Bohring-Opitz Syndrome (BOS)

https://pubmed.ncbi.nlm.nih.gov/29446906/

Clinical characteristics:

Bohring-Opitz syndrome (BOS) is characterized by distinctive facial features and posture, growth failure, variable but usually severe intellectual disability, and variable anomalies. The facial features may include microcephaly or trigonocephaly / prominent (but not fused) metopic ridge, hypotonic facies with full cheeks, synophrys, glabellar and eyelid nevus flammeus (simplex

), prominent globes, widely set eyes, palate anomalies, and micrognathia. The BOS posture, which is most striking in early childhood and often becomes less apparent with age, is characterized by flexion at the elbows with ulnar deviation and flexion of the wrists and metacarpophalangeal joints. Feeding difficulties in early childhood, including cyclic vomiting, have a significant impact on overall health; feeding tends to improve with age. Seizures are common and typically responsive to standard epileptic medications. Minor cardiac anomalies and transient bradycardia and apnea may be present. Affected individuals may experience recurrent infections, which also tend to improve with age.

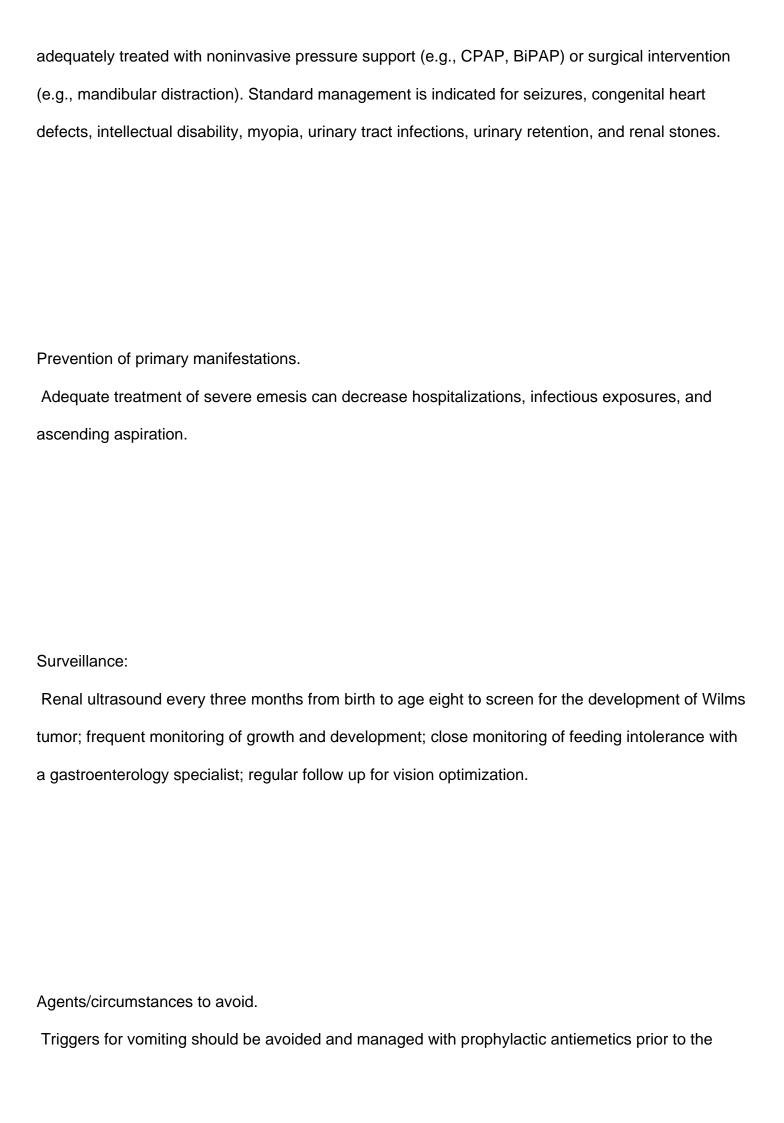
Isolated

case reports suggest that individuals with BOS are at greater risk for Wilms tumor than the general population, but large-scale epidemiologic studies have not been conducted.

Diagnosis/testing:
The diagnosis of Bohring-Opitz syndrome (BOS) is established in a proband with suggestive
clinical features and/or the identification of a constitutional heterozygous pathogenic variant in
ASXL1
by molecular genetic testing.
Management:

Treatment of manifestations.

Cyclic vomiting may be managed by identification and avoidance of triggers, daily maintenance medication, and early abortive treatment; G-tubes or GJ-tubes may decrease aspiration and improve nutrition. Due to the prevalence of obstructive sleep apnea, polysomnography should be considered. Referral to a craniofacial team should be considered for those with palatal abnormalities, micrognathia, or obstructive sleep apnea. Tracheostomy may be considered for those with recurrent aspiration who develop secondary lung disease, or in those with severe sleep apnea that is not



exposure.
Genetic counseling:
Bohring-Opitz syndrome (BOS) is typically the result of a
de novo
pathogenic variant in
ASXL1
. When BOS results from a
de novo
variant, the risk to the sibs of a proband is small. No individuals with BOS have been reported to
reproduce. Although the vast majority of BOS occurs as the result of a
de novo
variant in
ASXL1
, molecular genetic testing can be used to evaluate a pregnancy at theoretically increased risk as a
result of constitutional and/or germline mosaicism for an
ASXL1
pathogenic variant in a clinically unaffected parent.