



Trabalhos Científicos

- Título: The Impact Of Advanced Paternal Age On Prematurity: A Systematic Review And Meta-Analysis
- Autores: ALÍCIA BATISTA DE ALMEIDA BARBOSA (UNIVERSIDADE ESTADUAL DO CENTRO-OESTE (UNICENTRO)), ISABELLA CHRISTINA AMARAL DE LARA (UNIVERSIDADE CESUMAR (UNICESUMAR)), PEDRO HENRIQUE DE SOUZA WAGNER (UNIVERSIDADE FEDERAL DE SANTA CATARINA (UFSC)), LUÍSA MENEGAZ VERONESE (UNIVERSIDADE FEDERAL DE MATO-GROSSO (UFMT))
- **Resumo:** Advanced maternal age is linked to poor neonatal outcomes, including preterm birth, fetal death, and low birth weight. In contrast, advanced paternal age has received less scrutiny. Recent studies have connected advanced paternal age with various metabolic and psychiatric disorders. While there is evidence suggesting a potential association between advanced paternal age and preterm birth, findings remain inconclusive. Our aim is to determine the impact of advanced paternal age on prematurity. The meta-analysis evaluated 3,987 studies from PubMed, Cochrane, Scopus, and Web of Science databases. Observational studies investigating the impact of advanced paternal age on prematurity were then identified. Only studies involving mothers aged 20-29 years and singleton pregnancies were included. Odds ratios (ORs) for binary outcomes were computed with 95% confidence intervals (CIs). Heterogeneity was assessed using I² statistics. Statistical analyses were conducted using R Studio version 4.4.0. The outcomes of interest included comparisons of overall preterm births (gestational age less than 37 weeks) and very or extremely preterm births (gestational age less than 32 weeks) between fathers of advanced age and a control group. Five observational studies, accounting for 6,710,987 patients, were included in the analysis. Fathers of advanced age were classified into the following age categories: 35-39 years, 40-44 years, 45-49 years, and 50 years or older. The control group consisted of fathers aged 20-29 years. Adjusted odds ratios, accounting for potential confounders such as maternal tabagism and parental education, were collected for computing the forest plots. For overall preterm births, a positive association was found for 35-39 years and 40-44 years age categories (OR 1.0713, 95% CI 1.0019 - 1.1456, p=0.044, I²=92% and OR 1.1419, 95% CI 1.0135 - 1.2867, p=0.029, I²=90%, respectively). No association was observed for 45-49 age group (OR=1.1250, 95% CI 0.9480 - 1.3350, p=0.178, I²=80%) and age equal 50 years or older (OR=1.0453, 95% CI 0.9092 - 1.2019, p=0.533, I²=28%). Regarding gestational age less than 32 weeks, only the group of 40-44 years showed a positive association (OR 1.1704, 95% CI 1.0485 - 1.3066, p=0.005, I²=90%, respectively). No significant associations were found for the other age groups: 35-39 years (OR 1.0714, 95% CI 1.0056 - 1.1456, p=0.033, I²=46%), 45-49 years (OR 1.2897, 95% CI 0.9913 - 1.6778, p=0.058, I²=65%), and 50 years or older (OR 0.9927, 95% CI 0.7787 - 1.2655, p=0.953, I²=6%). While the systematic literature review yielded controversial results, with some studies reporting positive findings and others reporting negative ones, our analysis indicated that advanced paternal age does not appear to have a significant impact on prematurity. Further research on this topic or analyses that include older mothers, adjusting odds ratios for this factor, could offer new insights and potentially change these findings.