



Positive Trend of Treatment With Equator and Tessiron in Patients With Nonspecific Aorto-Arteritis

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Annotation: In the pathogenesis and manifestation of nonspecific aortoarteritis (NAA) and complications, one of the significant aspects is the violation of the structure and function of the endothelium. In NAA, it appears as a primary target organ, since the endothelial lining of blood vessels is involved in the regulation of vascular tone, hemostasis, immune response, migration of blood cells into the vascular wall, synthesis of inflammatory factors and their inhibitors, and performs barrier functions. The leading clinical syndrome of this disease is arterial hypertension (AH), observed in approximately 70 % of patients.

Key words: aortoarterit, immune response, blood pressure, endothelium.

Relevance: Studies of recent years have established that damage to the endothelial layer of the vascular wall during the formation cardiovascular disease occurs at the earliest stages of NAA pathogenesis [2, 7 , 9]. Calcium antagonists and ACE inhibitors have vasoprotective action, cause regression of vascular remodeling [2.3, 5], contribute to the correction of endothelial dysfunction, reduce the activity of monocyte-macrophages by reducing the formation of angiotensin II , suppress the activation of adhesion molecules and inflammatory mediators, the migration of smooth muscle cells to the focus of inflammatory lesions, the growth of smooth muscle cells of the vascular walls [10, 11]. These processes underlie anti-inflammatory and angioprotective the results of the Equator, developed by the company " Gedeon Richter" drug, which is a fixed combination of lisinopril (10 mg) and amlodipine (5 mg). In Uzbekistan, this combination in 2008 registered under the trade name Equator. Considering narrow connectedness for the patient of the complex from the simplicity of the therapeutic regimen, the effective solution of the problem necessary increasing the dose in a number of patients treated with Equator therapy was the development by Gedeon Richter of a drug containing a combination of lisinopril and amlodipine at a dose of 20 mg and 10 mg, respectively. In Uzbekistan, this combination was registered in 2011 (Equator 20/10).

Recently, an antiplatelet agent has also been actively studied. clopidogrel as a possible endothelioprotector . To date, the ability of clopidogrel has been confirmed increase the production of nitric oxide by the vascular endothelium, which is a significant proof of its endothelial protective results (Molero L., 2005). Consequently of absolute interest was the implementation of a comparative assessment of clinical performance use of the equator and antiaggregantclopidogrel(Tessiron) in patients with NAA.

The purpose of the study is the development performance effects of Equator and Tessiron therapy on clinical symptoms and functional state of vascular endothelium in patients with NAA.

Materials and Methods .Thirty-seven patients with NAA were examined. The control group included thirty healthy donors: twelve men and eighteen women aged twenty-two before thirty - eight years old, mean age was 24.2 ± 6.3 years . All patients were randomly assigned to two groups. The 1st group consisted of nineteen patients with NAA who took Equator at a dose of: lisinopril 10 mg per day amlodipine 5 mg daily and tessiron (clopidogrel)75 mg daily. The 2nd group included 18 patients whose therapy included taking the Equator at a dose of: lisinopril 10 mg per day amlodipine 5 mg per day. The duration of therapy was six months. All examined patients with NAA received pathogenetic therapy with prednisolone at a dose of 40 mg per day, according to the degree of disease activity.

Results and discussion.Results Studies have shown that against the background of ongoing therapy , a positive clinical result was achieved . This was characterized by improvement in well-being, reduction of headaches, dizziness, achievement of the target level of blood pressure (130/90 mm Hg) in all patients with a history of illness less than 1 year, in 73.8 percent with a disease duration of up to 3 years, 26.2% of patients achieved a decrease in blood pressure by at least 15 % of the initial level. We have studied the effects of the equator and tessiron on the content of ET-1, an increase in the level of which serves as a marker of improvement in endothelial dysfunction. The results of the studies are presented in Table 1 . Decrease in the level of ET-1 in the blood serum of patients with NAA with II degree of severity of ED after 6 months of therapy with the equator, more important when using the equator and tessiron . The use of the equator in combination with tessiron was accompanied by the normalization of the concentration of ET-1 in the blood serum in patients with NAA with grade II ED.

