Bohring-Opitz Syndrome (BOS)

https://pubmed.ncbi.nlm.nih.gov/26364555/

Bohring-Opitz syndrome (BOS) was first described by Bohring et al. [1999]. The authors reported four cases which had several features in common, including a prominent metopic suture, hypertelorism, exophthalmos, cleft lip and palate, limb anomalies, as well as difficulty feeding with severe developmental delays. In almost 50% of cases that meet the clinical criteria for BOS, de novo frameshift and nonsense mutations in the ASXL1 gene have been detected, suggesting that loss of function of this gene is a major cause. We report on the clinical characterization of one young female patient who was evaluated because of severe developmental delays, failure to thrive, and multiple minor anomalies and was clinically diagnosed with BOS. Whole exome sequencing analysis detected one novel disruptive frameshift mutation in the ASXL1 gene and we were also able to confirm the presence of two CFTR mutations associated with her chronic pancreatitis with acute severe breakthrough attacks requiring multiple ICU admissions. This latter complication of pancreatitis further contributed to the complexity of the clinical presentation and represents an independent genetic finding. Our case report emphasizes the importance of highly specific phenotypic characterization of patients with complex phenotypes before proceeding with molecular studies. That approach will lead to more accurate molecular data interpretation and better clinical genetic diagnosis, particularly for those patients with rare, difficult-to-diagnose disorders.