
PRENATAL DIAGNOSIS OF CHROMOSOMAL DISORDERS IN NORTH - WEST RUSSIA: A SURVEY OF 3440 CASES

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Objective: *our original strategy for PD of chromosome disorders includes analysis of direct chromosome preparations from CVS as the basic step, supplemented with CBL cultures for karyotyping of the fetuses with abnormal or ambiguous CVS results.*

Methods: *3440 cases of cytogenetic PD was performed since 1987, most of them (87%) were represented by CVS. Standard karyotyping with direct chromosome preparations, differential staining (QFH/AcD, QFH/MG), and semiautomatic system for image analysis (ISTA-VideoTest, St-Pb) was applied throughout the study. Conventional analysis was supplemented by FISH and molecular genetic techniques if necessary.*

Results: *Success rate of cytogenetic analysis was 98,8% (CVS II) - 99,3% (CVS I, CBL). Altogether 199 fetuses with chromosome aberrations (5.8%) including 86 heteroploids were found. Out of a total 42 mosaics, only 4 were provided as true ones, and 29 could be attributed to CPM of the type 1. Karyotype discrepancies between CVS and fetal tissues were confined to 3 cases including 1 false-positive case. Not a single false-negative diagnosis was recorded so far.*

Conclusion: *Our karyotyping strategy (direct CVS preparations supplemented with CBL, FISH and PCR) is quite sufficient for reliable PD of chromosome disorders.*

MORPHOLOGICAL FEATURES OF ENDOMETRIAL CANCER: CONNECTION WITH INSULIN RESISTANCE AND TYPE OF FAT TOPOGRAPHY

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Objective: *Insulin resistance was postulated to be a factor which might promote stimulation of tumor growth in endometrial cancer. The main task of this presentation was to evaluate connections of blood insulin level and type of fat topography (as indirect signs of insulin resistance) and morphological features of endometrial cancer.*

Methods: *77 endometrial cancer patients were included in this analysis (61 of them were in postmenopause). Blood insulin and glucose levels, type of fat topography (waist/hip ratio), morphological characteristics of tumor (grade of differentiation, myometrial invasion rate, mitotic index and percent of pathological mitoses) and alcali-induced DNA unwinding (as a measure of DNA strand breakage) in tumor tissue were examined. Statistical analysis was performed by computerized method allowing for means and standard errors and by Pearson linear correlation. The significance level of 0,05 was used throughout the study.*

Results: *Basal and reactive (after glucose load) insulinemia correlated positively with rate of tumor invasion in patients with android type of fat topography and negatively – with histopathological tumor grade in patients with gynoid type. Positive correlation between value of waist/hip ratio, from one side, and invasion rate, percent of pathological mitoses and DNA unwinding in tumor tissue, from the other side, was revealed primarily in postmenopausal patients with body weight excess.*

Conclusions: *Signs of insulin resistance are connected with more advanced endometrial cancer (especially in patients with upper type of fat topography). This fact needs further evaluation for the purpose of better understanding mechanisms of carcinogenesis in uterine body and proposing supplementary methods of prophylactic and therapeutic intervention in the disease.*