



INVESTIGATION OF SOME CARDIO-VASCULAR DISEASES - PRESENTATION OF STUDENTS STUDY

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ABSTRACT

Diseases of the heart are main factor for disablement of people, and worsening the quality of life. Cardio-vascular diseases /CVD/ are the main cause for death among the people of Europe. Aiming at reducing the burden of CVD, EHN & ESC created European chart for healthy heart. On September the 29 -th Bulgaria became a member of the club of countries signed European chart «Healthy heart». The aim of the current work was to present the data for the spread of some CVD in the town Yambol, performed by medical students of MF, TU Stara Zagora – may 2011 - in the day for prevention of CVD.

At the terrain, in urban environment students performed measurement of B.P., height, and weight by standard tools, examined peripheral arteries by portable dopler-ultrasound devices. Every person participator in the research was asked for some CVD, as well for major risk factors for CVD - behavioral /smoking, physical inactivity, unhealthy diet/, heredity, high blood sugar, previously diagnosed hypertension

The conclusions from the survey suggest sexual differences for C.V. insult and M.I.: these conditions are more common with men, whereas the cardiac arrhythmias are more common with women. Heart failure and Cardiac Artery Diseases/CAD/ are equally distributed in genders /men-women/. EU strives for encouraging investigations and exchange of information and good practice between member states. Widespread national strategies should bring together medical professionals, nongovernment organizations, governments, social health organizations, patient's organizations and media. The initiative represented by medical students, supported by local authorities and guided by Dean of Faculty correlates with this.

INTRODUCTION

Cardio-vascular diseases as a socially important problem.

Diseases of the heart are main factor for disablement of people, and worsening the quality of life.

They are main reason for chronic diseases and losses on the labor market.

They are closely related to social conditions of living, and the percentage differences are the main cause for inequality between member states.

Cardio-vascular diseases are the main cause for death among the people of Europe.

They form a half of deaths in Europe causing more than 4.35 millions in 52 member states of European region of WHO, and more than 1.9 million deaths in the countries of EU.

According to the latest data of EU countries research, the total annual cost of CVD for economics are over 192 bill. of Euro. 57% of them are health care expenses, including medicaments, 21 %, expenses for disablement, and 22% indirect and other difficult estimated expense.

In The 2011 Eurostat admitted that the CVD are the main reason for greater mortality amidst the older people.

Bulgaria is not an exception. According to NSI in the 2010, 110 000 people died in the country. Among them 75 000 die of diseases of

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circulation organs. Amidst them more than 56 000 were older than 65 years.

Aiming at reducing the burden of CVD ,EHN&ESC created European chart for healthy heart", On September the 29 -th Bulgaria became a member of the club of countries signed European chart «Healthy heart».

AIM AND TASKS

Presenting data for the spread of some CVD in the town Yambol, performed by medical students of MF, TU Stara Zagora – may 2011 - in the day for prevention of CVD

METHODS AND MATERIALS

At the terrain, in urban environment they performed measurement of B.P., height, and weight by standard tools, examined peripheral arteries by portable doppler-ultrasound devices. Before the investigation students were trained by qualified cardiologist.

Every person participator in the research was asked for some CVD ,as well for major risk factors for CVD - behavioral /smoking, physical inactivity, unhealthy diet/, heredity, high blood sugar, previously diagnosed hypertension

DISCUSSION

330 inhabitants of Yambol joined the investigation

Demographic characteristics of the group

Gender

Men – 71 /22%/- mean age of 68.34

Women -259/78%/- mean age of 64.42

Age structure according to WHO

– up to 44 y: 20 /6.1 %/ – 45-59 y- 68 (20.6%),60-74 y- 167 (50.6%)75-89 – 75 (22.7%)

90 – none

82 people or 26% were hypertensive above 138 mm SAP and above 89 mm.DAP. 59 of the group were with diagnosed earlier hypertension, and 23 were diagnosed for the first time.

