

## Prevention of hypertensive states of pregnancy

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**Abstract.** The problem of hypertension in pregnant women has an interdisciplinary nature and remains the focus of cardiologists, obstetricians, pediatricians and clinical pharmacologists. Particularly at risk of developing preeclampsia two groups of women: those who had preeclampsia during a previous pregnancy, and those who have the kidney disease or hypertension. Currently under discussion is to consider gestational increase in blood pressure, including preeclampsia, the factor determining high risk of cardiovascular disease, in connection with which there is a need in the prevention of preeclampsia, so as the only effective way to treat it is the birth of a child. Prenatal care in both groups were carried out according to clinical protocols for pregnant women outpatient service of Kazakhstan, only pregnant in the main group received supplemental calcium preparation as a prophylactic measure. [Sakhipova G.Z., Karimsakova B. K., Ismailova I.V., Iztleuov E.M. **Prevention of hypertensive states of pregnancy.** *Life Sci J* 2014;11(6s):326-328] (ISSN:1097-8135). <http://www.lifesciencesite.com>. 66

**Keywords:** arterial hypertension in pregnant women, the violation of the placental blood flow, calcin, hypotensive effect, preventing late gestosis.

### Introduction

The problem of hypertension in pregnant women has an interdisciplinary character and remains the focus of Cardiology, clinical pharmacologists, obstetricians and pediatricians. According to clinical protocols of MOH RK, hypertension is a condition when the diastolic pressure is greater than or equal to 110 mm Hg. art. in an attempt to measure or is greater than or equal to 90 mm Hg. art. the measurement interval in 4:0. You must confirm the increased level of HELL, at least two measurements at intervals of not less than four hours [1, 2, 3, 4, 5, 6]. There are four main forms of AG pregnancy: chronic AG, gestational AG, preeclampsia/eclampsia has developed against the backdrop of chronic HYPERTENSION. Arterial hypertension with proteinuria (greater than 300 mg daily of protein in the urine) is called preeclampsia. The presence of edema is not a diagnostic criterion of PE. When physiologically flowing pregnancy rate reaches 60% of trauma [4, 7, 8, 9].

Especially vulnerable to the risk of preeclampsia, two groups of women: those who have had preeclampsia during a previous pregnancy, and those who have kidney disease or hypertension. In the general population of patients with HYPERTENSION, i.e. including women outside pregnancy, divided into four risk groups of cardiovascular complications depending on the degree of increase the arterial pressure, risk factor, target organ damage and associated clinical conditions: low, medium, high and very high additional risk. Discussions are under way on how to

treat gestational ad, including preeclampsia, high risk factor of cardiovascular disease [10, 11, 12, 13], hence the need for the prevention of preeclampsia appears as the only effective way to treat it is the birth of a child.

The purpose of the study: effectiveness of D-calcin with the aim of preventing hypertensive states of pregnancy.

Methods and materials research: 60 hypertensive pregnant women were supervised, that were divided into 2 groups: a main group and the comparison group, with 30 pregnant women each. Prior to inclusion in the study, all participants had received a written informed consent.

Monitoring of pregnant women in both groups was conducted according to clinical Protocol management in out-patient service, the only major group of pregnant drug addiction received calcium for prevention. As a preparation of calcium preparation on calcin was selected in the Tablet, 5 g granules which contain active substances: calcium-magnesium inositol hexakisphosphate 125 mg, Calcium Gluconat 375 mg, vitamin D2 3000 ME. Pregnant took on calcin on 1/3 measuring cup \* 3 p. Pregnant women receiving calcium and pregnant drug comparison groups did not differ in age, frequency and nature of somatic pathology, gynecological diseases, number of pregnancies and births. In both groups were dominated by primigravida and primiparous. Reliable differences in the duration of gestosis, higher blood pressure and proteinuria. Age pregnant women ranged from 20 to 35 years. Among the various degrees of anemia extra

genital pathology found in 80% of cases, XP pyelonephritis in every third case, 10 percent of pregnant women were hypertensive type of dystonia. During pregnancy, chronic arterial hypertension was noted in 10% of cases, gestational hypertension in 60%, 30% of pregnant women with preeclampsia.

In the comparison group remained until delivery proteinuria, and against the backdrop of the admission on calcin frequency of proteinuria was reduced to 50%. Blood pressure during pregnancy in 30% of cases have increased in the study group and comparison group-60%, in particular: the mean systolic blood pressure in the main group  $145 \pm 5$  mm Hg, in the comparison group  $140 \pm 2$  mm Hg, diastolic blood pressure  $100 \pm 5$  mm Hg, and  $95 \pm 3$  mm Hg, respectively.

Fetal monitoring has shown that the violation of the placental blood flow 1 and 2 degrees was observed in 90% of cases in the study group, while the comparison group violations have been reported in 42% according to doppler. Circulatory fetal placental disorders 3 degrees were not observed in both groups. According to CTG research in core violation fetal was fixed in every third case of the predominance of primary violations in 80%, while 10% in the comparison group, with the initial fetal disorders.

In both groups of pregnant delivery is on time, only the main group 30% delivery is after 36 weeks in a planned manner due to the lack of effect of treatment or increase the severity of gestosis and comparison group were pregnant in a maternity hospital with the start of a regular labor. Fetal loss was not in both groups, only the frequency of births of children with mild asphyxia in the study group was significantly higher than the birth rate in asphyxia light in the comparison group.

### Results and discussions

Reception of a pregnant woman of calcium in a dose of 1-1, 5-2, 0 g/day every day leads to change of certain biochemical indicators in women, in particular increases the excretion of calcium and magnesium content in the serum, resulting in reducing the frequency of late gestosis. Mechanism favorable action of calcium is that intracellular calcium in smooth muscles decreases the tendency to spasms of vascular walls. The concentration of calcium in muscles increases with increasing content of its food. Intake of calcium each day in healthy pregnant leads to a decrease in systolic and diastolic BP at 4-5 mmHg In the third trimester of pregnancy revealed the relationship between dose of calcium and hypotensive effect. It is very important, as the data reduced diastolic arterial pressure even 5 mm Hg. reduces the frequency of stroke by 40%.

D-calcin is a complex of minerals and vitamin D2, regulator of the calcium-phosphorus metabolism. Calcium-magnesium inositol hexakisphosphate (phytin) is a complex organic compound of phosphorus containing a mixture of calcium and magnesium salts. Vitamin D2 is the regulator of calcium and phosphorus. Increases the permeability of the intestinal epithelium for calcium and phosphorus, provides the necessary concentration in the blood. It is regulates bone mineralization, as well as the mobilization of calcium from the bone and Promotes for reabsorption of phosphate in renal bone. And has cumulative properties. Helps absorption of calcium and retain it in the body of magnesium, phosphorus and vitamin D, which are contained in the product on calcin. Numerous studies have proved a useful combination of vitamin D and calcium.

### Conclusion

In hypertension in pregnant women taking calcium reduces ad. Increasing doses of calcium up to 1.5 g/day reduces the arterial pressure in the third trimester of pregnancy. Calcium intake in the dose of 2 g/day reduces ad at the end of the 2-nd week of preparation. Hypotension effect of taking calcium intake may be associated with the high level of its excretion in the urine. It is possible that taking calcium (perhaps by reducing parathyroid hormone release, increasing the level of magnesium ions and reduce the activity of Renin, as well as the excretion of nitrate and nitrite ions, depending on severity of gestosis) can prevent the development of hypertension in pregnant women.

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