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Short Communication

A Short Note on Triple X Syndrome

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DESCRIPTION

About 1 in 1,000 girls have triple X syndrome, commonly known as trisomy X or 47,XXX. It is a rare genetic condition which affects only females. Females normally have two X chromosomes in all cells. A female with triple X syndrome carries three X chromosomes. People typically contain 46 chromosomes, divided into 23 pairs and two sex chromosomes, in each cell [1].

The common signs and symptoms of the trisomy X syndrome may include flat feet, breastbone with an inward bowed shape, hypotonia, psychological problems such as anxiety and depression, learning disabilities such as reading and understanding, delayed development of speech and language skills, behavioral problems, kidney problems, curved little fingers (clinodactyly), premature ovarian failure, epicanthal folds, widely spaced eyes, seizures, genito-urinary malfunction etc.

Trisomy X syndrome is caused by non-dysfunction and mosaic

Nondisjunction: In most cases, an extra X chromosome is present in the child as a result of an improper division of either the mother's egg cell or the father's sperm cell. Nondisjunction, a type of random mistake, causes all of the child's cells to have an additional copy of the X chromosome.

Mosaic: If infant has a mosaic version of triple X syndrome, in which only a small percentage of cells contain the extra X chromosome. Females with the mosaic type might not exhibit as many obvious symptoms.

Some females with triple X syndrome may only exhibit mild or no symptoms, others may struggle with behavioral, psychological, and developmental problems that can result in a wide range of other disorders such as work, relationship problems, need additional support for the daily activities, poor self-esteem etc [2,3].

Diagnosis

The paediatrician or other healthcare provider will draw blood for testing if a genetic test is prescribed. These tests might be:

karyotype or chromosome microarray: Determine the level of mosaicism and check for the presence of an additional X chromosome (if any).

Prenatal genetic testing: Women with triple X syndrome or moms who are older than average may be encouraged to have prenatal genetic testing, such as Non-Invasive Prenatal Testing (NIPT), amniocentesis or Chorionic Villi Sampling (CVS), done on their unborn children.

Treatment

There is no cure for the triple X syndrome. The type of treatment will depend on any specific symptoms. The treatments may include kidney structure can be examined using renal ultrasonography, an EKG/echocardiogram to assess the heart, atypical movements, a neuropsychological testing, speech therapy, occupational therapy, physical therapy, or other modalities, referral for counselling and subsequent family planning to a fertility expert, treatment with oestrogen is necessary for women who experience early ovarian failure.

Educational assistance: If child has a learning disability, educational assistance can be given to help them gain the skills and methods they need to succeed in school and in everyday life.

Counseling and supportive environment: Girls and women with triple X syndrome are more prone to anxiety as well as behavioral and emotional problems. Psychological counseling may help teach child with triple X syndrome and child's family how to demonstrate love and encouragement while discourage behaviors that might negatively impact on learning and social functioning.

Periodic examination: The doctor might advise routine exams all the way through childhood and into adulthood. If any health issues, learning difficulties or developmental delays arise, quick treatment can be given [4].

CONCLUSION

It is a rare genetic condition which affects only females. A female with triple X syndrome carries three X chromosomes. Women with triple X syndrome or moms who are older than average may

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