

Traditional and modern views on the problem of infertility: the state of health of women,
whose pregnancies occurred as a result of the use of auxiliary
reproductive technologies

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Traditional and modern ideas about the health of women whose pregnancy occurred as a result of
assisted reproductive technologies

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SUMMARY

As a result of the study, it was found that the health status of women whose pregnancy occurred as a result of the use of ART is significantly more likely to be negatively affected by gynecological and somatic diseases in comparison with the group of women with spontaneous pregnancies. A significant burden of obstetric history was revealed in the group of women who underwent IVF, mainly due to the high frequency of undeveloped and ectopic pregnancies in these women. Along with the high incidence of somatic and gynecological diseases, this can have an adverse effect on the course and outcomes of pregnancies after IVF. Taking into account traditional medical ideas about the causes of infertility,

Key words: assisted reproductive technologies, extracorporeal fertilization, women's health, traditional medical systems.

RESUME

It is established that the health of women, whose pregnancy occurred as the result of assisted reproductive technologies, significantly more likely to have a negative impact of gynecological and physical disorders compared with the group of women with spontaneous pregnancies occurred. Women undergoing IVF were more likely to have complicated obstetric history mainly due to high frequency of non-developing or ectopic pregnancies, which along with a high frequency of somatic and gynecological diseases in these women may adversely affect the course and outcome of pregnancy after IVF. Taking into account centuries-old traditional medical beliefs about infertility,

Keywords: assisted reproductive technologies (ART), in vitro fertilization (IVF), women's health, traditional medical systems.

Introduction

With the increase in the number of children born with the help of assisted reproductive technologies (ART), there is a growing interest in their state of health. The results of numerous studies on the health status of these children are often contradictory. A number of authors report that children from pregnancies after the use of ART, including multiple pregnancies, do not differ in physical, psychomotor development and morbidity from those born after natural pregnancies [3, 8, 13, 14, 19, 22]. In the same time

some works indicate an increased frequency of congenital malformations and developmental anomalies in children with IVF compared to the population [9, 17, 18], as well as a higher mortality and morbidity among such children [9, 15], including due to severe pathology CNS - cerebral palsy, epilepsy [20, 21]. At the same time, researchers have no doubts about the fact that the state of health of mothers influences the health and development of children born as a result of using ART. At the same time, the traditional and modern view of the health status of women who underwent the IVF procedure, in none of the cases, was the subject of a special study in a comparative aspect.

Our attention was attracted by the problem of the traditional and modern attitude to the problem of childbirth and infertility depending on the state of the mother's health, on which the child's health largely depends. Today, various traditional medical systems of the world have established technologies for correcting the state of "infertile" women in order to achieve the desired pregnancy and physiological childbirth without the use of ART in their modern understanding.

"In the Russian folk tradition (Russian folk medicine of the 19th - early 20th centuries [11]), children are God's blessing and express the presence of the Holy Spirit in the family. But complete sterility is already the unhappiness of the family ... It is an expression of God's anger and punishment for the sins of a husband and wife "[11], including" for debauchery "and the unhealthy lifestyle of the future mother. The physical and mental health of women diagnosed with infertility is currently being dealt with in Russia by homeopaths and specialists in other areas of traditional medicine. The problem of infertility and the state of health of expectant mothers was, in particular, the focus of the conference "Revival of patristic traditions of treatment and nutrition" [4].

From the standpoint of traditional Chinese medicine (TCM), infertility can be the result of several types of syndromes [2, 7, 10, 12]. It can be caused by "a lack of energy in the kidneys and liver, disrupting the endocrine system, which creates an imbalance of hormones in the body and makes it impossible to conceive" [2, 7, 10, 12]. It can also be the result of "stagnation of Qi energy and blood: the lack of circulation blocks the possibility of conception (with normal hormone levels)." In particular, "stagnation of blood" can manifest itself in the female body in the form of endometriosis, which TCM specialists suggest correcting with acupuncture and herbal medicine [6, 10]. "Pathogenic Damp-Heat Syndrome" can also cause infertility from the point of view of BMT due to improper functioning of internal systems, when a man has "insufficient sperm quality for conception," and a woman needs to "remove the blockage" in order to make pregnancy possible. Taking into account the diagnosis of various types of infertility in TCM, various treatment options for future parents are offered [2, 6, 7, 10, 12].

From the standpoint of Ayurveda, the health of a child also directly depends on the health of his parents, and the health of their "reproductive tissue" depends on the health of all other tissues and systems in the body [5, 16].

According to traditional medical concepts, modern medical technologies and synthetic drugs can often cause infertility themselves. At the same time, the possibilities of traditional herbal medicine and other traditional methods of treatment are used completely insufficiently in the correction of reproductive disorders [1].

Today, the widespread practice of using reproductive technologies saves many families from infertility, without focusing on its causes, including traditionally significant ones, however, the state of health and quality of life of children born as a result of ART and their parents requires, in our opinion, a special study. ...

