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MANAGEMENT OF STABLE ANGINA IN MEN (LITERATURE REVIEW)

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Stable angina: historical and contemporary data

The classical description of Stable Angina, which is valid and today, has been made for the first time by William Beberdeb in 1772. His article about almost 20 patients called "Some considerations about chest diseases". He made a very detailed and excellent description, since the Stable Angina is called up today Heberden's angina [1, 5]. He described very clear its precipitation to the effort and emotions. Hunter died suddenly, in 1793, at the age of 65, and at the autopsy made by his disciple Edward Jenner it was found the intense coronary artery ossification. These findings allowed the determination of a relation between Stable Angina and coronary disease [8, 9]. Then, in 1799, the scientist Parry linked the Stable Angina problem with the poor blood flow with the obstruction of the coronary arteries, and in 1809 the well-known scientist Bums said that Stable Angina develops because "offer of energy and exhaustion are not balanced". This important conception remains valid up today [5].

In 1933, the famous Britain cardiologist Sir Thomas Lewis launched the concept that ischemia includes not only changes in the structure of coronary arteries, but and in and their tonicity, therefore a supply deficit may be caused by inadequate coronary tone and the deficit can cup by vasodilation [7, 9]. These methods remain today of major importance in the diagnosis of Stable Angina, very informative, accessible and safe at the same time [6, 7]. An important step in the diagnosis ofthe Stable Angina was innovation in technique viewing of coronary arteries. Selective coronary angiography was introduced by MasonSones in 1959 in the United States. He relied on the works of German doctor Werner Forssmann, who in 1929 tried this method by himself by inserting a catheter through the cubital vein to the right atrium. Later he and is honored with the Nobel Prize for developing the method of the human body probing.

Angina particularities at men; Trigger-factors

The subclinical signs of atherosclerosis, such as thickness measurements intimates environments, can also identify women before menopause, especially when there are present some risk factors. Flow-mediated vasodilation of the brachial artery decreases with age at menopause.

Dyslipidemia. Throughout life, men are subject to a number of hormonal changes, including those associated with puberty. Each of these variations can alter hormone levels in serum lipoproteins. At birth and during childhood cholesterol levels is the same for girls and boys. After the age of 20 years, in both sexes, LDL-cholesterol tends to increase, however, with a higher rate in men. Besides reducing overall levels of HDL cholesterol, and changes occur in the proportion of its subtypes, with obvious reduction HDL2 particle considered to be more active in the transport of cholesterol [2, 4].

Hypertriglyceridemia is also an independent risk factor for ICC stronger for men than women. A meta-analysis of 17 studies showed that the relative risk for hypertriglyceridemia CI was raised by 32% in men and 76% women. In the study Lipid Research Clinics' Follow Up Study determined that the level of HDL-cholesterol and triglycerides are powerful predictors for the ICC to women than LDL and total cholesterol [1, 2].

Hypertension. Vasodilation is determined by the increase of bioviability of nitric oxide, inhibition of proliferation of smooth muscle cells in vessels,

inhibition of the renin-angiotensin-aldosterone system (RAAS), inhibition of the sympathetic nervous system [3]. At the same time, the menopause increases the risk of glomerulosclerosis and renal pathology because the decrease of estrogen level contributes to the proliferation of mesangial cells, so determining the glomerulosclerosis development, and later high blood pressure [1, 4]. Furthermore, the estrogens a strong antioxidant effect, inhibiting the generation of active forms of oxygen [4, 8], involved in the atherosclerosis generation. Men who have high rates of blood pressure already present a risk for IHD for time more than men who have optimal blood pressure. At the same time, the hypersensitive men who dispose of an adequate treatment have a risk for CI 8 times higher than normotensive men, meanwhile in men with an inadequate therapy the risk for IHD increase 19 times [7, 9].

Smoking. Although the majority of cardiovascular risks in women are aggravating during the postmenopausal period, the smoking has a harmful effect since the youth. In young women, the smoking causes a decrease of regulation by the estrogens of the endothelial wall vasodilation [5, 6]. By the age of 50, the smoking has a more negative effect in men than in women, depending on the number of cigarette packages smoked per day [93], presenting a higher risk to develop IHD [5, 7]. Its atherogenic risk is determined by a great number of mechanisms. It induces the coronary spasm, has prothrombotic properties, determines changes in the blood rheology, increases the oxidation of LDL-cholesterol, decreases the level of HDL-cholesterol, causes the platelet aggregation, increases the fibrinogen level, determines the endothelial deficiency etc. [2, 6]. An obvious risk factor represents and the passive smoking, responsible for the increase of risk for CI with 30% [1, 5, 9].

Body weight may increase during the first years of menopause and body fat distribution changes from a gynoid pattern to an android one. Given the fact that the distribution of fats plays a key role for the assessment of cardio-vascular risk, besides BMI it is important to determine also the waist-hip or abdominal circumference proportion. Men who have the waist-hip proportion >0.76, compared to men with <0.72, have a cardio-vascular risk 2.3 times higher, and women with the proportion >0.88 – 5 times higher. Men with abdominal circumference >76.2 cm have 1.8 times higher cardio-vascular risk compared to women who have an abdominal circumference <71.1 cm, and for those who have the abdominal circumference >96.5 cm, the risk is 3.2 times higher [1, 4].