Table #1 Dynamics of the content of ET-1 in the blood serum of patients with NAA during therapy

Show-body	Cont- role n =30	Groups of surveyed		
		Patients with NAA from II st. ED		
		Before treatment n =39	Equator Therapy n =19	Therapyequator + tessiron n =20
		39.3±0.93	21.8±0.9	16.1±0.9
THIS- 1 ng/l	14.6±1.6	Patients with NAA from III - IV Art. ED		
		Before treatment n =37	Equator Therapy n =18	Equator + tessiron therapy n =19
		52.8±0.98	49.8±0.7	38.7±0.7

Changes in the concentration of ET-1 in patients with NAA with III-IV severity of ED were characterized by a similar trend. However, it is worth noting that a genuine change in the level of ET-1 during therapy with the equator was not achieved. Only the combined use of the equator and andtessirona led to more an important decrease in the level of ET-1 (up to 38.7 ± 0.7 ng /l). In patients with NAA with III-IV degree of ED, the appointment of the equator was accompanied by a tendency to reduce the concentration of ET-1 without a true difference in the compared groups, while the complex use of the equator and tessiron led to a true decrease in the level of ET-1. Thus, the obtained results indicate performance effects on the level of ET-1, the equator and the combination of the equator and tessiron in patients with NAA, while complex therapy with the equator and tessiron has the greatest corrective effect on the endothelium. We have also evaluated the effectiveness effects of therapy on ET-1 production in patients with different the duration of the NAA. Studies have shown the

achievement of more low levels of ET-1 concentration during treatment in patients with NAA with a history of less than 1 year. In this group of patients, therapy with the equator caused genuine a decrease in the level of ET-1 (up to 27.9 ± 1.1 ng /l, $p < 0.01$) and complex therapy with the equator and tessiron led to the normalization of the presence of ET-1 in the blood serum of the examined patients. The smallest dynamics of finding ET-1 occurred in patients with a long history of the disease (from 1 to 3 years), in this group of patients the most important changes in the level of endothelinemia noticed only against the background of complex therapy: equator tessiron, which is due to the fact that the group of patients with a duration of NAA from 1 to 3 years mainly consisted of patients with III and IV degrees of ED. For property performance impact achieved drugs on endothelial function in our work was also determined by the dynamics of endotheliocytemia, reflecting the severity of damage to the endothelium of the vascular bed. Studies have shown a decrease in the number of circulating desquamated endotheliocytes (CEK) in patients with NAA after treatment. At the same time, it was noted truly a more pronounced decrease in endotheliocytemia with the use of complex therapy with the equator tessiron in patients with NAA, both with II, and III, IV degree of ED. It should be noted that for sure huge performance effects on the level of CEC was achieved in the group of patients with NAA with stage II. Endothelial dysfunction. Studies finding the von Willebrand factor, which characterizes the prothrombotic activity of the endothelium of the vascular bed, showed a true decrease in its presence by 9 % in patients with NAA from stage II. ED during therapy with the equator (Table 2).

Table 2 Dynamics Of The Content Of Von Willebrand Factor In The Blood Serum Of Patients With NAA

Groups of surveyed							
Index	Control n =30	Patients with NAA from II st. ED N=39			Patients with NAA III - IV Art. ED n =37		
		Before treatment N=39	Therapy		Before treatment N=37	Therapy	
			Equator n =19	Equator+ Tessiron N=20		Equator n =18	Equator + tessiron N=19
Ffv%	105.3±1.6	166.8±2.1	152.9±2.1	107.1± 1	181.3± 2.6	178.6± 2.3	159.4± 1.9

The use of combination therapy (equator - tessiron) led to the normalization of the level of vWf in the blood serum of patients with NAA from stage II. ED. In patients with NAA with III- IV Art. ED The use of the equator against the background of basic therapy with prednisolone did not have an important influence on the content of vW, Application along with the equator and tessiron caused a real decrease in its concentration. It should be noted that in patients with a duration of NAA less than the first year, combination therapy led to the normalization of the serum level of vWF, with a duration of NAA from the first year to three years, a true decrease in its level was achieved. and the use of only the equator was less effective if patients with the duration of NAA determined an important decrease in the level of vW, then in patients with a history of the disease more the first year of its presence there was no dynamics. Thus, studies have shown that the equator and the combination of equator tessiron along with anti-inflammatory activity possess corrective effect on ED in patients with NAA, the effectiveness of which directly depends on the severity of ED and the duration of NAA. The use of the equator in combination with tessiron in patients with NAA with III-IV degree of ED significantly increased the effectiveness of the vasoprotective effect of therapy, which was manifested by the correction of indicators characterizing the functional state of the endothelium. It should be noted that the vasoprotective activity of the drugs correlated with their anti-inflammatory effect.

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