

CHAPTER VIII.

DISEASES OF THE UMBILICUS.

INFLAMMATIONS OF THE UMBILICUS.

Inflammations, Concretions, and Gangrene.—Inflammation starting at the umbilicus is almost always due to uncleanness. Especially in stout people dust and fragments of clothing are apt to accumulate in the deep umbilical hollow. Secretion of sweat and sebaceous glands is added until the foreign matter may produce considerable irritation. As such material collects, it may gradually form itself into a solid mass, producing a so-called umbilical stone which may exist for a long time without symptoms. When as a result of traumatism secretion is increased, its exit is impeded by the stone, and swelling and redness of the parts result. The umbilical opening forms the crest of an inflammatory tumor and discharges under pressure a thick foul-smelling fluid which may easily be confounded with the contents of a broken-down sebaceous cyst. Such inflammatory conditions should be treated by the application of compresses wet with a 1 per cent. solution of aluminum acetate. When the swelling has subsided, the foreign matter can be washed from the umbilicus by a stream of water. The care of the parts consists in frequent bathing and dusting with talcum, dermatol, or some other powder. If the swelling does not diminish under the moist compresses, the umbilical ring must be divided with a knife to permit the pus and foreign material to escape. The umbilical ring can be dilated by repeated carefully applied gauze dressings so that recurrence of the trouble is unlikely.

A newborn child may suffer from various inflammations of the umbilicus, such as arteritis, phlebitis, simple suppurative inflammation, or erysipelas. The prognosis under such circumstances is unfavorable. The treatment consists in suitable surgical dressing. Sometimes the umbilicus of an emaciated child becomes gangrenous. Weak antiseptic dressings and strengthening diet are necessary. There is great risk under such circumstances that the process will extend to the abdominal cavity.

Inflammatory Umbilical Fistula.—The umbilicus is the thinnest part of the abdominal wall, hence it is a favorite seat for the escape of pus from an intra-abdominal abscess. This may occur in the acute form after the existence for a longer or a shorter time of intense pain, swelling, and redness. The process may also assume a chronic form. In either case, when rupture has taken place there will be a discharge from the fistula of pus mixed with feces, urine, bile, etc.,

according to the origin of the abscess. Such a fistula receives accordingly different names.

A fecal fistula may be due to a variety of causes. An umbilical hernia may become gangrenous, or a foreign body in the intestine may work its way outward. There may be tuberculous or gangrenous ulcers of the stomach or intestine, or a simple gastric ulcer may perforate, or a fistula at the appendix may lead to a fistula at the umbilicus. In rare cases tuberculous peritonitis will produce an umbilical fecal fistula. Round worms may make their escape through an umbilical fecal fistula, but that they are capable of producing such a fistula is not generally believed.

A urinary fistula at the umbilicus may be due to extraperitoneal rupture of the bladder either traumatic or due to inflammation. An umbilical fistula may follow rupture of a suppurating echinococcus cyst, or a suppurating gall-bladder may discharge itself through the umbilicus.

A peritoneal fistula without inflammation of any abdominal organ may be produced by an ascites of marked degree or by acute or chronic suppurative peritonitis. Cystic tumors of the ovary may exceptionally rupture through the umbilicus.

The nature of an umbilical fistula which discharges feces or small gall-stones or urine will soon be evident. When such a fistula discharges only mucus or mucus mixed with pus, and admits a probe for only a short distance, and when the history of the illness throws no light upon the region of the trouble, the cause of the fistula may be in doubt. Certain articles of food—for example, huckleberries—may serve to confirm a diagnosis of fecal fistula. Irrigation of the bladder with a colored fluid will show whether its contents escape at the umbilicus. A careful microscopical examination of the secretion will sometimes be of service, but in some cases the origin of the trouble must remain in doubt.

The prognosis of such a fistula depends upon the general condition of the patient and the source of the trouble. If the fistula is due to tuberculous peritonitis, the prognosis is naturally an unfavorable one. On the other hand, the formation of a fistula in ascites or in acute or chronic suppurative peritonitis may lead to a spontaneous cure. A fistula connecting with the gall-bladder will not permanently close until all gall-stones have passed and the suppurative discharge gives place to one of pure bile. An extensive operation is necessary to cure a patient of a permanent biliary or fecal or urinary fistula.

TUMORS OF THE UMBILICUS.

Pernice divides tumors of the umbilicus into three classes: inflammatory tumors, connective-tissue tumors, and epithelial tumors.

Inflammatory Umbilical Tumors.—The granuloma of early infancy and the papillary fibroma of later life belong in this class. A granuloma is sometimes called an umbilical fungus. It develops after

the umbilical cord falls off as a result of inflammation in the wound, usually due to uncleanness. The raw surface granulates and grows outward until a small-pedicle tumor is formed. If such an umbilicus is examined three or four weeks after the wound should have healed, there will be found in the bottom of the umbilical hollow a small mass of granulations whose surface is covered with a purulent secretion. This will serve to distinguish it from an enteroteratoma, which is covered with mucous membrane, while the absence of an opening distinguishes it from a vitello-intestinal fistula. In rare cases the granuloma becomes covered with a layer of thin epithelial cells and the resulting pedunculated tumor will then remain indefinitely without symptoms in the bottom of the umbilical hollow.

