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Fetal malnutrition in infants of smokers and passive smokers assessed by clinical assessment of nutritional status scoring

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Abstract: Aim: Studies have shown that maternal smoking during pregnancy is associated with low birth weight, height and head circumference in newborns. In the present study, along with these anthropometric measures we aimed to determine fetal malnutrition (FM), which is a less known outcome of antenatal tobacco exposure. Materials and methods: Two hundred and sixty-six term singletons without anomalies were evaluated for their birth weight, height, and head circumference and for FM using the Clinical Assessment of Nutritional Status (CANS) scoring. A CANS score equal to or less than 24 is accepted as FM. Results: Smokers' (n = 84) and passive smokers' (n = 110) babies showed a birthweight deficit of -220.6 g (95% CI: -403.2 to -37.9) and -160.22 g (95% CI: -364.3 to -43.9), a birth height deficit of -0.42 cm (95% CI: -1.38 to -0.55) and -0.94 cm (95% CI: -2.03 to -0.16) and a head circumference deficit of -1.38 cm (95% CI: -1.91 to -0.86) and -0.89 cm (95% CI: -1.46 to -0.32) respectively, compared to nonsmokers' babies (n = 72). Smokers and passive smokers' babies also revealed decreases in CANS scorings, which were 22.7 (3.9) (P < 0.001) and 24.3 (4.3) respectively, compared to nonsmokers' babies who showed a CANS score of 27.6 (4.4). Babies whose mothers smoked more than 10 cigarettes/day had a much lower CANS score, which was 21 (3.97) (P = 0.013). Conclusion: Our findings suggest that screening for fetal malnutrition is indicated in smoking women's and passive smokers' babies.

Key words: Smoking mothers, clinical assessment of nutritional status (cans) score, fetal malnutrition, passive smokers

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