

THE DRUG PHYSIOTENS, THE FEATURES OF THE DRUG AND ITS USE IN THE FIELD OF CARDIOLOGY, IN PATIENTS WITH HEAVY BODY WEIGHT

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Abstract. Moxonidine (Fisiotens®) is an antihypertensive drug that selectively interacts with imidazoline I1-receptors located in the brainstem, resulting in a decrease in sympathetic activity and blood pressure (BP). Moxonidine (Fisiotens®) has high affinity to imidazoline I1 - receptors and only slightly binds to central α_2 -adrenoreceptors, due to interaction with which dry mouth and sedative effect are mediated; reduces tissue resistance to insulin. Decrease in systolic and diastolic BP at a single and prolonged administration of the drug is associated with a decrease in the pressor action of the sympathetic nervous system on peripheral vessels, reduction of total peripheral resistance (TPR).

Keywords: Moxonidine (Fisiotens®), α_2 –adrenoreceptors, atherogenic dyslipidemia, arterial hypertension, metabolic syndrome, imidazoline I1 –receptors, catecholamine.

ПРЕПАРАТ ФИЗИОТЕНЗ, ОСОБЕННОСТИ ПРЕПАРАТА И ЕГО ПРИМЕНЕНИЕ В ОБЛАСТИ КАРДИОЛОГИИ, У ПАЦИЕНТОВ С БОЛЬШОЙ МАССОЙ ТЕЛА

Аннотация. Моксонидин (Физиотенз®) — антигипертензивный препарат, селективно взаимодействующий с имидазолиновыми I1-рецепторами, расположенными в стволе головного мозга, что приводит к снижению симпатической активности и артериального давления (АД). Моксонидин (Физиотенз®) обладает высоким сродством к имидазолиновым I1-рецепторам и лишь в незначительной степени связывается с центральными α_2 -адренорецепторами, за счет взаимодействия с которыми опосредуются сухость во рту и седативный эффект; снижает резистентность тканей к инсулину. Снижение систолического и диастолического АД при однократном и длительном введении препарата связано с уменьшением прессорного действия симпатической нервной системы на периферические сосуды, уменьшением общего периферического сопротивления (ОПС).

Ключевые слова: Моксонидин (Физиотенз®), α_2 –адренорецепторы, атерогенная дислипидемия, артериальная гипертензия, метаболический синдром, имидазолиновые I1 –рецепторы, катехоламины.

Metabolic syndrome (MS) as a set of metabolic disorders and associated pathological manifestations (atherogenic dyslipidemia, insulin resistance, hypersympathicotonia, arterial hypertension, abdominal obesity, endothelial dysfunction, increased blood coagulation

properties) are recognised as risk factors for the development of atherosclerotic diseases and cardiovascular mortality [1, 2]. The prevalence of MS in the adult population reaches 23-24%, and at the age of up to 49 years it is more often detected in men, and at the age of over 70 years - in women [3, 4]. These observations gave grounds to consider, along with other factors, the role of menopause in the development of MS. In 1997 menopausal metabolic syndrome (MMS) was singled out. metabolic syndrome (MMS) as a type of MS, the development of which is based on estrogen deficiency [5, 6].

The aim of the study:

-to study the effect of long-term use of moxonidine (Physiotex) on arterial hypertension, lipid and carbohydrate metabolism, autonomic dysfunction, psychoemotional status - on risk factors of atherosclerotic diseases in women with MS. The results of observation of 32 women aged from 45 to 68 years (58.3.3 years) were analysed. 45 to 68 years (58.3±2.3 years), suffering from mild and moderate arterial hypertension (AH) stage II in combination with MMC. The mean duration of AH was 8.2±1.4 years. All women had manifestations of menopausal syndrome. Prior to the study, the patients did not receive hypotensive drugs for a week, anthropometric measurements, clinical examination, office BP determination (according to Korotkov) were performed. BP determination (according to Korotkov), electrocardiography, bicycle ergometry, biochemical tests: total cholesterol (TC), high-density lipid cholesterol (HDL) and low-density lipid cholesterol (HDL), triglycerides, fasting and post-exercise blood glucose. fasting blood glucose and after a 75 g glucose load [8]. The Weyl index was used to assess the state of the autonomic nervous system. The severity of menopausal syndrome (MS) was determined by the Kupperman index based on the vasomotor and general reactions (the number of 'hot flashes', their severity, sweating, etc.).

Our observations have shown a good hypotensive effect of M, that is consistent with the data of other studies conducted both in women with estrogen deficiency [9,10] and in mixed groups where the hormonal factor was not taken into account [11-15] . The mechanism of hypotension is associated with a decrease in sympathoadrenal hyperactivity, secretion of catecholamines, renin, aldosterone, and a decrease in peripheral arterial tone [6, 16]. The efficacy of M in the treatment of AH is comparable to that of modern first-line antihypertensive drugs (IAPP, beta-adrenoreceptor blockers and calcium channel blockers) [18, 19], regardless of the level of estrogenic activity.

At the same time, positive dynamics of the general condition of women was observed during M treatment. Along with normalisation of BP and disappearance of clinical manifestations of hypertension, the severity of menopausal syndrome decreased significantly: the frequency of 'hot flashes', intensity of sweating, headache, cardialgia stopped, psychoemotional

status improved. The number of women with mild course of CS increased from 10 to 21 (at the expense of more severe forms), Kupperman index decreased from 33.8 ± 1.2 to 22.4 ± 1.1 ($P < 0.05$). The manifestations of autonomic dysfunction decreased - Weyl index decreased from 43.3 ± 2.2 to 26.1 ± 0.9 ($P < 0.05$).

The quality of life' improved by 1.28 points ($P < 0.05$). The favourable effect of M on the course of menopause, general condition, emotional sphere and standard of living of patients deserves special attention, which allows to give preference to imidazoline receptor agonists when building a treatment programme for menopausal women to achieve a better result.

Conclusions

Moxonidine has provided a vector for speculation about the possible link between hypertension, overweight and stress. My personal experience of using the drug shows that I have no objections to the hypotensive effect of moxonidine, the dose of 0.2 mg is rarely used, I prescribe immediately 0.4-0.6mg/day. Studies indicate the benefits of moxonidine in the treatment of AH in overweight. In our national guidelines from the WNOC, 2004, the moxonidine class is indicated for the treatment of AH in MS and diabetes mellitus (DM). In the recommendations of the European Society of Hypertension ESH, 2003, as recommendations for the therapy of patients with RAS hyperactivity, MS and DM (called the most rational combinations of two or more hypotensive drugs).

- The imidazoline receptor agonist moxonidine (Fisiotenz) in the 6-month treatment of menopausal women with metabolic syndrome reduces total metabolic syndrome. syndrome reduces the total risk of cardiovascular diseases due to normalisation of BP (in 81,2% of patients), positive effect on lipid and carbohydrate metabolism (increase of HDL cholesterol by 15%, decrease of glycaemia in 2 hours after glucose load by 17,48%), reduction of autonomic dysfunction.

- Moxonidine (Physiotensis) favourably affects the course of menopausal syndrome, improves the quality of life of patients.

- In the course of long-term treatment moxonidine (Physiotenz) is well well tolerated by 84.4% and satisfactory - 15.6% of patients.

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