The first principle of treatment is a painstaking cleanliness in order to induce cicatrization of the umbilical wound. If this does not succeed, the granulations should be touched with a stick of silver nitrate, or, if necessary, the tumor may be snipped off with scissors before the caustic is applied. One should be certain that it is composed wholly of granulation-tissue before removing it.

A papillary fibroma is due to chronic irritation of the umbilicus. It is a firmly pedicled tumor which may reach the size of a nut and is made up of branching papillæ. Such a tumor may undergo cancerous degeneration when it occurs in this part of the body, as well as elsewhere. If it does so, it becomes fixed in the umbilical hollow. There are also papillomata which are sessile, and which if they ulcerate can scarcely be distinguished from cancer except by microscopical examination.

As a papillary fibroma is a benign tumor, it is safe to destroy it by chromic acid or other caustics. If it is too large for this treatment, it should be removed with a knife or curette. If there is suggestion of cancerous degeneration, extirpation should be thoroughly carried out even if the peritoneal cavity is opened in the process.

The umbilicus may be the seat of a gumma which simulates a malignant growth.

Connective-tissue Tumors.—Fibroma, fibrolipoma, angioma, and myxoma of the umbilical region are among the rarest of tumors. Sarcoma occurs more frequently, usually in the form of fibrosarcoma. Such a tumor is firm and has no pedicle. It is covered with normal skin until it ulcerates as a result of mechanical irritation. The veins in the skin are much dilated. It grows slowly and does not infect the neighboring lymph-glands. These tumors occur usually between the thirteenth and fifty-fifth years of age. They are generally found in women, and are therefore supposed to be, like the desmoid tumors, indirectly the result of traumatism due to pregnancy. Such a tumor can be readily removed, although it may be necessary to take with it a portion of the peritoneum. The prognosis is favorable. The other connective-tissue tumors are soft, and are therefore easily distinguished from sarcoma. When thoroughly removed, recurrence is unlikely.

Congenital myxosarcoma of a telangiectatic type may develop in

the portion of the umbilical cord which remains. Such a tumor may be successfully removed soon after birth.

Epithelial Tumors.—Dermoids and sebaceous cysts are found in the umbilical region and may reach a considerable size. The peritoneal cavity may be opened in their removal. This does not add greatly to the risk if the operation is an aseptic one. If such a cyst is suppurating, its contents should be evacuated and its cavity stuffed with iodoform gauze before the peritoneal cavity is opened. These benign tumors are of far less significance than carcinoma of the umbilicus.

An umbilical carcinoma may be primary or secondary to disease of some abdominal organ, especially the stomach and intestine. Secondary carcinoma is much more common than the primary variety.

A primary carcinoma usually springs from the superficial epithelium of the umbilicus, and is therefore an epithelioma. From the beginning, it forms a shallow ulcer with foul-smelling secretion and crusts. Such a growth is apparently due to chronic inflammation the result of uncleanness. The papillary carcinoma appears as a cauliflower-like mass with a broad pedicle and firm infiltrated base. Such a tumor is said by Hübner to spring from a papilloma which is subjected to constant irritation. Both of these forms of primary cancer grow slowly. There is also a scirrhus carcinoma of the umbilicus which starts from the superficial epithelium and grows rapidly. It does not ulcerate until a later period and produces metastases in the mesentery as well as in the lymphatic glands, whereas the two other forms mentioned produce metastases in the lymphatic glands only. Tubular and colloid forms of cancer have been described by Pernice and others, but they are very rare. The diagnosis of a carcinoma is not difficult, since it presents the characteristic appearance of hard ulcerating base and raised edges. In very stout persons it may be difficult to bring the hidden ulcer into view. A microscopical examination may be necessary to decide whether a papillomatous tumor is malignant or is the seat of a simple inflammation.

The prognosis in case of epithelioma and papillomatous carcinoma is favorable if the tumor is removed at an early stage. It is not so good in scirrhus, and far worse in the rare tubular and colloid forms of cancer.

Secondary carcinoma of the umbilicus is due in two-thirds of the cases in which it occurs to disease of the alimentary tract or the liver, and in one-third of the cases to disease of the female genital organs. The primary disease extends by continuity to the umbilicus in the large majority of cases, being due to metastasis only 5 times in 29 cases, according to Pernice. The form of a secondary cancer is the same as that of the primary tumor; hence if microscopical examination of an umbilical cancer shows that the growth is of a cylindrical type, it is safe to assume that it is secondary to disease of some abdominal organ. Under such circumstances operation is naturally useless unless intense pain or hemorrhage makes a partial removal or curettage advisable. Such treatment will rarely be called for, however, as the appearance of carcinoma at the umbilicus is a late manifestation of the disease.