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Adverse pregnancy outcomes associated with advanced maternal age among mothers who deliver in the maternity wards of Teaching Hospital Jaffna, Sri Lanka

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Background and objective: Advanced maternal age has been associated with many maternal and neonatal complications. This study was performed to compare the pregnancy outcomes between women of advanced maternal age (>35 years) and younger women (18-35 years) who delivered in the maternity ward of Teaching hospital Jaffna (THJ).

Methods: This was an Analytical cross-sectional study. The study was conducted in the maternity ward of Teaching hospital Jaffna, from July 29, 2024 to October 5, 2024. A total sample size of 240 was selected using stratified systematic sampling, consisting of 120 cases (mother's age >35 years) and 120 controls (18-35 years), maintaining a 1:1 ratio. Data were collected using interviewer-administered questionnaire. Statistical analysis was performed using standard package for social science (SPSS) software, and the chi-square test was applied to determine the association between maternal age and complications.

Results: The sample included 120 mothers in each age group. The majority of participants in both the 18-35 group (72.5%, n=87) and the age >35 years group (78.3%, n=94) were homemakers. The total rate of lower segment caesarean section (LSCS) delivery was higher in the advanced maternal age group (61.6%, n=74) compare to the younger group (44.1%, n=53). The advanced maternal age group was significantly associated with low birth weight (p= 0.015) and fetal distress (p=0.047), with older group reporting a 20.0% incidence of fetal distress (n=24). Conversely, muconium aspiration was more prevalent in the younger age group (4.2%) compare to the older group (2.5%) and show significant association with maternal age (p=0.038). There was no statistically significant association found for Gestrational Diabetes Mellitus (p=0.323) or pregnancy induced hypertension (p=0.636).

Conclusion: Advanced maternal age (above 35 years) is associated with increased rates of advanced outcomes, including an elevated likelihood of low birth weight (and higher rate of lower segment caesarean section deliveries, which contribute to an increased need for neonatal intensive care unit admissions. Specialized prenatal care programs and standardized screening protocol should be established for women of advanced maternal age to monitor for and manage potential complication.

Keywords: advanced maternal age, maternal complications, neonatal complications, pregnancy induced hypertension, postpartum hemorrhage