

# Malrotation and volvulus

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Complex rotations in utero give the small bowel mesentery its broad, stable base, running from the duodenal-jejunal (DJ) flexure in the left upper quadrant to the caecum in the right lower quadrant. Incomplete rotations leave the mesentery with a narrow, unstable base at risk of twisting. Sometimes, fibrous Ladd's bands run between a central upper abdominal caecum and the right lateral abdominal wall, obstructing the duodenum ( Figure 18.6 ). A chronic volvulus that spares the vessels may present with protein-losing enteropathy or chylous ascites, while acute luminal obstruction presents with green-bilious vomiting and is the harbinger of vascular compromise. A baby suspected in an acidotic baby vomiting bile with a gasless abdominal radiograph and a scaphoid abdomen demands an immediate laparotomy. Well babies presenting with bilious vomiting have a contrast study to locate the DJ flexure. If the DJ flexure lies to the left of the vertebral column, at the level of the pylorus, the mesentery is likely to be stable. At operation, the bowel is placed in the non-rotated position and the mesentery is broadened - Ladd's procedure ( Figure 18.8 ).

**Figure 18.5 Small bowel atresia.**

**Figure 18.6 The narrow origin of the small bowel mesentery predisposes to midgut volvulus. Figure 18.7 An acute small bowel volvulus with vascular compromise: the baby's head is to the right. Note that the terminal ileum, caecum**

and appendix in the upper central abdomen are well perfused. Figure 18.8 Ladd's procedure: the duodenum is placed on the right, the colon on the left and the mesentery is broadened. The duodenum appears to lie near the colon since the wound is small. The appendix may be removed.

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