

COMPUTERIZED CARDIOTOCOGRAPHY: EFFECT OF CIGARETTE SMOKING ON SHORT-TERM VARIATION

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Objective: The present study was undertaken to determine the possible effect of cigarette smoking on short-term variation of FHR rate, analyzed by a computerized system.

Material and Methods: Fifteen healthy pregnant women gave informed consent to the study. Nine of them were primiparous and 3 were multiparous (more than 3). The mean age was $31,9 \pm 5,2$, and the gestational age at the moment of the study was $35,2 \pm 3,5$ weeks. The average of cigarettes smoked was $15,3 \pm 13,7$. Fetal heart rate recording was performed with the Sonicaid System 8002 (Oxford, UK). After the first reading of short-term variation (STV), at 10 minutes onset of recording, 4 readings more took place. At this time the patient began to smoke. During smoking (approximately 7 minutes) and after, 4 and 5 STV measurements, respectively, were performed. STV before, during and after cigarette smoking was studied by Friedman's and Wilcoxon's tests. A $p < 0.05$ was considered significant.

Results: Before cigarette smoking a non-significant difference was found between STV values. The last STV value of this time ($8,6 \text{ms} \pm 3,3 \text{ms}$), was compared with STV values during and after smoking. A non-significant difference was found between STV values during smoking, as well as the first value after smoking ($8,2 \text{ms} \pm 2,9 \text{ms}$). Another hand, a significant difference ($p < 0.05$) was found between other STV values after smoking ($8,0 \text{ms} \pm 2,7 \text{ms}$; $7,9 \text{ms} \pm 2,6 \text{ms}$; $7,9 \text{ms} \pm 2,6 \text{ms}$ and $7,8 \text{ms} \pm 2,5 \text{ms}$).

Conclusion: These results allow to conclude that cigarette smoking have an effect on short term variation of fetal heart rate when analyzed with computerized system, after 10 minutes onset of smoking.