Intracranial calcification in children

Intracranial calcification (ICC) is a common finding in children and it can be caused by a variety of conditions. This condition can be divided into two categories: congenital and acquired. Congenital ICC is usually due to genetic disorders, while acquired ICC is often associated with systemic diseases or infections. The pathogenesis of ICC is not fully understood, but it is believed to involve a combination of factors such as demineralization, demyelination, and vascular changes.

The clinical presentation of ICC varies depending on the underlying cause. In children with congenital ICC, the condition is often associated with neurological symptoms such as seizures, developmental delays, and progressive neurological deficits. On the other hand, acquired ICC is often associated with systemic symptoms such as fever, vomiting, and headache.

The imaging features of ICC can be variable, and they can range from subtle cortical calcifications to more extensive calcifications involving the basal ganglia, thalamus, and cerebellum. The diagnosis of ICC is typically made using neuroimaging techniques such as computed tomography (CT) and magnetic resonance imaging (MRI). These imaging modalities can provide detailed information about the location, extent, and morphology of the calcifications.

The management of ICC depends on the underlying cause. In cases of congenital ICC, genetic counseling and treatment of associated conditions may be necessary. In cases of acquired ICC, therapy may involve treatment of the underlying systemic disease or infection.

In conclusion, intracranial calcification in children is a complex condition that requires a thorough evaluation to determine the underlying cause. Early detection and appropriate management are important to prevent progression of neurological symptoms and optimize prognosis.