

**O. Boyarin, N. Kokorina**

*Belarusian State University, ISEI BSU,  
Minsk, Republic of Belarus  
oya.boyarin@yandex.ru*

During the study, the course and outcomes of pregnancy as a result of IVF were analyzed. The causes and factors of infertility are considered. The comparative characteristic of the health state of children born as a result of the use of IVF children and natural childbirth is given.

*Keywords:* assisted reproductive technologies, infertility, in vitro fertilization, multiple pregnancy

One of the most important and relevant aspects of family planning is the treatment of infertility, which makes it possible to have coveted children.

According to the definition of WHO (1986), marriage is considered sterile, in which a woman does not develop a pregnancy in a single year with a regular sexual life without using contraception, provided that the spouses are of childbearing age. WHO data suggests that infertility has a greater impact on demographic indicators than miscarriage and perinatal pathology combined [1].

Today in Belarus there are about 10 thousand women and 2 thousand men suffering from infertility. Because of health problems, about 14 percent of couples can not have children. The chance to become parents is given by modern medical technologies, and in particular, the method of in vitro fertilization. In the Republic of Belarus, about 1,500–1700 IVF are performed every year, 500–700 of which end in childbirth. In total, more than 5,000 children were born in Belarus with the help of this method [2].

The aim of the study was to investigate the features of the course and outcome of pregnancy in women after using assisted reproductive technologies.

### **Materials and methods of the research**

A retrospective analysis of medical records of 35 women was made to conduct this research. All of the women were divided into 2 groups:

The first group consisted of women with infertility, whose pregnancy was the result of in vitro fertilization (n = 20). The second group included women who had a natural pregnancy (control), (n = 15).

### **Results**

The main contingent of the IVF program are women aged 31–35 with a duration of infertility from 1 to 5 years.

The causes of infertility in women of the IVF group were: endometriosis (30 %); endocrine pathology (15 %), tubal peritoneal factor (15 %), male factor (20 %), combined factor (15 %).

When studying obstetric-gynecological history of women of the IVF group, it was found that 80 % of women had a complicated course of pregnancy (anemia, infectious and inflammatory diseases of the reproductive system).

When analyzing pregnancy outcomes in women of the IVF group, it was found that 52 % of children were born from a multiple pregnancy of them 44 % with prematurity of varying degrees. In 90 % of cases, cesarean section was used as a delivery in connection with multiple pregnancies and a complicated course of the perinatal period.

Comparative analysis of newborns of the IVF group and newborns of the control group revealed that in 81,4 % of the children of the IVF the Apgar score was 8/9, while in the control group, the index was 100 %.

In 11,12 % of the children in the main group, the Apgar score was lower than 6, the children were transferred to IVL on 5 minutes, which was associated with hypoxic CNS damage in the ante- and intranatal periods.

The increased risk of possible complications in children born after the application of IVF is primarily a consequence of pathology in the parents that caused infertility.

Thus, pregnant patients of the IVF program constitute a high-risk group for miscarriage, development of preeclampsia and placental insufficiency.

### **BIBLIOGRAPHY**

1. *Gerasimov, G.* Reproductive health and protection / G. Gerasimov // Safe motherhood in the twenty-first century: proceedings of the VIII Congress of obstetricians-gynecologists and neonatologists. – 2007. – P. 71–78.
2. *Vlasevich, A.* Peculiarities of the period of early neonatal adaptation of newborns born to women after in vitro fertilization / A. Vlasevich, E. Alferovich / Belarusian state medical university. Minsk, 2014. – 1 p.