The aim of the study was a retrospective assessment of the health status of women, who gave birth to full-term babies after IVF.

Materials and methods

In total, on the basis of the catamnesis department of the Family Planning Center and

Reproduction (CPRR) we examined 87 women with pregnancies after IVF (which ended in urgent delivery in the period from 2007 to 2010) and 104 children born full-term at the CPRR from these mothers. The comparison group consisted of 104 mothers and 104 children who were born in the city of Moscow in the same period of time from spontaneous pregnancies and were observed according to the territorial principle in the GP # 10.

Each group (main and control) included an equal number of children of the same age: 37 children at the age of 1 year, 36 children at the age of 2 years and 31 children at the age of 3 years.

Children in the comparison group were selected taking into account the age of the mothers. At the same time, for each "mother-child" pair from the IVF group, a "mother-child" pair from spontaneous pregnancy was selected so that the age of the mothers was the same. Since among the children born as a result of the IVF method, 34 children were from twins, and there were no children from multiple pregnancies in the comparison group, two mother-child pairs with the same age of mothers were selected for each twins from the IVF group. Thus, there were 87 women in the main group (of which 17 women with multiple pregnancies), and in the control group - 104 mothers.

As objects of research, we used medical documentation of the established sample for the mothers of all examined children of both groups.

When carrying out the research, the methods were used, including: information-analytical, historical, systematization, grouping, ranking, as well as methods of statistical analysis.

The work was carried out within the framework of the planned theme of the State Budgetary Educational Institution of Higher Professional Education, N.I. Pirogov "The closest and distant follow-up of full-term babies born as a result of the use of assisted reproductive technologies (ART)."

Results and its discussion

Most often, children in women of the main and control groups were born after the first pregnancy (46.0% and 33.7%, respectively); however, women with spontaneous pregnancies were characterized by a higher parity. Noteworthy is the fact that the so-called "elderly primiparas" (first births at 35 years of age and older) accounted for 31% of mothers whose pregnancies occurred after IVF, versus 7.7% among women in the control group (Table 1). ...

As a result of the study, it was possible to establish that more than 87% of women with pregnancies after IVF had gynecological diseases and a history of surgery. Among women with spontaneous pregnancies, only 15% of mothers had a burdened gynecological history. The proportion of women with extragenital pathology was 71.3% and 45.2%, respectively (Table 1).

Table 1

Health status of women included in the study

Indicators	Main group (pregnancy after ECO),%	Control group (spontaneously the onset pregnancy),%	Credibility assessment difference (P),%
History of gynecological diseases and operations	87.4 ± 7.1	15.4 ± 7.1	> 99.7
Extragenital pathology	71.3 ± 9.7	45.2 ± 9.8	> 99.7
Genetic pathology	1.1 ± 2.2	0.0	<95
Hereditary and congenital pathology	6.9 ± 5.4	0.0	> 95
Elderly primiparous	31.0 ± 9.9	7.7 ± 5.2	> 99.7

Hereditary and congenital pathology (congenital malformations of the heart, uterus, hereditary thrombophilia, pituitary microadenoma) occurred only among women with IVF pregnancies (6.9%). One woman in this group had a confirmed

genetic pathology, in connection with which she underwent a donor embryo transfer.

In a detailed study of the gynecological anamnesis of mothers of both groups, we found that women in the main group (IVF) had uterine fibroids significantly more often - 18.4% (versus 4.8% among women with spontaneous pregnancies), cervical erosion - 20.7 % (versus 3.8%), chronic inflammatory diseases of the reproductive organs - 24.1% (versus 0%), polycystic ovaries - 9.2% (versus 0%), endometriosis and endometrial polyps - 9.1% (versus 0 %) (Table 2).

table 2

Gynecological diseases in women included in the study

Indicators	The main group	Control group	(R), %
Uterine myoma, history of myomectomy	18.4 ± 8.3	4.8 ± 4.2	> 99.7
Erosion of the cervix	20.7 ± 8.7	3.8 ± 3.7	> 99.7
Chronic inflammatory diseases (adnexitis, salpingo-oophoritis, endometritis)	24.1 ± 9.2	0.0	> 99.7
Endometriosis, endometrial polyps	9.1 ± 6.2	0.0	> 99.7
Ovarian dysfunction	4.6 ± 4.5	0.0	> 95
Polycystic ovary	9.2 ± 6.2	0.0	> 99.7
History of tubectomy	26.4 ± 9.5	1.9 ± 2.7	> 99.7
History of ovarian cyst resection	11.5 ± 6.8	0.0	> 99.7
Adhesion process in the abdominal cavity	12.6 ± 7.1	0.0	> 99.7
Urogenital tract infections (candidiasis, ureaplasmosis, toxoplasmosis, chlamydia, mycoplasmosis, condylomatosis)	22.8 ± 8.9	2.9 ± 3.3	> 99.7
Carriage of HSV, CMV	6.9 ± 5.4	0.0	> 95

12.6% of women in the IVF group had signs of adhesions in the small pelvis as a result of previous surgical interventions (tubectomy - in 26.4%, myomectomy - in 18.4%, resection of the ovarian cyst - in 11.5% of women).