This was very useful screening for the latter group persons, because they were alarmed to take care about their blood pressure Hypertension is called “the silent killer”, because it might be asymptomatic many years without symptoms.All the people with diagnosed hypertension was 183 or 54.6 % of participants, as well 25% of people with known hypertension have abnormal BP, which means nonadequate control of the disease.

48 /15 %/ of screened participants have suffered cerebrovascular insults - 16 men/23% of all men/ and 32 women/13 % of all women/

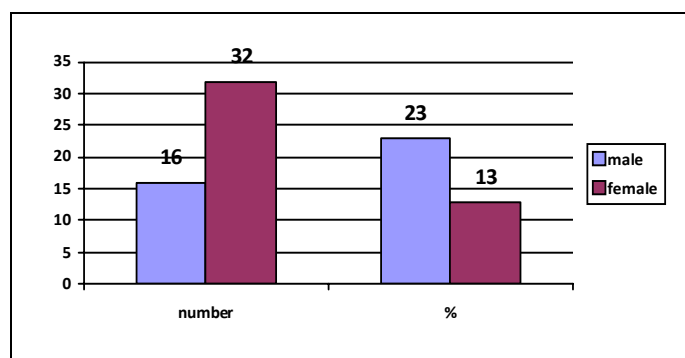


Figure 1. Results for some CVD

Previous cerebrovascular insult - by age:
up to 44 y - no insults,45-60 y / - 9.9% /16 men/,
65-74 y-16.7/11/above 75 y/ 28.4%/21/

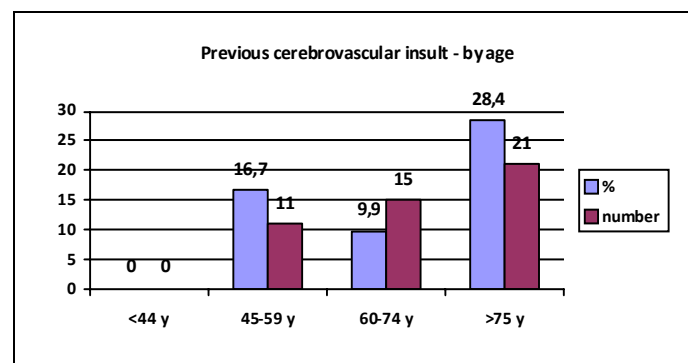


Figure 2. Previous cerebrovascular insult - by age

Results for myocardial infarction

30/9 %/ of participants suffered previous m.infarction - 11 men /16 % of all men/ & 19 women /8% of all women/,9.2% in the group 45-60 y, 8%- 60-75 y ,15% up 75 y.

Gender distribution:

