



Pregnancy adverse outcomes in Tunisian women over 40 years

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Introduction:

Advanced maternal age, defined as pregnancies occurring in women aged 40 years or older, has become increasingly common in recent years. The trend towards delayed childbearing is influenced by various factors, including social and economic changes, advancements in reproductive technologies, and increased educational and career opportunities for women. However, pregnancy at an advanced age is associated with several potential risks and complications for both the mother and the fetus.

The aim of this retrospective case-control comparative study was to evaluate the maternal-fetal prognosis of pregnancies in Tunisian women aged 40 years or older. We examined the outcomes and compared them to a control group of women who delivered during the same period but were of a younger age.

Methods:

A total of 454 pregnant women who delivered at the Department of Gynecology in the Ben Arous Regional Hospital were included in the study. The participants were divided into two groups based on their age: Group 1 included women aged 40 years or older (n=227), while Group 2 served as the control group and consisted of women below 40 years of age (n=227). Maternal-fetal outcomes were compared between the two groups.

Results:

First trimester adverse outcomes were more frequent in group 1 than in group 2: ongoing abortions, terminated pregnancies, scar pregnancies and extra uterine pregnancies. However, the difference was not significant (15% vs. 29%, p=0.931). Over all second and third trimester adverse outcomes were significantly more frequent in group 1 than in group 2: pre-eclampsia (11.8% vs 6.6%, p=0.0077), premature rupture of membranes (40% vs 18%; p<0.001), in utero fetal death (2.5% vs 0.7%; p=0.178), diabetes (55.2% Vs 23.8%; p<0.001), preterm delivery (15.8% vs. 6.6%; p=0.003). Scheduled caesarean sections were significantly more frequent in group 1 (111 vs 55; p<0.001). The average birth weight of the baby was 3315.1 g [550-5400g] in group 1 versus 3350.6 g [590-4800] in group 2 with a non-significant difference (p=0.529). The rate of hospitalisation in the neonatal unit was 10% in group 1 compared to 7% in group 2 with a non-significant difference p=0.246%.

Discussion:

The results of this retrospective case-control comparative study provide valuable insights into the maternal-fetal prognosis of pregnancies in Tunisian women aged 40 years or older. The findings highlight the increased risk of adverse outcomes associated with advanced maternal age and emphasize the need for close monitoring and specialized care for this population.

The study revealed that during the first trimester, adverse outcomes were more frequent in women aged 40 years or older compared to the control group, although the difference was not statistically significant. This observation suggests that there may be underlying factors contributing to early pregnancy complications in older women, which warrant further investigation. In contrast, the second and third trimesters demonstrated a significant increase in adverse outcomes for pregnancies in Group 1. Pre-eclampsia, a condition characterized by high blood pressure and organ damage, was found to be more prevalent in older women. This aligns with previous research indicating that advanced maternal age is a known risk factor for pre-eclampsia. The higher incidence of premature rupture of membranes in Group 1 further emphasizes the vulnerability of older women to complications that can lead to preterm delivery. Another noteworthy finding is the higher prevalence of diabetes in women aged 40 years or older. This highlights the importance of screening for gestational diabetes in this age group and implementing appropriate management strategies to ensure the well-being of both the mother and the baby. Scheduled caesarean sections were also significantly more frequent in Group 1, which suggests that older women may have a higher likelihood of requiring surgical intervention for delivery. This finding is consistent with previous studies that have identified an increased risk of obstetric interventions, including caesarean sections, in pregnancies of advanced maternal age. Interestingly, there was no significant difference in the average birth weight of the babies between the two groups. This suggests that despite the increased risk of adverse outcomes, the overall growth and development of the fetus may not be significantly affected by maternal age alone. However, it is essential to consider other factors, such as gestational age and maternal health conditions, which may influence birth weight. The rate of neonatal unit hospitalization did not differ significantly between the two groups. Although this finding may seem counterintuitive given the higher prevalence of adverse outcomes in Group 1, it is crucial to note that the decision to admit newborns to the neonatal unit is multifactorial and depends on various clinical considerations. Future research could explore specific neonatal outcomes and long-term effects associated with pregnancies in older women.

Conclusions:

In conclusion, this study underscores the importance of recognizing the increased risks and potential complications associated with pregnancies in women aged 40 years or older. Close monitoring, early detection of complications, and tailored interventions are vital to enhance the prognosis for both the mother and the fetus. Further research is warranted to explore the underlying mechanisms behind these adverse outcomes and to develop evidence-based guidelines for managing pregnancies in this specific age group.

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