

DIFRENTIATION OF HISTOLOGICAL AND CYTOLOGICAL OBSERVATION OF HUMAN TERM PLACENTA

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Abstract

Introduction: Studies about placental tissue provide abundance of information about pregnancy course and pathological processes responsible for complications during pregnancy. Cytodiagnosics is a method which helps to estimate the condition of organ by observing its cells on cytosmear. Placenta is a unique organ, composed of tissue which belongs to the two different organisms and has many complex functions.

Aim: To compare cytological and histological findings of human term placenta and determinate the most appropriate method for preparing cytosmears.

Materials and methods: Material used in this study represented five segments of five placentas. Placentas had normal morphological characteristics and were obtained after the elective cesarean section, done in term under sterile conditions. The cytosmears and histological preparations were made of placental segments. Smears were made by impression-method, towage-method and method with cytobrush. For histological preparations, the tissue was fixated, dehydrated, moulded and cut on microtome. Smears and preparations were stained with Giemsa stain and H&E.

Results: On cytosmears, decidual, amniotic, trophoblastic, blood cells, chorionic villi and syncytial knots were found. There were no fibrinoids nor micro calcifications found on cytosmears, which existed on corresponding histological preparations. The number of all types of granulocytes was regular on every cytosmear/ histological preparation pair.

Conclusion: All elements, which may be indicators of some placental diseases, can be seen on cytosmears, except fibrinoid. The method with cytobrush, among applied ones, provides the best quality cytosmear so that histological findings could be completed with cytological ones.

Keywords: histological preparation, cytodiagnosics, human term placenta, cytosmear,

Biography:

Pharmacist with experience in the areas of nanotechnology and microbiology. Conducted master's and specialization in microbiological quality control both in the area of applicability of alternative methods in monitoring the microbiological quality of treated water for dialysis. Currently is PhD student in Pharmaceutical Sciences – UNESP, addressing in her thesis the development of nanotechnological formulations for a fungal disease.

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