

THE CORRELATION BETWEEN THE MONTH OF FERTILIZATION AND THE INCIDENCE OF CONGENITAL ABNORMALITIES

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Introduction. Maternal exposure to certain environmental conditions during specific months can impact the risk of congenital anomalies. Research shows that infants conceived between January and March have a higher incidence of neural tube defects, likely due to maternal nutritional deficiencies like folate and increased viral infections, such as influenza, during these months [1].

Aim of the study. This study aimed to investigate the correlation between the month of fertilization and the occurrence of congenital abnormalities, focusing on identifying potential environmental and nutritional factors that may contribute to varying risks across different seasons.

Materials and methods. A retrospective analysis was conducted on 101 cases of pregnancy termination for medical reasons due to fetal anomalies at the Grodno Regional Clinical Perinatal Center from 2022 to 2023. Patient records were reviewed to determine the month of fertilization and the type of congenital anomaly. Non-parametric statistical methods were used due to the non-normal distribution of maternal age, with results presented as medians and quartiles. Statistical analysis was performed using Jamovi, with correlations assessed using Spearman's rank correlation coefficient. The Kruskal-Wallis test was applied to compare multiple independent groups, adopting a significance level of $p < 0.05$ for all tests.

Results and discussion. The median age of the patients was 27 years [26; 33]. Fertilization predominantly occurred in March (15%), April (14%), and May (11%). Most patients were married (88%), with 12% unmarried. Employment statuses included 49% in active jobs, 21% in sedentary jobs, and 30% on maternity leave. Congenital malformations were detected in 40% of patients, with single organ malformations in 38% and systemic malformations in 22%. A significant correlation was observed between the month of fertilization and cardiovascular congenital abnormalities ($p < 0.001$). Previous studies suggest that seasonal factors, such as maternal nutrition, vitamin D levels, and environmental exposures, can impact fetal development [2]. Research in Spain found that babies conceived in winter months had higher rates of congenital heart defects, possibly linked to temperature and infections [3]. Our study also indicates a correlation between cardiovascular and genitourinary congenital

abnormalities ($p < 0.001$). While no direct causal relationship was established, further investigation into the association between fertilization month and genitourinary abnormalities is warranted.

Conclusion. This study reveals a significant link between the month of fertilization and the occurrence of cardiovascular and genitourinary congenital abnormalities in pregnancies terminated for medical reasons. Further research with larger, population-based studies and attention to environmental and nutritional factors is essential to understand the underlying mechanisms and develop preventative strategies. These findings underscore the need to consider seasonal influences in prenatal care and counseling.

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SURGICAL STRATEGIES IN PATIENTS WITH ATHERODIABETIC DAMAGES OF THE LOWER LIMB VESSEL BED

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Introduction. Diabetes Mellitus (DM) is one of the most important risk factors for the development of atherosclerosis obliterans (AO). In the group of patients with diabetes, the prevalence of AO reaches 29% [1], and the risk of chronic lower limb ischemia increases by 3.5 times in men and 8.6 times in women [2]. When diabetes is combined with atherosclerosis of the lower extremities, the risk of high amputation of the lower extremity in patients increases 10 times [3].