

Indications for Chromosome Analysis

Indications for Prenatal Diagnosis

Higher Age of Mother

The higher age of mother means **more than 35 years**. Chromosome analysis in this case, is taken like a part of *the prenatal care*. Although we can find abnormalities also in children of young mothers, *higher age means higher risk*. Nowadays it is discussed the role of the mother, comparing to the father's influence. Both of them can be a donor of chromosome abnormality, but mother's germ cells are more vulnerable.

Positive Family Anamnesis

Some kinds of chromosomal abnormality in relative should also be an indication for chromosome analysis. Mainly *chromosomal translocation* or *heritable chromosomal disturbances*. Miscarriage in relatives also is a good indication for chromosomal analysis

Abnormal Findings in Screening

The good reason is for example if the *intrauterine grown retardation* or some abnormalities or *malformations* in ultrasound.

Stillbirths and Neonatal Deaths

In more than **10% of abortions** is connected to some chromosome abnormality. It is important to examine both parents, because of prevention for next pregnancies.

Indications for Postnatal Diagnosis

Low Birth Weight

In comparison to other groups of children, those with chromosome abnormality have lower birth weight. For instance in newborns with trisomy 13 (Patau syndrome) and trisomy 18 (Edwards syndrome).

Health Problems in Newborns

A postnatal chromosome analysis is necessary if we can find some *developmental delay*, some *dysmorphic features*, *mental retardation* or *inborn defects*.

Fertility Problems

About **5% of all cases of infertility** is connected with some chromosome abnormality. We have to think about it, when *miscarriages* occurred repeatedly. Chromosome abnormalities can be also a reason of *disorders of menstruation cycle*.

Exposure of Parents

Exposure to **radiation** represents a high risk. It can influence maternal germ cell for years. Especially some of the jobs in the health care are dangerous in this way (employees in radiology department in hospitals) and workers of nuclear plant or uranium mines. We have to be careful about exposure to **chemical substances**.

Links

Related articles

- Prenatal Diagnosis of Chromosome Abnormalities
- Autosomal Disorders
- Genetic Counseling

Sources

- Standard Chromosome Analysis (http://genetics.emory.edu/pdf/Emory_Human_Genetics_Chromosome_Analysis.PDF)
- Indication:Cytogenesis (http://www.viomecum.ch/index.cfm?uuid=166E033A5E514977971B2A1BD324E1D0&o_lang_id=2)

