

## **MORPHOMETRIC STUDY OF PLACENTA VASCULARIZATION IN PATIENTS WITH UTERINE ALTERED ARTERY DOPPLER FLOW VELOCITY EXAMS**

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Objective: One of the frequent questions in obstetric practice is to determine placental vascular changes that may account for abnormal Doppler flow velocity alterations in maternal uterine vessels from women and foetuses without pregnancy pathology. Methods: A retrospective morphometric study was realized using 27 placentas from patients submitted for Doppler flow velocity exam. The placentas were morphologically examined using Hematoxylin-Eosin staining. Measurements were made with the use of a video camera coupled to a common light microscope and a computer with an automatic image analyzing software. Results: Of the 27 placentas, 13 (48%) were of patients showing unaltered Doppler and 14 (52%) showing altered Doppler. The number of stem villi vessels was significantly larger in the placentas of patients with Doppler exam alterations ( $p=0.003$ ). This group also presented greater stem villi vessel thickness, although with no significant difference. The number of intermediary and terminal villi vessels was greater in the placentas of patients with altered Doppler exams ( $p<0.001$ ), and a greater terminal villi area was observed in these cases ( $p<0.001$ ). Conclusion: The morphological proof that uterine artery Doppler flow velocity exam alterations are associated with placental vascular alterations demonstrates the importance of the valorisation of this exam during prenatal care, even in the absence of maternal-fetal interurrences.

Key words: blood flow, Doppler, placenta, vascularization, villi.

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