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PECULIARITIES OF PREGNANCY PROGRESS IN WOMEN WITH CORRECTED ISTHMIC-CERVIAL INCOMPETENCE

Abstract. *The article deals with the results of the study of peculiarities of pregnancy progress and its outcome among women with isthmic-cervical incompetence corrected by means of different methods. The conducted analysis demonstrated the lack of statistically significant difference between the results of applied methods of ICI correction, which requires more deliberate approach to use surgical correction of this pathology and detection of accurate indications for its application.*
Key words: *miscarriage, isthmic-cervical incompetence, pessary, suture on the uterine cervix.*

Introduction. Miscarriage is one of the topical issues of contemporary obstetrics caused by a high frequency and lack of tendencies to reduce this pathology. Isthmic-cervical incompetence (ICI) is a common cause of habitual non-carrying of pregnancy involving from 14,5% to 65% of late miscarriages and preterm labour.

ICI progress can be under the impact of organic, functional and congenital factors promoting the development of the following types of the pathology: anatomical (traumatic, organic), functional and congenital. Organic ICI occurs in case of traumatic damages of the uterine cervix due to huge fetus delivery, precipitated labour, as well as delivery by means of obstetric forceps, induced abortion, diathermocoagulation and other manipulations when instrumental dilation of the uterine cervix is used [1]. Due to the above mentioned the connective tissue is formed in the area of the isthmic portion of the uterus. This tissue is a morphological substrate of ICI. Functional ICI develops during pregnancy and can be stipulated by both hormonal disorders (ovarian hypofunction, hyperandrogenesis) and changes of uterine response to neurohumoral stimuli [4].

Premature labour in case of ICI is caused by several mechanisms [1, 5]. Incompletely closed cervical canal promotes ascending spread of the vaginal microflora to the uterine cavity resulting in infection of the fetal membranes. Due to inflammatory process metabolites are formed producing cytotoxic action on trophoblast and causing chorion detachment. In the II half of pregnancy they increase uterine irritability initiating the onset of uterine contractions and preterm labour (PL) [6]. On the other side, due to gradual shortening of the vaginal part of the uterine cervix and dilation of the cervical canal the ovum loses its support and descends in the caudal direction, the fetal membranes penetrate into the dilated cervical canal and open. Biometrium contractility occurs and the ovum is extruded.

Nowadays both conservative and surgical methods of correction of ICI are applied. All of them are principally directed to prevent dilation of the uterine cervix as a factor of ICI. Conservative methods of treatment are: keeping to bed regimen, application of obstetric pessary, hormonal or tocolytic therapy. It should be noted that all pharmacological agents indicated to prevent PL in case of ICI block the final stage of their progress – biometrium contraction. Therefore, their administration cannot be considered sufficient. It is these causes that might affect considerable prolongation of pregnancy [7].

Scientists do not share the same views concerning application of obstetric pessary: some of them consider its use to be rather effective [8, 9], others [10] are more restrained. Therefore, application and comparison of the results of different methods to correct ICI remain rather topical.

Objective of the investigation was to study the progress of pregnancy and its outcome in women with isthmic-cervical incompetence corrected by various methods.

Materials and methods. A retrospective analysis of the progress and outcome of single pregnancy in 84 patients with corrected ICI has been performed. Depending on the methods of correction the women were distributed into three groups. The first group included 25 women who underwent the procedure of applying circular sutures on the uterine cervix. The second group included 34 women who were treated by means of the obstetric discharging pessary of "Arabin" type. The third group comprised 25 women with a combined correction of ICI (circular sutures on the uterine cervix followed by insertion of the obstetric discharging pessary). Women with

multiple pregnancy were not included into the study. The diagnosis if ICI was made on the base of obstetric-gynecological examination and trans-vaginal ultrasonic cervicometry.

The groups were statistically similar. The mean age of the patients was 28,7±4,2. There were 7 (28%) primigravid women in the 1st group, 14 (41,2%) – in the 2nd group, and 5 (20%) – in the 3rd group. Occurrence of abortions and voluntary miscarriages in secondary pregnant women concerning the groups was 32%, 29,4% and 36% respectively. Habitual miscarriage was found in 10% of the examined women from all the three groups.

Complicated gynecological anamnesis was found in 69 women (82,1%). The most frequent complications included chronic adnexitis, endometriosis, uterine myoma, ovarian cystic disease, urinary infections and endometrium polyps.

The findings were statistically processed by means of the applied computer program Statistica 10.0. Significant difference was considered to be reliable with $p< 0,05$.

Results and discussion. Pregnancy of the examined women was clinically complicated with a pronounced threat of miscarriage. All the pregnant women before correction of ICI were at least once hospitalized for threat of miscarriage. After ICI correction pregnancy was not complicated in 19 (22,6%) women. Others had different complications both on the maternal and fetal side. Preterm effusion of amniotic fluid was registered according to the groups in 16%, 14,7% and 12% cases. Placental dysfunction occurred in 24%, 8,8% and 16% of patients respectively.

Efficacy of all the three types of ICI correction was rather high. Thus, the number of preterm labour in the 1st group was 8%, in the 2nd – 11,8%, and in the 3rd – 12%, without reliable difference between the groups ($p>0,05$).

Delivery through the physiological maternal passages was more frequently registered among the women from the 1st group, and cesarean section was performed in more than 30% of pregnant women from the 2nd and 3rd groups, including 37,8% - due to urgent indications.

In all the examined groups there was rather high (27,4%) rate of babies transferred to the second stage of general medical care or those who required resuscitation and intensive care. It was indicative of the fact that perinatal complications were found more often in pregnant women with ICI.

Conclusion. The conducted analysis demonstrated the lack of statistically significant difference between the results of applied methods of ICI correction. The use of aggressive methods of correction (applying sutures of the uterine cervix) should be administered for those patients with contraindications to alternative methods of treatment of this pathology.

Prospects of further studies. A comprehensive investigation of the issue of miscarriage in women with isthmic-cervical incompetence and its differentiation correction should be of practical value considering the elaboration of comprehensive methods of treatment of this group of pregnant women and prevention of perinatal complications.

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