Schneider-Affeld F, Kaukel E, Nienstedt K.

The objective of the investigation was to clarify whether, from the pulmonary or cardiological viewpoint, preference should be given to delivery in the sitting or lying position. For this purpose a spirometry was carried out in 28 pregnant women, average age 26 (19 to 35) and 15 control persons, average age 30 (20 to 41). In addition, the cardiac output of 12 pregnant women at the final date of confinement as well as of 10 persons of corresponding age for comparison purposes was determined by means of the CO2 rebreathing method. In none of the women investigated had labour set in. There were no significant differences of the VC, the IRV, the ERV and the FEV1 in the two groups examined, either in the lying or in the sitting position. Both in the sitting and in the lying position the arterial oxygen partial pressure of the pregnant women at rest was significantly above that of the control group. After stress both groups showed an increase of PaO2 and no longer differed significantly from one another. A difference in the PaCO2 depending on the position was not ascertainable in either group. However, the pregnant women had a significantly lower PaCO2 than the control group. The cardiac output of pregnant women did not differ significantly in the sitting position from those of the control group (4.7 +/- 1.3 and 5.3 +/- 1.5 l/min. respectively). Whereas the cardiac output of the comparison group rose in the lying position to 5.2 +/- 0.9 l/min, in the case of the pregnant women it dropped significantly (p less than 0.01) to 3.6 +/- 1.2 l/min. These findings show that a decision as to whether the delivery should take place in the sitting or lying position cannot be taken on the basis of parameters that analyse the lung function. The significant reduction of the cardiac output of those women lying on their back during labour, caused by the compression of the vena cava inferior and of the aorta by the uterus, indicates that the second stage of labor is better carried out in a position other than lying, e.g. the sitting position.

PMID: 6408819 [PubMed - indexed for MEDLINE]