distended and covered in places with the thinnest film of lymph. No obstruction existed, but there was a tumor-like mass surrounding the pancreas, firm, hard, and deeply infiltrated with blood. The patient improved after the operation and recovered completely.

Treatment.—Purgatives should not be given. For the pain hypodermics of morphia are indicated. To allay the distressing vomiting, the stomach should be washed out. Not only is this directly beneficial, but Küssmaul claims that the abdominal distention is relieved, the pressure in the bowel above the seat of obstruction is lessened, and the violent peristalsis is diminished. It may be practised three or four times a day, and in some instances has proved beneficial; in others curative. Thorough irrigation of the large bowel with injections should be practised, the fluid being allowed to flow in from a siphon syringe, and the amount carefully estimated. Jonathan Hutchinson recommends that the patient be placed under an anæsthetic, the abdomen thoroughly kneaded, and a copious enema given while in the inverted position. Then, with the aid of three or four strong men, the patient is to be thoroughly shaken, first with the abdomen held downward, and subsequently in the inverted position.

Inflation may also be tried, by forcing the air into the rectum with the bellows or with a Davidson's syringe. It is a measure not without risk, as instances of rupture of the bowel have been reported. Fitz's figures show that in the first eight years of the last decade there were thirty-three cases of recovery after injection or inflation in cases of certain or probable intussusception, and eleven deaths. In cases of acute obstruction, if these means do not prove successful by the third day, surgical measures should be resorted to, and when the obstruction seems persistent and the condition serious, laparotomy should be performed at once.

For the tympanites turpentine stupes and hot applications may be applied; if extreme, the bowel may be punctured with a small aspirator needle. In cases of chronic obstruction the diet must be carefully regulated, and opium and belladonna are useful for the paroxysmal pains. Enemata should be employed, and if the obstruction becomes complete, resort must be had to surgical measures.

V. CONSTIPATION (*Costiveness*).

Definition.—Retention of fæces from any cause.

Constipation in Adults.—The causes are varied and may be classed as general and local.

General Causes.—(*a*) Constitutional peculiarities: Torpidity of the bowels is often a family complaint and is found more often in dark than in fair persons. (*b*) Sedentary habits, particularly in persons who eat too much and neglect the calls of nature. (*c*) Certain diseases, such as anæmia, neurasthenia and hysteria, chronic affections of the liver, stomach, and intestines, and the acute fevers. Under this heading may appropriately be placed that most injurious of all habits, *drug-taking*. (*d*) Either a coarse diet, which leaves too much residue, or a diet which leaves too little may be a cause of costiveness.

Local Causes.—Weakness of the abdominal muscles in obesity or from overdistention in repeated pregnancies. Atony of the large bowel from chronic disease of the mucosa; the presence of tumors, physiological or pathological, pressing upon the bowel; enteritis; foreign bodies, large masses of scybala, and strictures of all kinds. By far the most important local cause is atony of the colon, particularly of the muscles of the sigmoid flexure by which the fæces are propelled into the rectum.

Symptoms.—The most persistent constipation for weeks or even months may exist with fair health. All kinds of evils have been attributed to poisoning by the resorption of noxious matters from the retained fæces—copræmia—but it is not likely that this takes place to any extent. Chlorosis, which Sir Andrew Clark attributes to fæcal poisoning, is not always associated with constipation, and if due to this cause should be in men, women, and children the most common of all disorders. Debility, lassitude, and mental depression are frequent symptoms in constipation, particularly in persons of a nervous temperament. Headache, loss of appetite, and a furred tongue may also occur. Individuals differ extraordinarily in this matter; one feels wretched all day without the accustomed evacuation; another is comfortable all the week except on the day on which by purge or enema the bowels are relieved.

When persistent, the accumulation of fæces leads to unpleasant, sometimes serious symptoms, such as piles, ulceration of the colon, distention of the sacculi, perforation, enteritis, and occlusion. In women pressure may cause pain at the time of menstruation and a sensation of fulness and distention in the pelvic organs. Neuralgia of the sacral nerves may be caused by an overloaded sigmoid flexure. The fæces collect chiefly in the colon. Even in extreme grades of constipation it is rare to find dry fæces in the cæcum. The fæces may form large tumors at the hepatic or splenic flexures, or a sausage-like, doughy mass above the navel, or an irregular lumpy tumor in the left inguinal region. In old persons the sacculi of the colon become distended and the scybala may remain in them and undergo calcification, forming enteroliths.

In cases with prolonged retention the fæcal masses become channelled and diarrhœa may occur for days before the true condition is discovered by rectal or external examination. In women who have been habitually constipated, attacks of diarrhœa with nausea and vomiting should excite suspicion and lead to a thorough examination of the large bowel. Fever may occur in these cases, and Meigs has reported an instance in which the condition simulated typhoid fever.

