 (2) .

12- Sex, age, cardiovascular risk factors, and coronary heart disease: a prospective follow-up study of 14 786 middle- aged men and women in Finland. AU - Jousilahti P; Vartiainen E; Tuomilehto J; Puska P. SO - Circulation 1999 Mar 9,99(9):1165-72.

13-T1 - Established risk factors and coronary artery disease: the Framingham Study.Au - Wilson PW SO - Am J Hypertens 1994 Jul;7(7 Pt 2):7S-12S.

14-Deedwania, PC, Carbajal, EV. Silent myocardial ischemia A clinical perspective. Arch Intern Med 1991; 151:2373.

15- Kannel, WB. Detection and management of patients with silent myocardial ischemia. Am Heart J 1989; 117:221.

16- American Heart Association. Heart and Stroke Facts: 1995 Statistical Supplement. American Heart Association 1994. Dallas TX 75231.

17- Roger, VL, Weston, SA, Killian, JM, et al. Time trends in the prevalence of atherosclerosis: A population-based autopsy study. Am J Med 2001; 110:267.

18-cupples, LA, Gagnon, DR, Wong, ND, et al. Preexisting cardiovascular conditions and long-term prognosis after initial myocardial infarction: the Framingham Study. Am Heart J 1993., 125:863.

19 -choudhri, AH Cleland, JG, Rowlands, PL. Unsuspected

renal artery stenosis in peripheral vascular disease. BMJ 1990; 301:1197.

20- Bucher, HC, Griffith, LE, Guyatt GH. Effect of HMGCOA reductive inhibitors on stroke. A meta-analysis of randomized controlled trials. Ann Intern Med 1998; 128:89.

21 - Crouse, JR, Byington, RP, Hoen, HM, et al. Reductase inhibitor monotherapy and stroke prevention. Arch Intern Med 1997; 157:1305.

22- Gordon, T, Kannel, WB, Hjortland, MC, McNamara, PM. Menopause and coronary heart disease. The Framingham Study. Ann Intern Med 1978; 89:157.

23-lerner, DJ, Kannel, WB. Patterns of coronary heart disease morbidity and mortality in the sexes: a 26-year follow-up of the Framingham population. Am Heart J 1986; 111:383.

24kannel, WB. Prevalence and clinical aspects of unrecognized myocardial infarction and sudden unexpected death. Circulation 1987;. 75:114.

25- Go, AS, Iribarren, C, Chandra, M, et al. Statin and beta-blocker therapy and the initial presentation of coronary heart disease. Ann Intern Med 2006; 144:229.

26-Ergin, A, Muntner, P, Sherwin, R, He, J. Secular trends in cardiovascular disease mortality, incidence, and case fatality rates in adults in the United States. Am J Med 2004; 117:219.

27- Arciero, TJ, Jacobsen, SJ, Reeder, GS, et al. Temporal trends in the incidence of coronary disease. Am J Med 2004; 117:228.

28- Yusuf, S, Reddy, S, Ounpuu, S, Anand, S. Global burden of cardiovascular diseases: Part 11: variations in cardiovascular disease by specific ethnic groups and geographic regions and prevention strategies. *Circulation* 2001; 104:2855.

29-laopez, AD, Mathers, CD, Ezzati, M, et ai. Global and regional burden of disease and risk factors, 2001: systematic analysis of population health data. *Lancet* 2006; 367:1747.

30- yusuf S, Reddy, S, Ounpuu, S, Anand, S. Global burden of cardiovascular diseases: part 1: general considerations, the epidemiologic transition, risk factors, and impact of urbanization. *Circulation* 2001,* 104:2746.

3 1 - Goyal, A, Yusuf, S. The burden of cardiovascular disease in the indian subcontinent. *Indian J Med Res* 2006; 124:235.

32-critchley, J, Liu, J, Zhao, D, et at. Explaining the increase in coronary heart disease mortality in Beijing between 1984 and 1999. *Circulation* 2004,. 1 10:1236.

33-Rodriguez, T, Malvezzi, M, Chatenoud, L, et al. Trends in mortality from coronary heart and cerebrovascular diseases in the Americas: 1970-2000. *Heart* 2006; 92:453.

34- Hardoon, SL, Whinctzp, PH, Lennon, LT, et al. How much of the recent decline in the incidence of myocardial infarction in British men can be explained by changes in cardiovascular risk factors? Evidence from a prospective population-based study. *Circulation* 2008; 1 17:598.

35-Beaglehole, R, Reddy, S, Leeder, SR. Poverty and human development: the global implications of cardiovascular disease. *Circulation* 2007; 1 16:1871.

36-Furman, MI, Dauerman, HL, Goldberg, RJ, et al. Twenty-two year (1975 to 1997) trends in the Incidence, in-hospital and long-term case fatality rates from initial Q-wave and non-Q-wave myocardial infarction: A multi-hospital, community-wide perspective. J Am Coll Cardiol 2001; 37:1571.

37-Rogers, WJ, Canto, JG, Lam. brew, CT, et al. Temporal trends in the treatment of over 1.5 million patients with myocardial infarction in the US from 1990 through 1999: the National Registry of Myocardial Infarction 1, 2 and 3. J Am Coll Cardiol 2000; 36:2056.

38-Thom, TJ, Kannel, WB, Silbershatz, S, et al. Incidence, Prevalence, and Mortality of Cardiovascular Diseases in the United States. 1n: Hurst's The Heart, 9th ed, Alexander, RW,

Schlant, RC, Fuster, V, Roberts, R (Eds), M mcGraw Hill, New York 1998. p.3.

39-Kuulasmaa, K, Tunstall-pedoe, H, Dobson, A, et ai.

Estimation of contribution of changes in classic risk factors to trends in coronary-event rates across the WHO MONICA Project populations. Lancet 2000; 355:675.

40-McGovern, PG, Pankow, JS, Shahar, E, et at. Recent trends in acute coronary heart disease--mortality, morbidity, medical care, and risk factors. The Minnesota Heart Survey Investigators. N Engl J Med 1996; 334:884.

41 - Capewell, S, Morrison, CE, McMurray, JJ. Contribution of modern cardiovascular treatment and risk factor changes to the decline in coronary heart disease mortality in Scotland between 1975 and 1994. Heart 1999; 81:380.

42-capewell, S, Beaglehole, R, Seddon, M, McMurray,

Explanation for the decline in coronary heart disease mortality rates in Auckland, New Zealand, between 1982 and 1993. *Circulation* 2000; 102:151 1.

43- Cooper, R, Cutler, J, Desvigne-Nickens, P, et al. Trends and disparities in coronary heart disease, stroke, and other cardiovascular diseases in the United States: findings of the national conference on cardiovascular disease prevention. *Circulation (Online)* 2000., 102:3137.