Also, women with pregnancies resulting from IVF use in the anamnesis reliably more often had indications of previous infections of the urogenital tract and the carriage of herpes viruses compared with women with spontaneous pregnancies (Table 2).

Concomitant somatic diseases were detected in 71.3% of mothers after IVF, while in women with spontaneous pregnancies, somatic pathology was found only in 45.2% of cases (Table 1).

In women of the main group (IVF), compared with women with spontaneous pregnancies, thyroid diseases (13.8% versus 4.8%), chronic diseases of the digestive system (19.5% versus 7.7%) and ENT organs (12.6% versus 6.7%), chronic inflammatory diseases of the kidneys and urinary tract (18.3% versus 8.6%) (Table 3). In addition, pregnancies after IVF proceeded against the background of vegetative-vascular dystonia (9.2%) and arterial hypertension (2.3%), antiphospholipid syndrome (2.3%), urolithiasis (2.3%), disorders of fat metabolism and obesity (4.5%).

At the same time, among women with spontaneously occurring pregnancies, the frequency of allergic diseases (11.5%) and varicose veins of the lower extremities (11.5%) was higher compared with women who became pregnant after IVF (6.8% and 6, 9%, respectively), however, the differences were statistically insignificant (Table 3).

Table 3

Extragenital pathology in women included in the study

Indicators	The main group, %	Control group, %	(R), %
Diseases of the thyroid gland	13.8 ± 7.4	4.8 ± 4.2	> 95
- incl. Hashimoto's goiter	8.0 ± 5.8	1.0 ± 2.0	> 95
Chronic diseases of ENT organs	12.6 ± 7.1	6.7 ± 4.9	<95
Chronic pathology of the digestive system	19.5 ± 8.5	7.7 ± 5.2	> 95
Chronic inflammatory diseases of the kidneys and urinary tract	18.3 ± 8.3	8.6 ± 5.5	> 95
Urolithiasis disease	2.3 ± 3.2	1.9 ± 2.7	0.2
Arterial hypertension	2.3 ± 3.2	1.9 ± 2.7	0.2
Vegeto-vascular dystonia	9.2 ± 6.2	3.8 ± 3.7	<95
Allergic diseases (hay fever, allergic rhinitis, atopic dermatitis, food allergies, bronchial asthma)	6.8 ± 5.4	11.5 ± 6.3	<95
Obesity	4.5 ± 3.9	0.0	> 95
Varicose veins of the lower extremities	6.9 ± 5.4	11.5 ± 6.3	<95

Attention was drawn to the high burden of obstetric history in the main group of women, due mainly to the high frequency of non-developing (9.2%) and ectopic pregnancies (21.8%) in these women. In general, a burdened obstetric history was observed in 39.1% of women in this group (versus 13.5% in women with spontaneous pregnancies). At the same time, the frequency of induced and spontaneous abortions in both groups was comparable and amounted to 35.6% and 10.3% in the main group and 36.5% and 10.6% in the control group.

Conclusion

The study made it possible to establish that the health status of women whose pregnancies occurred as a result of the use of ART are significantly more likely to be negatively affected by gynecological and somatic diseases in comparison with the control group. At the same time, today in various traditional medical systems of the world there are available technologies for correcting the state of "infertile" women in order to achieve the desired pregnancy and physiological childbirth without the use of ART (in their modern understanding). This work is an attempt to draw the attention of the professional community of traditional medicine specialists to the problem of scientifically grounded use of resource-saving traditional technologies (means and methods of prevention and treatment) to prepare women for the desired pregnancy. Maybe,

conclusions

1. In women who underwent the IVF procedure, significantly more often compared with the control the group met uterine fibroids, cervical erosion, chronic inflammatory diseases of the reproductive organs, polycystic ovaries, endometriosis and endometrial polyps, as well as infections of the urogenital tract and the carriage of herpes viruses.

2. In women from the IVF group compared with women with spontaneous With the onset of pregnancies, somatic pathology was significantly more often recorded: diseases of the thyroid gland, chronic diseases of the digestive system and ENT organs, chronic inflammatory diseases of the kidneys and urinary tract. In addition, pregnancies after IVF more often proceeded against the background of arterial hypertension, antiphospholipid syndrome, disorders of fat metabolism and obesity.

3. Revealed a significant burden of obstetric history in a group of women,

pregnancy which came as a result of application of ART, conditioned predominantly the high frequency of non-developing and ectopic pregnancies in these women, which, along with the high frequency of somatic and gynecological diseases in these women, can have an adverse effect on the course and outcomes of pregnancies after IVF.

4. It is advisable to evaluate the results of this study from the standpoint of TCM and other traditional medical systems of the world in order to assess the feasibility of developing modern domestic scientifically based technologies for correcting the health status of women diagnosed with infertility (by means and methods of traditional medicine).

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