

Chromosomal Disorders Detected in Ancient Skeletal Remains

By iastoppers | 2024-02-28 16:10:00



Chromosomal Disorders Detected in Ancient Skeletal Remains

Researchers have identified chromosomal disorders, including six cases of Down syndrome and one case of Edwards syndrome, in prehistoric skeletal remains dating up to approximately 5,500 years old.



[ref- medmonks]

Rare Ancient Cases:

- **Chromosomal trisomies**, specifically Down syndrome (trisomy 21) and Edwards syndrome (trisomy 18), were identified in nearly 10,000 genomes from ancient skeletal remains.
- The discovery includes cases dating back to the Bronze Age (2,700 BCE) and the Neolithic period (3,500 BCE).

About Down syndrome:

- Down syndrome, also known as **trisomy 21**, is a **genetic condition** caused by an **extra copy of chromosome 21**.
- It is caused by a **random error in cell division** that results in the **presence of an extra copy of chromosome 21**.
 - The type of error is called **nondisjunction**.
- Symptoms include a **flattened face**, almond-shaped eyes, short neck, small ears, tongue protrusion, **white spots on the iris**, small hands and feet, and a single line across the palm (palmar crease).
- It can cause **delays in speech and self-care skills** like feeding, dressing, and using the toilet.
- It can **affect kids' ability to learn** in different ways, and most have mild to moderate intellectual disability.
- There is **no single, standard treatment for Down syndrome**.

About Edwards syndrome:

- Edwards syndrome (**trisomy 18**) is a **genetic condition** that causes **physical growth delays** during fetal development.
- The condition occurs when a person has an **extra copy of chromosome 18**, which is **random and unpredictable**.
- Edwards syndrome can affect anyone.
- Children diagnosed with trisomy 18 have a **low birth weight, multiple birth defects** and **defining physical characteristics**.
- The likelihood that a parent will have a child with Edwards syndrome (trisomy 18) **increases with maternal age** at the time of pregnancy.
- If a parent had a child with Edwards syndrome (trisomy 18) and becomes pregnant again, it's unlikely they'll have another child diagnosed with the same condition (no more than 1%).
- **Life expectancy for children** diagnosed with Edwards syndrome is **short due** to several life-threatening complications of the condition.
- Children who **survive past their first year** may face **severe intellectual challenges**.