

Differentiation of Histological and Cytological Observation of Human Term Placenta

Phani Bhavana Cherukuri

Department of Pathology, Guntur Medical College, India

Abstract:

Introduction: Studies about placental tissue provide abundance of information about pregnancy course and pathological processes responsible for complications during pregnancy. Cytodiagnostics is a method which helps to estimate the condition of an 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 the human term placenta and determine 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 the 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 microcalcifications 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.



Biography:

Phani Bhavana Cherukuri is Final year Medical Student at Guntur Medical College, Dr.N.T.R University of Health Sciences, Guntur, AP, India (August 2013- current) - Bachelor of Medicine and Bachelor of Surgery(M.B.B.S). Expected Date of Graduation: July,2021. Her Intermediate Education [Class 11 and 12] - Sri Chaitanya Junior College, Vijayawada (June 2011-May, 2013); GPA 9.86 in the State Intermediate Public Examination. Her High School, V.S.St.John's Higher Secondary School, Gannavaram. [Class 10] Grade A+ and GPA 10 in Central board of secondary examination..

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- 2. Phani Bhavana Cherukuri & Patki, Swati & Patki, Manoj & Ravikumar, B & Rao, A R & Madhavi, K & Bolla, Chandrasekhar & Reddy, Swati & Patki, B & Ravikumar, A & Rao, K & Phani, Madhavi. (2013). TO ASSESS THE KNOWLEDGE REGARDING HIV/AIDS AMONG JUNIOR COLLEGE STUDENTS IN KHAMMAM TOWN OF ANDHRA PRADESH. Journal of Evolution of Medical and Dental Sciences. 2. 5558-5564. 10.14260/jemds/1024.

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