Constipation in infants is a common and troublesome disorder. The causes are congenital, dietetic, and local. There are instances in which

the child is constipated from birth and may not have a natural movement for years and yet thrive and develop. An instance of the kind was in my ward recently in which a baby of seven months had never had a movement without preliminary injections. The abdomen became swollen every day, but subsided after an injection and the passage of a long catheter. No stricture could be felt. I have already referred to a case of W. E. Hughes's, in which there was enormous dilatation of the large bowel with persistent constipation. In some of these patients there may be constricting bands, or, as in a case of Cheever's, a congenital stricture.

Dietetic causes are more common. In sucklings it often arises from an unnatural dryness of the small residue which passes into the colon, and it may be very difficult to decide whether the fault is in the mother's milk or in the digestion of the child. Most probably it is the latter, as some babies may be persistently costive on natural or artificial foods. Too much casein in the milk is believed by some writers to be the cause. In older children it is of the greatest importance that regular habits should be enjoined. Carelessness on the part of the mother in this matter often lays the foundation of troublesome constipation in after life. Impairment of the contractibility of the intestinal wall in consequence of inflammation, disturbance in the normal intestinal secretions, and mechanical obstruction by tumors, twists, and intussusception are the chief local causes.

Treatment.—Much may be done by systematic habits, particularly in the young. The desire to go to stool should always be granted. Exercise in moderation is helpful. In stout persons and in women with pendulous abdomens the muscles should have the support of a bandage. Friction or regularly applied massage is invaluable in the more chronic cases. A good substitute is a metal ball weighing from four to six pounds, which may be rolled over the abdomen every morning for five or ten minutes. The diet should be light, with plenty of fruit and vegetables, particularly salads and tomatoes. Oatmeal is usually laxative, though not to all; brown bread is better than that made from fine white flour. Of liquids, water and the aërated mineral waters may be taken freely. A tumblerful of cold water on rising, taken slowly, is efficacious in many cases. A glass of hot water at night may also be tried alone. A pipe or a cigar after breakfast is with many men an infallible remedy.

When the condition is not very obstinate it is well to try to relieve it by hygienic and dietetic measures. If drugs must be used they should be the milder saline laxatives or the compound liquorice powder. Enemata are often necessary, and it is much preferable to employ them early than to constantly use purgative pills. Glycerine either in the form of suppository or as a small injection is very valuable. Half a drachm of boric acid placed within the rectum is sometimes efficacious. The injections of tepid water, with or without soap, may be used for a prolonged period with good effect and without damage. The patient should be in the dorsal position with the hips elevated, and it is best to let the fluid flow in slowly from a fountain syringe.

There are various drugs which are of special service, particularly the combination of ipecacuanha, nux vomica, or belladonna, with aloes, rhubarb, colocynth, or podophyllin. Meigs recommends particularly the combination of extract of belladonna (gr. $\frac{1}{12}$), extract of nux vomica (gr. $\frac{1}{4}$), and extract of colocynth (gr. ij), one pill to be taken three times a day. In anæmia and chlorosis a sulphur confection taken in the morning, and a pill of iron, rhubarb, and aloes throughout the day are very serviceable.

In children the indications should be met, as far as possible, by hygienic and dietetic measures. In the constipation of sucklings a change in the diet of the mother may be tried. Drinking of water, barley water, or oatmeal water will sometimes obviate the difficulty. If laxatives are required simple syrup, manna, or olive oil may be sufficient. The conical piece of soap, so often seen in nurseries, is sometimes efficacious. Small injections of cold water may be used. Large injections should be avoided if possible. If it is necessary to give a laxative by the mouth the castor oil or fluid magnesia is the best. If there are signs of gastro-intestinal irritation rhubarb and soda or gray powder may be given. In older children the diet should be carefully regulated.

VIII. DISEASES OF THE LIVER.

I. JAUNDICE (*Icterus*).

1. **Jaundice as a Symptom.**—Cases with icterus may be divided into two great groups: Those in which there is obstruction, either in the smaller or in the larger ducts—the *hepatogenous* form; cases in which the jaundice is due to suppression of the function of the liver-cells, as in the widespread necrosis of acute yellow atrophy, or to an excess of the chromatogenous material, as in malaria, pernicious anæmia, and certain fevers, in which the liver function cannot keep pace with the blood destruction (hæmolysis)—*hæmatogenous* or non-obstructive jaundice.

The following classification of the causes of hepatogenous jaundice is arranged by Murchison, to whose writings on the liver we owe so much: Obstruction (1) by foreign bodies within the ducts, as gall-stones and parasites; (2) by inflammatory tumefaction of the duodenum or of the lining membrane of the duct; (3) by stricture or obliteration of the duct; (4) by tumors closing the orifice of the duct or growing in its interior; (5) by pressure on the duct from without, as by tumors of the liver itself, of the stomach, pancreas, kidney, or omentum; by pressure of enlarged glands in the fissure of the liver, and, more rarely, of abdominal aneurism,