23 men/ 34% of all men/ and 84 women/ 34% of all women/

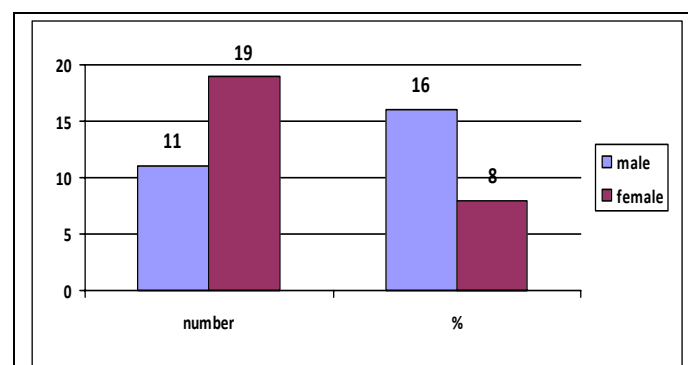


Figure 3. Distribution of myocardial infarction among genders

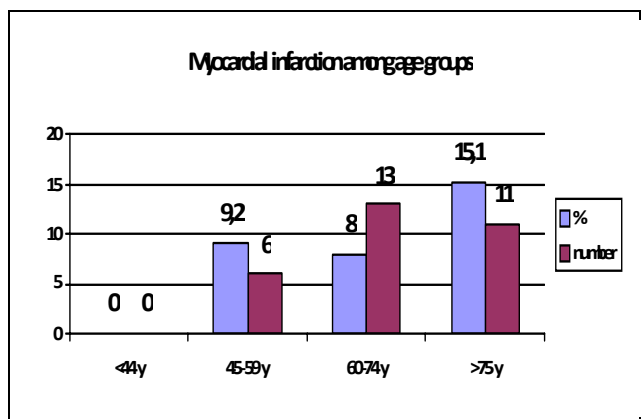


Figure 4. Distribution of myocardial infarction among age groups

CAD - distribution by age

Up to 44 y – 15 % of the group, 45-59 y – 24.5 % of the group, 60-75 y – 32 % of the group, above 75 y – 36 % of the group

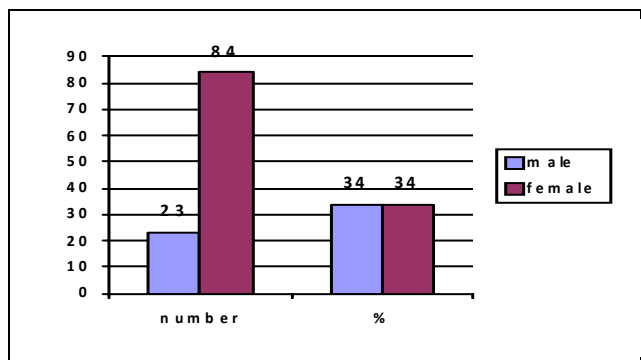


Figure 5. CAD distribution by gender

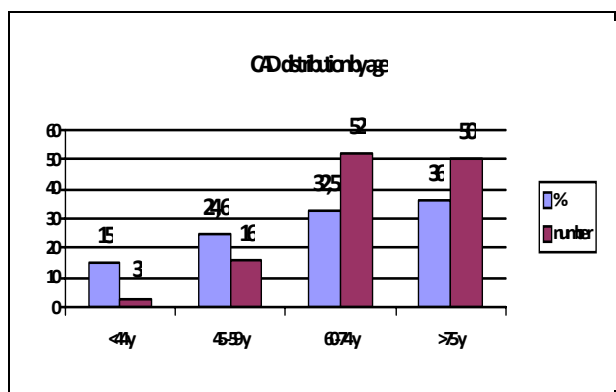


Figure 6. CAD distribution by age

Doppler-ultrasound investigation

Peripheral arterial disease

Peripheral arteries were examined by Doppler-ultrasound techniques.

67 /20% of participants/ have peripheral arterial failure. This data correlates with estimated high rate CAD person /34%/ and those previously suffered myocardial infarction /8%/, and highest age of investigated people.

More than 70% of them are above 60 years when atherosclerosis is more advanced

Heart failure

65/20 % of the screened persons/ suffer heart failure .13 are men /19 % of all men/ and 52 women /21 % of all women/ The highest part of HF is the group above 75 y /33%/

