CONGENITAL MALFORMATION OF THE UMBILICUS.

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THERE have lately been under my care three cases of malformation of the umbilicus which, owing to their comparative rarity and interest from a developmental point of view, have seemed to me to be worthy of record.

CASE I. Large Congenital Exomphalos: Hernia of Intestines into a Thin Membranous Sac. Composed of the Dilated Umbilical Cord: Abdominal Section: Recovery.—R. M. was admitted into the General Hospital on August 18th, 1892, four hours after birth, on account of a large membranous protrusion at the umbilicus. The infant, a female, was in other respects quite healthy and a full term child. Protruding from the umbilicus was a membranous sac about the size of a large orange, with thin transparent walls thickened on the right side, to which the umbilical cord was attached. Coils of intestine were plainly visible through the sac, which was evidently an expansion of the umbilical cord. The intestines could not be reduced into the abdominal cavity. Chloroform was administered, the sac opened, and the neck of the umbilical aperture enlarged by a vertical incision above and below the umbilicus. Several coils of small intestine—one coil with a thin white cord attaching it to the fundus of the sac—were reduced into the abdomen. The cæcum and vermiform appendix were intimately adherent to the sac wall. As it was impossible to separate these latter, all the sac was cut away except where adherent to cæcum, and this part was reduced into the abdomen along with the intestine. The abdomen was then closed with fine silk sutures.

During that night and the whole of the following day the child vomited at frequent intervals. The vomit resembled coffee grounds. In the evening of August 19th the anus was well dilated with forceps. This gave vent to a quantity of meconium, and the child's recovery was afterwards uninterrupted. When seen a few months ago she was a strong healthy girl.

This case is an example of a deformity occasionally met with in obstetric practice. The white cord attaching a coil of small intestine to the fundus of the sac was the fibrous remains of the vitello-intestinal duct. This and the adhesion of the cæcum to the sac wall may perhaps account for the non-closure of the umbilicus.

CASE II. Umbilical Fæcal Fistula due to Persistence of the Ductus Vitello-intestinalis Opening at the Umbilicus: Death: Necropsy.—J. Y., a puny male infant, was admitted into the Children's Hospital in October, 1894, with a large abnormal aperture at the umbilicus, through which all fæces were discharged. The history was that the infant was at birth a well-developed child. The midwife who attended the mother noticed nothing wrong with the navel, and ligatured the cord in "the usual way." Meconium and fæces passed naturally *per anum* for two days. On the fourth day some fæcal discharge was noticed at the umbilicus. This discharge from the umbilicus increased daily, while the motions passed through the natural passage rapidly grew smaller, until latterly all fæces had been discharged through the abnormal aperture.

The infant was extremely emaciated on admission. At the umbilicus was a fistula lined with mucous membrane, the edges of which were in a state of prolapse. A probe passed freely through the fistula but detected no "spur." The anus and rectum were well formed but empty. Attempts were made to induce a closure of the opening by means of an india-rubber ring, but had to be abandoned, as they produced obstinate vomiting. No motion was passed *per anum*; partially digested curds passed through the umbilical opening, and he died some ten days after admission.

At the necropsy, which was made on the following day, it was found that, situated about seven inches from the ileo-cæcal valve, was a short wide diverticulum leading from the small intestine to the umbilicus. The diverticulum had a thick muscular wall, and was lined by normal mucous membrane. The small intestine above the diverticulum was much

dilated; below it, both small and large intestine were much contracted. The cæcum and appendix cæci lay free in the cavity of the true pelvis, attached to the anterior surface of the sacrum by a long mesocæcum. The ascending colon passed upwards on the left side of the spine, and then crossed over to the normal situation of the hepatic flexure.

CASE III. Muscular Walled Sac Opening at Umbilicus and Attached to the Small Intestine; Due to Imperfect Obliteration of the Vitello-intestinal Duct.—W. B., a boy, aged 2½ years, was admitted into hospital in September, 1893, suffering from an umbilical discharge. The mother's account was that ever since birth there had been a periodic discharge of "urine from the navel." The discharge took place generally after an attack of straining or fit of crying.

On examining the navel a small fistula was discovered, into which a probe passed downwards and backwards for 3 inches. The introduction of the probe gave vent to several cubic centimetres of a clear, thin, oily, light yellow fluid, resembling urine except in its being oily to the touch. The fluid when collected was found to be slightly alkaline in reaction, highly albuminous, and contained no urea. After admission there were several discharges of this fluid. The child was anaesthetised, a probe passed into the fistulous opening, and an exploration made. The peritoneum was opened and the fistula found to lead into a muscular walled sac, attached to the umbilicus and passing downwards and backwards. It had no connection with the bladder, but was attached at its blind end by a short, slender, fibrous cord to a coil of small intestine. The sac was opened, its walls partly excised, and the remains of it stitched to the edges of the parietal peritoneum.

On October 22nd, as the remains of the sac were still discharging the same yellow oily fluid, it was again laid open. Its interior was found to be lined with mucous membrane resembling that of the small intestine. The wound rapidly granulated up, and the child left the hospital well. The fluid resembled in its reactions those ascribed to the succus entericus; and the wall of the sac resembled very closely that of the small intestine. Unfortunately no microscopic examination was made of the portion excised. From its connections, however, I have little doubt that it was developed from a portion of the vitello-intestinal duct, which had not undergone obliteration.

The three cases related above are all examples of malformations of the umbilicus due to errors in development in connection with the alimentary canal. Urinary and biliary fistulae at the umbilicus have been recorded by various writers, but of such I have had no personal experience.

NOTE OF A CASE OF SALIVARY CALCULUS PRESENTING UNUSUAL SYMPTOMS.

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ON December 15th, 1894, I saw a gentleman, aged between 30 and 40, a patient of Dr. Day, who sent him to me on account of an affection of the mouth and neck. He was pale, and looked worn and ill, and stated that he had noticed a "hard lump" in the floor of the mouth for about two years, which had much increased of late, and become painful and inconvenient. The swelling in the submaxillary region had also gradually appeared, first as a small lump, then as a continually increasing and painful one. The significant statement was also made, that the lump in the neck became markedly more painful and harder after eating.

On examination, a hard elongated tumour occupied the floor of the mouth on the left side, beneath the tongue. The mucous membrane was livid, and at one spot was a fungating excrescence. Indeed, I looked upon the affection as one of typical epithelial carcinoma, which hardly needed a second glance. The mass in the neck and under the jaw was hard and fixed, the size and consistence of a small potato, indistinguishable from cancerous glandular disease. The history of the pain and swelling in the neck after eating, made me suspicious that the salivary duct was blocked, and that possibly by a calculus. The orifice of the duct was indistinguish-