

MORPHOLOGICAL AND DNA ANALYSIS OF COMPLETE HYDATIDIFORM MOLE

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Complete hydatidiform mole (CHM) is one of the most common forms of gestation trophoblast disease. In this work, 72 cases of CHM were verified by histological methods and DNA analysis. Significant hydropic swelling of chorionic villi (size of 2-3cm) was present in all cases (Figure 1). Microscopic analysis showed hydropic degeneration of chorionic villi with the presence of central cistern. Connective tissue was avascular and circumferential trophoblastic hyperplasia was on the surface of chorionic villi (Figure 2). The structures of the embryo and amniotic membrane were not present. Immunohistochemistry proved over-expression of HCG in cells of syncytiotrophoblast and intermediary trophoblast. Cytogenetic examination showed diploid number of chromosomes in majority of CHM cases. DNA analysis proved androgen origin of CHM (71 cases, 98.6%). Frequency of heterozygous CHM was 49.3% and homozygous CHM was 50.7%. Malignant transformation of homozygous CHM to choriocarcinoma happens only in 1 case. This study represents combination of morphological observation with DNA analysis, which improves diagnostics of CHM.

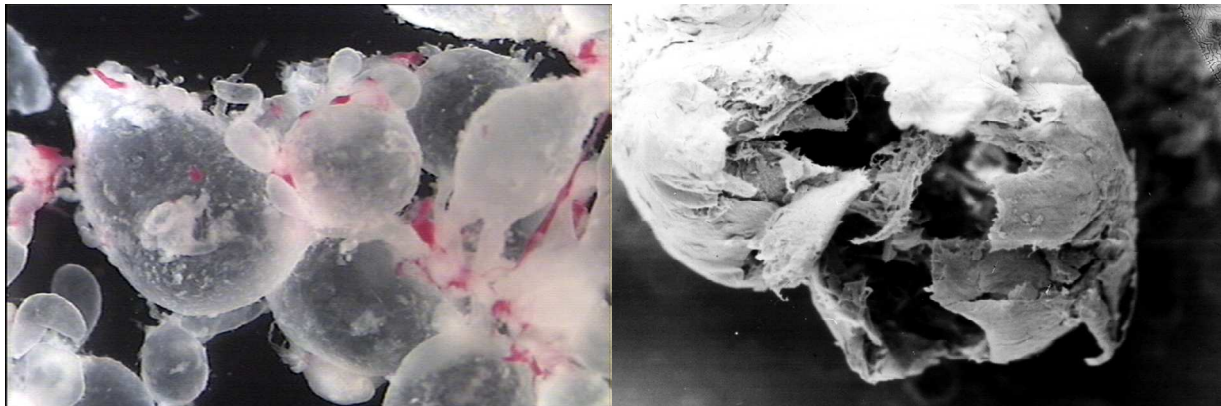


Figure 1. Hydropic swelling of chorionic villi - macroscopic view (left) and SEM analysis (right).

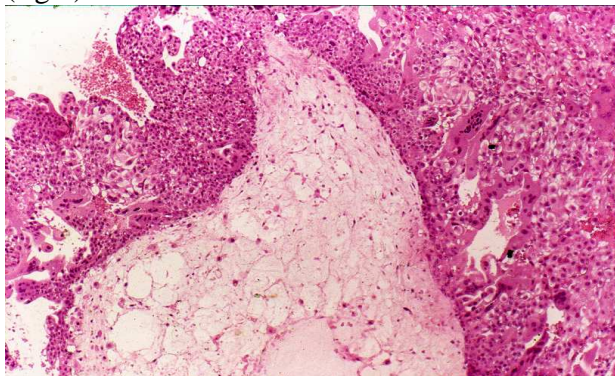


Figure 2. Hydropic degeneration of chorionic villi (Hematoxylin and Eosin).