

arrest of development of the abdominal walls takes place, then part of the viscera are never enclosed. This is one variety of embryonal hernia.

In this form the viscera may be free in the amniotic fluid, or may be enclosed by a thin membrane, the primary membrane of Rathke. There is no peritoneal covering, as that develops with the abdominal wall.

If these eventrations are large, the children are usually dead at birth, or die shortly after. There is very frequently some other congenital malformation accompanying it, as imperforate anus, etc. Another variety of embryonal hernia is due to the partial persistence of the vitelline or omphalo-enteric duct.

The duct for a time is normally pervious, but finally loses its lumen and becomes a fibrous cord passing from the umbilicus to the ilium. If this duct does not close, then it becomes a diverticulum of the intestine, opening in the ilium, and extending into the cord. It is usually about the size of the gut at the ilium, getting smaller at the blind end in the cord. This variety, from the nature of its formation, is irreducible. Sometimes the duct is closed at the ilium, so that when the cord drops off a blind fistula remains.

Another variety is when a loop of intestine is retained in the cord. At a certain stage of development, according to Mall, a great amount of shifting takes place in the embryo, from the head to the tail, and the liver rapidly enlarges. This forces back some of the intestine into the cavity of the umbilical cord. At a later period, on account of the rapid development of the lower part of the body, the peritoneal cavity becomes larger, and the intestines are drawn back to their place. At this time the omphalo-enteric duct becomes atrophied, stretches out and breaks under tension, and the last loop passes into the abdominal cavity. If the atrophied duct should be short and thick, it holds the last loop in the cord, to which it becomes adherent. This loop may extend quite a distance in the cord, and is also irreducible.

These two varieties are usually small and frequently overlooked. Fatal results have followed an inclusion of this form of hernia in ligature of the cord.

The second class include those hernias which develop in the fetus after the abdomen has closed and the cord is formed, and are called fetal hernias. At this period the intestine is free from the omphalo-enteric cord and the parietal peritoneum is complete. Consequently, in their formation the peritoneum is pushed in front, and a true sac is formed. As this form appears after the