The type 2 diabetes mellitus (DM) presents an important cardiovascular risk factor. In the most cases the DM is also associated with other risk factors, as: hypertriglyceridemia, hypertension, atherogenic dyslipidemia, inflammation and endothelial dysfunction, fibrinolysis [2, 5]. The studies emphasize that the cardiovascular risk of DM increases together with its evolution, being equal to zero in the first time after the diagnostic of DM and 7 times higher over 7 years [4, 7]. Men with DM a subject to a 8 times higher cardiovascular risk than the non-diabetes population, meanwhile the men present a 3 times higher risk [4, 8]. The case of a so higher death rate in woman is multifactorial, associating the involvement of inflammatory factors, the smaller coronary arteries and treatment of diabetes often lighter than for men [9].

Sedentary lifestyles. Physical inactivity is a major atherogenic risk factor. A meta-analysis of several studies showed that physically active people have a likelihood of developing the IHD from 50 to 70% lower compared to physically inactive persons [1, 4, 9]. The explanation for this phenomenon belongs to the improvement of lipid profile, insulin sensitivity and endothelial function of the coronary arteries.

Treatment

Drug treatment:

- Stopping smoking and avoiding contact with smokers, which is associated with a reduction in mortality due to AMI 36% [2, 3];
- Observance of the Mediterranean diet, with the aim of reducing the BMI <25 kg/m^2;
- Regular physical activity – 30 minutes daily, or minimum 3 times per week in patients with a history of MI or revascularization;
- Sexual activity does not represent limitations in patients with successful revascularization and those with NYHA I after grade IC, the remaining patients, it is necessary to perform a stress test to assess the degree of stress symptoms from occurring;
- Management has favorable effects on body mass of BP control, dyslipidemia and glucose metabolism;
- Lipid management through lifestyle modification and/or administration of statins;
- Maintaining BP within the norm: 130-139 / 80-85 mmHg;
- Glucose monitoring within the norm, age, presence of diabetes complications and duration [1, 7].

Anti-ischemic therapy. Nitrates by means of the active compound, nitric oxide (NO) provides an arteriolar and venous vasodilation, thus improving coronary flow and at the same time decreasing the pre- and afterload. The standard treatment for angina attacks remains cropping of nitroglycerin in tablets (0.3-0.6 mg) or as a spray, sublingual every 5 minutes, until the chest pain is improved (up to 1.2 mg). **Ivabradine** lowers heart rate, inhibiting

selective sinus node, it decreases the myocardial oxygen need, with no effect on inotropism or TA [1, 5, 4]. **Nicorandil** is a nicotinamide derivative, which dilates epicardial arteries of the heart and at the same time stimulate ATP-sensitive potassium channels. It is suitable both for prevention and for long-term treatment of AP. **Trimetazidine** is a metabolic modulator anti-ischemic treatment very effective anti-anginal, but has a number of contraindications, such as Parkinson's disease, motor disorders or diabetes. **Ranolazine** is a selective inhibitor of the Na flux with anti-ischemic and metabolic disorders. It reduces angina and increase functional capacity without altering heart rate or BP.

Pathogenetic therapy. Acetylsalicylic acid at a dose of 75-150 mg remains the foundation of pharmacological prevention of arterial thrombosis. Clopidogrel is the best option for patients with AMI, stroke (stroke) or a history of peripheral vascular disease. Prasugrel P2Y12 antagonists and Ticagrelor are new, with stronger antiplatelet effect, but not yet widely indicated, due to insufficient clinical studies [5, 9]. In women, aspirin decreased the risk of MI by 12% and men 14% [1, 7]. Angiotensin-converting enzyme (ACE) is indicated, especially in patients with HF, diabetes, hypertension and / or LVEF (left ventricular ejection fraction) ≤40%.

Lipid lowering therapy. Treatment with statins reduces the risk of atherosclerotic cardiovascular complications in both primary prevention and secondary. In patients with atherosclerotic vascular disease, simvastatin and pravastatin reduced the incidence of serious cardiovascular complications by 30%. Other drugs that modify lipid profiles than the statins, for example, fibrates, nicotinic acid resin or extended release, and combinations thereof and other lipid-lowering statin may be required to control the level of fat in patients with severe dyslipidemia [4,5]. In women, statins have been shown to be more beneficial in the prevention of ICC, indicating a reduction in cardiovascular risk by 25%, compared to males it has been found that only a 14% diminuating [1, 3, 6].

Coronary revascularization. Percutaneous transluminal coronary angioplasty (PTCA) is a method that has evolved from simple metal stents associated with a recurrence rate of 20-30% stenosis of pharmacologically active stents to reduce the incidence of restenosis coming and the need for further revascularization. Coronary angiography and percutaneous coronary intervention (PCI) are more commonly performed via the femoral or the radial artery and less commonly performed via the brachial or ulnar artery. Overall, the femoral artery is the most common route of access for these procedures in the United States; however, the use of radial access is increasing. In selected labs in the United States and in some parts of Europe, radial artery access exceeds 90%. Subsequently, pharmacologically active stents have been improved by reducing the thickness strut site and using biocompatible polymers. To prevent stent thrombosis, patients received double antiplatelet therapy is indicated for 6-12 months after surgery [9]. Coronary artery bypass surgery is a method of revascularization that by using arterial grafts (internal mammary artery) or venous (saphenous vein) allows by passing the obstruction and coronary flow restoration.

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PARTICULARITĂȚILE DETERMINĂRII INTIMA MEDIA LA PACIENȚII CU DIFERITE VARIANTE ALE CARDIOPATIEI ISCHEMICE (REVISTA LITERATURII)

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Summary

Particularities of intima-media determination in patients with different variants of ischemic heart disease (Literature review)

Atherosclerosis and its consequences are more common meet in ischemic heart disease and stroke, are and will