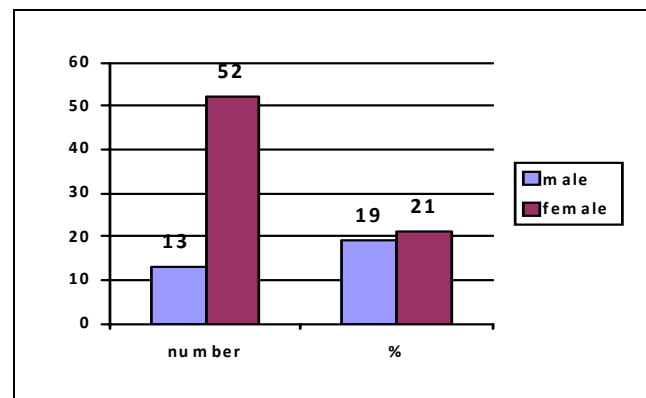


Figure 7. Heart failure - gender distribution

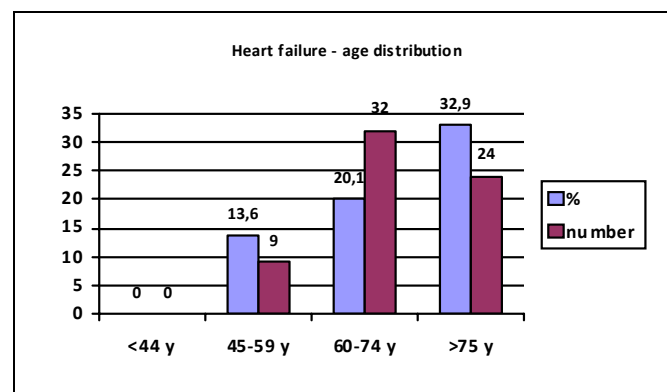


Figure 8. Heart failure - age distribution

Cardiac arrhythmias

132 /41 % of participants/ suffer cardiac arrhythmias

18 are men /26 % of all men/

114 women /45% of all women/

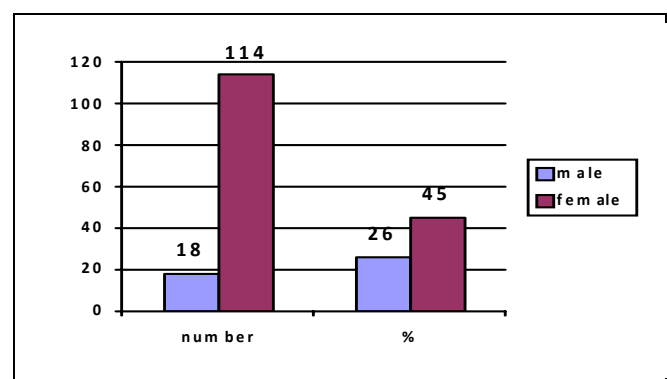


Figure 9. Cardiac arrhythmias – gender distribution

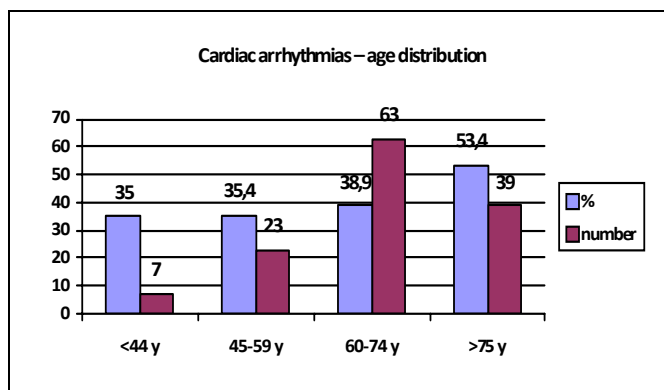


Figure 10. Cardiac arrhythmias – age distribution

It is impressive the equalizing of arrhythmia cases as relative part among young people and other groups

Arterial hypertension - 167/52.5% of screened persons/ have family history for A.H. Cerebrovascular insult - 98 /31.1%/ have family history for c.v. insult
Myocardial infarction – 63 /20.1%/ of screened persons have family history for M.I

CONCLUSIONS

Sexual differences are interesting - C.V. insult and M.I. are more common with men, and Cardiac arrhythmias are more common with women Heart Failure and C.A.D. are equally distributed in genders /men-women EU strives for encouraging investigations and exchange of information and good practice between member states. Widespread national strategies should bring together medical professionals, nongovernment organizations, governments, social health organizations, patient's organizations and media. The initiative represented by medical students, supported by local authorities and guided by Dean of Faculty correlates with this.

REFERENCES

1. Eurostat 2011
2. .European guidelines on CVD prevention – ESC 2007
3. The European Heart Health Charter 2007