Condition: Hirschsprung disease

Inheritance:

Genetically heterogeneous.

Genetic etiology:

Genetically heterogeneous; includes chromosomal and single gene disorders. The latter includes both syndromic and nonsyndromic. The most common single gene nonsyndromic form is due to mutation in the *RET* gene, in which inheritance is autosomal dominant and mutations tend to be loss of function.

Frequency:

Approximately 1/5,000 births.

Clinical features:

Hirschsprung disease consists of lack of ganglion cells in a segment of bowel, leading to amotility of that segment. This can lead to intestinal obstruction above the amotile segment. The defect results from failure of migration of neural crest cells. If the defect occurs in the recto-sigmoid colon it is referred to as “short segment;” involvement above the sigmoid is referred to as “long segment.”

Management:

Resection of aganglionic segment and reanastomosis of remaining colon.

Genetic counseling:

Requires establishing correct etiological diagnosis, including in some cases specific genetic tests.

Human Genetics and Genomics, Fourth Edition. Bruce R. Korf and Mira B. Irons.