



Correlations of morphological (macroscopic and microscopic) parameters of placenta with maternal age and parity

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Abstract

Background: Placenta is a chief cause of maternal and perinatal mortality and significant factor in fetal growth retardation. It undergoes different variations in weight, volume, structure, shape and function continuously throughout the gestation to support the prenatal life. Cautious examination of placenta can give information which can be useful in the management of complications in mother and the newborn.

Objective: The present work has been attempted towards determination of the morphological (macroscopic and microscopic) parameters of human full-term placentae and their relation with different parity and age group of mothers.

Patients and Methods: A whole of 40 placentae were recently collected. They were divided into four groups (10 women each); primigravida age < 35 years, primigravida age > 35 years, multigravida < 35 years; multigravida > 35 years. Neonatal and placental weights, placental thickness and number of cotyledons were measured. Tissue for histological examination was obtained to study the parameters of microscopic morphometry (number of apoptotic cells, number of terminal villi, number of syncytial knots, number of fetal capillaries and thickness of trophoblastic basement membrane).

Results: Placental and neonatal weights were within normal range. They were augmented with maternal age and parity. Number of cotyledons was higher than those reported by other authors in other populations but it was still within normal range and it was significantly decreased in multigravida > 35. Placental thickness was within normal range and it was significantly decreased in multigravida > 35. All microscopic parameters were increased with maternal age and parity.

Conclusion: There were correlations between microscopic and macroscopic parameters. The length of stem villi were less in multigravida > 35 since placental thickness was decreased in this group. All microscopic parameters were increased with maternal age and parity. These variations may have some important bearing on the placental inadequacy in higher age group and parity of mother.

Key words: placental weight, number of cotyledons and apoptotic cells.

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