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To evaluate the diameter of the placental blood vessels and its relation with the blood supply of the full term newborn

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ABSTRACT

Introduction: The placenta is a poorly studied human organ and one of the most important for the health of the woman and her fetus. The study of the placental phenotype opens the way to the identification of the cause of fetal death, being the progress of pregnancy dependent on the establishment and maintenance of an efficient uteroplacental vascular system. **Objectives:** To evaluate the diameter of the placental blood vessels and its relation with the blood supply of the full term newborn. **Methodology:** A total of 111 full-term placenta were analyzed from fragments collected in Recife-PE maternity hospitals. Statistical analysis was performed by SPSS software (version 8.0). **Results:** There was a significant difference ($p < 0.05$) between placentas studied. The fetal capillaries in the mothers with comorbidities showed infiltration of the trophoblast, dilated vessel wall and increased vessel lumen. There was a loss of tunica intima of the vascular wall, tending to degeneration, and in conjunction between tissues of the placenta of diabetic mothers, mothers with STI and with hypertension. As a consequence, we identified calcifications and infarct areas in the placentas collected. **Conclusion:** The literature correlating the diameter of placental vessels with fetal blood supply is still incipient. Our study demonstrated that the associated comorbidities of the mother can negatively affect the integrity of the placenta, through vascular disorders.

Keywords: Placenta; Placental Circulation; Comorbidity; Histology

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