Anatomy: polydactyly essay sample

Polydactyly is a condition in which the patient has more than five fingers on his hands or more than five toes on his feet. This anatomical abnormality is a congenital abnormality. Patients will have six or more toes or fingers at birth. It is estimated that every two in one thousand children will be born with this disorder. Certain populations have a higher incidence rate due to the founder effect, such as the Pennsylvania Dutch in the USA. The one question many patients, and parents, ask is " how is polydactyly inherited?

Causes

During normal embryonic development (while the baby is still in the womb), the hand initially forms in the shape of a paddle, and then—at about the sixth or seventh week of gestation—splits into separate fingers. Polydactyly results if there's an irregularity in this process: An extra finger forms when a single finger splits in two. African-Americans are more likely to inherit the condition than other ethnic groups.

Diagnosis

Diagnosing this condition is relatively easy. The doctor will make a diagnosis based on medical history, family history, a physical examination, and some diagnostic testing. When assessing the patient's family medical history the doctor will often ask questions like: I s there a history of other family members, particularly parents, siblings, and grandparents, being born with extra toes or fingers, Is there a family history of the disorders associated with this disorder, or Is the patient experiencing any other medical problems or symptoms. Some doctors also do diagnostic tests like: Enzyme tests, metabolic studies, chromosome studies and x-rays.

Treatments

This condition is most often treated around the first year of life. Surgical removal is the most common mode of treatment. A surgeon will have the patient prepped for surgery and will remove the partial digit or extra digit is excised. Once it is removed, the surgeon will reconstruct any abnormalities associated with the extra digit or its removal.