STUDIES ON KARYOTYPES IN CHILDREN FROM TRIPLET PREGNANCIES AND IN THEIR PARENTS

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A total of 70 karyotypes of infants from triplet pregnancies and their parents from 17 families were examined. The karyograms of 16 families showed a normal number of chromosomes and no abnormal morphology. Only in the 17th family a girl showed an additional chromosome in group G and deletion of the long arms in another from group C. A high concentration of developmental malformations was however present in this family.

The aim of the study has been to examine infants from triplet pregnancies and their families under the cytological aspect and to find or exclude anomalies in the numbers or quality of chromosomes in families in which multiple pregnancies occurred.

Karyotypes were examined in 70 persons from 17 families from Danzig and its province. Leukocyte cultures were carried out according to Moorhead's method.
The examinations embraced: quadruplets, 16 triplet sets in 5 of whom one infant had died (in total 43 infants from triplet pregnancies), 11 mothers, 8 fathers, and 4 siblings: in total, 70 persons in 17 families, making up the following family groups:

1. only quadruplets
2. triplets, parents, siblings
3. triplets only
4. triplets, of whom one infant had died
5. one family (no. 17) in which triplets were born two times, one infant of the first set of triplets having been a stillbirth
6. one pair of parents whose triplets had died.

Only presently alive infants and members of their families were examined.

The karyograms of 16 infants from multiple pregnancies showed normal number morphology of the chromosomes.
In a girl from the second group of triplets of family 17 a 47,XX karyogram was found, the additional chromosome corresponding by size to group G; also a possible group-C chromosome showed deletion of the long arms: this was found in a dozen-or-so, 46,XX karyograms.
No chromosomal aberrations were found in the other children of this family or in their parents.
Among the first triplets of this family a girl was stillborn and a second girl (I.) has a defor-

mation of the brain case, whereas the boy (M.) showed no developmental malformations. A deformation of the skull of craniostenosis type, pes planus, strabismus (and retardation in intellectual developement in one boy, S.) were found in all children from the second triplet pregnancy. The parents showed no visible physical anomalies, but developmental malformations could be found in three generations of female individuals in the family of the father on both parental sides. This family is the object of further cytogenetic examinations.

Cytogenetic examinations in siblings of twins and supertwins were carried out by many authors, various aspects of these examinations having been taken into account.

Koch et al. (1970) tried to use these investigations for identifying Mz and Dz twins, but negative results were obtained. No differences in the numbers or structure of the chromosomes were found capable of being used as a differentiating criterion.

In multiple-pregnancy children with anatomical malformations Yarema and Borgaonkar (1970) carried out karyograms and found chromosomal defects in a number of cases, the defects being connected with the developmental malformations.

This agrees with the conclusion of the present study, i.e., that children of multiple pregnancies with no anatomical or psychological defects most probably have normal chromosome sets.

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