

Hirschsprung's disease

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Genetic defects (e.g. RET, EDNRB, EDN3) can affect the migration of neural crest-derived intestinal neurones (neuroblastoma, gangliopathy), leading to aganglionosis and thickened nerve trunks in the distal bowel. There may be a family history. Aganglionic bowel fails to relax, causing a functional obstruction. Aganglionosis extends from the anus to the sigmoid colon in 75%, the proximal colon in 15%, and the terminal ileum in 10% of cases. A transition zone lies between dilated, proximal, normally innervated bowel and narrow, distal aganglionic bowel. Neonatal Hirschsprung's disease presents with delayed passage of meconium, abdominal distension and bilious vomiting requiring resuscitation, gastric decompression, antibiotics and a bowel washout. The diagnosis is made on a rectal suction biopsy. A contrast enema may show the narrow aganglionic segment, a cone and dilated proximal bowel (Figure 18.15). Daily rectal washouts may allow a period of growth at home before surgery. If decompression fails, a stoma is fashioned using frozen section histopathology to identify ganglionic bowel. Definitive surgery removes the aganglionic segment

(b) (c)

and brings ganglionic bowel to the anus; Swenson, Duhamel, Yancey-Soave and transanal 'pull-throughs' are options. Most children achieve reasonable bowel control, but some have residual constipation, incontinence or episodes of enterocolitis.

Figure 18.15 Barium enema in an infant, showing a 'transition zone' in the proximal sigmoid colon between the dilated proximal normally innervated bowel and the contracted aganglionic rectum.

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