

The effect of antenatal vaginal progesterone administration on uterine, umbilical and fetal middle cerebral artery Doppler flow: A cohort study.

Summary:

Objective To evaluate the effect of vaginal progesterone (P) administration during the second and third trimesters of pregnancy on Doppler velocimetry of uterine, umbilical, and middle cerebral vessels.

Study Design A prospective cohort study conducted on 80 women at risk for preterm labor. Uterine artery, umbilical artery, and middle cerebral artery (MCA) Doppler indices were measured before and after 1 week of administration of 200 mg twice daily vaginal P. The primary outcome parameter was the change of MCA pulsatility index (PI) after P administration. Secondary outcomes included changes in uterine artery and umbilical artery Doppler measurement. **Results** There was no significant changes of umbilical artery resistance index (RI) (0.69 ! 0.049 vs. 0.68 ! 0.041), umbilical artery PI (1.14 ! 0.118 vs. 1.11 ! 0.116), uterine artery RI (0.66 ! 0.12 vs. 0.66 ! 0.107), uterine artery PI (1.00 ! 0.26 vs. 1.016 ! 0.24), and MCA PI (1.27 ! 0.18 vs. 1.26 ! 0.23) measurements before and after 1 week of P administration, respectively. **Conclusion** Vaginal P has no significant effects on uterine artery, umbilical artery and MCA Doppler indices.

Synopsis Administration of vaginal P has no significant effects on uterine artery, umbilical artery, and MCA Doppler indices.