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THE OBSTETRIC OUTCOMES OF ART IN OBESE WOMEN

***Abstract.** Nowadays the obesity rate is still increasing, we can consider this aspect as a component part of the economic progress. Excess body mass has a multitude of disadvantages on human health. In our study we analyzed the influence of obesity on female reproductive function, from the perspective of obstetric outcomes in obese women after assisted reproductive technologies were done.*

***Keywords:** IVF, obstetric outcomes, overweight, pregnancy.*

Infertility affects one in seven couples, and its rate is on the increase. Ovulatory defects and unexplained causes account for >50% of infertile aetiologies. It is postulated that a significant proportion of these cases are either directly or indirectly related to obesity. The prevalence of overweight and obese men and women has topped 50% in some developed countries. Thus, the combination of infertility and obesity poses some very real challenges in terms of both the short- and long-term management of these patients [1]. The probability of conception in women decreases linearly, starting from a BMI of 29 kg/m², by 4% for each additional 1kg/m² of BMI. It has also been found that many of the maternal-fetal risks that arise during pregnancy are linearly dependent on BMI [2].

The aim of the present study was to investigate the association between overweight or obesity and the occurrence of complications in women after IVF, as well as the expected obstetric outcomes and live birth rates, compared with normal

weight women, who got pregnant after an assisted reproductive technologies, in our case after an IVF. We analysed 212 pregnant women who gave birth in state medical institutions in Chisinau during 2018-2020, the pregnancy being obtained after the IVF procedure. Of the total number of pregnant women, n=48 (22,6%) female were overweight or obese and the 77,4 % women were normalweight at the first antenatal visit. The data obtained correlate with the data from specialized literature. Republic of Moldova ranks 115th place in the world according to the obesity index, in 2016-18,9% of adults were obese and in 2015- 27,1% of obese or overweight women were registered [3]. The term of birth was different, normal weight women gave birth at a term mean of 37 weeks and 4 days, compared, with obese women on average at 35 weeks and 5 days. Obese or overweight nulliparous women are more likely to finish the pregnancy by cesarean section [4], unlike women with normal BMI, women with morbid obesity had a 3 higher risk of having an elective cesarean section and a higher risk of 2,8 for having urgent cesarean section [5]. In our study 176 women (83%) were underwent a cesarean section, 84 cases of urgent and other 92 cases of an elective cesarean section, of which 67% (118 cases) were performed in overweight women. The obese women had a higher risk for gestational diabetes, hipertension and Large for gestational age baby [2]. Hypertension is the most common medical problem encountered during pregnancy, complicating 2-3% of pregnancies [6]. Blood pressure disorders have been detected in 64 cases (30,2%), chronic hipertension in 20 cases (9,4%) , which 17 cases in obese women, the gestational hipertension were developed in 33 cases (15,6%), during pregnancy in obese women this blood pressure disorders appeared in 23 cases. Preeclampsia was developed by 9 women (4,3%), which 6 women with BMI more than 25kg/m². Also, HELLP Syndrome was identified in 2 cases (0,9%), one case in normal weight women and the other one in overweight.

When analyzing the condition of newborns we refer to birth weight and APGAR score in the 1st and 5th minute of life. The maximum birth weight in all children in the study was 4460 gr (fetal macrosome) from the obese mother, the minimum weight was 950 gr, also from the obese mother, the average weight of the children at birth was 3158 ±165 gr. Maternal obesity leads to neonatal fetopathy and

/ or premature birth with small fetuses and premature births. The Apgar score provides an accepted and convenient method for reporting the status of the newborn infant immediately after birth and the response to resuscitation if needed [7]. The mean of Apgar score in the 1st minute of life in newborns from normal weight women was 8,05 and 8,9 in the 5th minute of life. In newborns from obese and overweight mothers the mean 1st minute Apgar score was 7,36 and 8,15 in the 5th minute of life.

Conclusion: Obesity has a negative effect on the evolution of pregnancy and newborns, so it is important for a woman to understand this aspect when planning a baby and try to reduce her body mass until she becomes pregnant.

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