CLOVES Syndrome and Mosaicism - The Genetics of PIK3CA-Related Overgrowth Conditions

CLOVES syndrome is genetic, but not inherited. It is caused by a difference in a gene that is present in just some of the body's cells. This diagram shows how scientists believe this process happens.

Researchers studying CLOVES syndrome and similar conditions don't have any reason to believe anything a mom or dad does (or doesn't do) eats, drinks, or is exposed to before or during pregnancy causes these gene changes to occur - they just happen randomly.

The PIK3CA gene in one of the cells changes - for example, where the DNA code should have a "G," it has an "A" instead.

As the cells of the growing embryo continue to divide, the number of both the cells with a changed PIK3CA gene and the cells with an PIK3CA gene continue to contribute to the formation of organs and tissues.

The developing baby has two types of cells. Some have the normal PIK3CA gene and some have the altered PIK3CA gene.

The parts of the body that developed from the cells with the altered PIK3CA gene grow differently than normal cells. This is why the body parts of people with CLOVES syndrome are unevenly affected.