A spice poultice or plaster should be kept over the abdomen so long as vomiting continues; being renewed or wet freshly with brandy or whisky often enough to maintain its strength. Ice (pounded in a rag for young infants) may be given more often than water to quench thirst. The food may be lime-water and milk, arrowroot, farina, chicken-water, beef-tea. After the first stage, many children will require *small quantities* of brandy or whisky (preferably with their food) for support.

In the early stage, if the head continue to be hot and stupor be threatened, a *few* leeches behind the ears, and the application of cold water, upon a light cambric handkerchief, to the head, may sometimes be proper. Such a stage, however, does not often last long. The tepid or even *cool bath*, also, may do excellent service, repeated every day.

Later, the two difficulties are, to check the diarrhœa, and to overcome the rejection of food by the stomach. For the bowels, astringents are then called for; especially logwood, blackberry root, geranium, krameria; aided in serious cases by paregoric in small quantities by the mouth, or even the injection into the bowels of one, two, or three drops of laudanum with starch. Sometimes acetate of lead injections (from one to three grains, with starch) may be further needed, for the same intent. Acetate of lead with acetate of morphia, in mucilage with cinnamon-water, makes a useful combination in obstinate cases. Nitrate of silver, in $\frac{1}{12}$ of a grain doses, thrice daily, has sometimes had an excellent effect. Dr. H. L. Byrd advises *sulphite of sodium;* 1 or 2 grain doses.

Protracted summer complaint affords scope for perseverance and contrivance in finding food available for the child. Well-made beef-tea agrees with most children. *Frozen* beef-tea (proposed by Dr. H. B. Hare, of Philadelphia) is especially likely to be acceptable. *Raw beef scraped* or rasped fine, has been found to answer the purpose best with some.

But all medical treatment may fail in some cases of cholera infantum, which will speedily recover on being removed from the city to the country. The immediate effect of a salubrious air is often surprising and delightful.

Prophylaxis.—This is very clear and simple. A child under five years of age ought never to be kept in the close-built parts of a large city, in our climate at all events, through June, July, and August, if it can be helped. Next to a *residence* for the summer in a high and open country, will be the benefit of frequent *excursions* or visits; riding or sailing; or even, if nothing else be possible, being carried daily into the squares or parks of the city. The proposition to have established *summer camps*, outside of each of our large cities, as places of refuge for the children of the poor during the hottest weather, is a very reasonable one.

DYSENTERY.

Definition.—An inflammation of the large intestine, involving the muscular as well as the mucous coat.

Varieties.—Acute and chronic; sthenic and asthenic; endemic or epidemic; bilious; ulcerative; strumous or tuberculous.

Symptoms.—Pain in the lower half of the abdomen, with soreness or tenderness on pressure or motion; frequent disposition to go to stool, with small and bloody or blood-marked muco-fecal or mucous passages, sometimes containing shreds of lymph or false membrane; tendency to strain (tenesmus) with griping (tormina); fever in most acute cases.

Severe and protracted cases may be considered as going through, 1st, the inflammatory, and 2d, the ulcerative stages.

Simple **acute** dysentery is commonly sthenic, or open, active, and inflammatory, without early or great tendency to prostration. Endemic or epidemic dysentery (the first name is the more correct) is generally asthenic. In this form fever may be absent, brief, or of a typhoid character. Vomiting is not rare in this, as it is in the ordinary acute form. Coldness and debility come early.

Sometimes, in malarial districts, dysentery, like all other maladies, may be intermittent; with daily or tertian exacerbations and intervals.

Morbid Anatomy.—Redness, turgescence, thickening, softening, ulceration, suppuration, and occasionally pseudo-membranous deposits, are, after death from dysentery, found, in various degrees, in the rectum, colon, cæcum; chiefly in the lower bowel. The hemorrhage which makes the typical bloody stools, is due to the congested and inflamed mucous membrane being constricted, in the tenesmus, by spasmodic and irregular contractions of the muscular coat.

Chronic dysentery presents nearly always ulceration of the rectum or colon, or both. The discharges in this may become almost entirely muco-purulent.

Causation.—Predisposition to dysentery is common in the latter part of summer; in this city and neighborhood, from the middle of August to the end of September, especially. Relaxation from heat, with sudden exposure to cold and wet, may produce an attack. So, often, will undigestible food; as unripe fruit. Bad drinking-water is another cause.

At any season and locality such agencies may produce simple acute dysentery. But in certain regions it becomes at times endemic. This is particularly noticed in many localities having considerable elevation, not subject to malarial fevers, but *within a short distance* of ague districts; dysentery upon the hills, while intermittent and remittent occur in the adjoining or subjacent valleys and meadow lands.

Prognosis.—Either form of dysentery *may* be fatal; but the endemic and asthenic type is much the more dangerous. The other, with good *early* treatment, is generally quite manageable. When allowed to become chronic and ulcerative, the doubtfulness of recovery is much greater. *Bilious* dysentery, that is, the form in which disorder of the liver is a prominent feature, the discharges presenting an excess of more or less altered, irritating bile, is more intractable than ordinary simple dysentery. *Scorbutic* dysentery (such as was seen during the Crimean war, and in the Chickahominy region of Virginia during the late war in this country) is frequently fatal.

Treatment. Simple acute form.—Now and then we may find a

robust patient who will require to be bled during the first, active stage of dysentery. Much more often, leeches over the abdomen, where the tenderness is greatest, will be suitable. After these, warm poultices, of flaxseed meal, mush, etc., may be put on. Later, in obstinate cases, a large blister in the same region.

At the very *start*, the old practice of beginning with a dose of castor oil with ten or fifteen drops of laudanum, will do very well. If left for a day or two, it had, as a rule, better be omitted.

Then the first prescription, in a mild or moderate case, may be of blue mass with ipecacuanha. After one or two days (sooner in an urgent case), camphor may be added, in pill. Next, we may substitute, for the blue pill, opium; afterwards, omit the ipecac., continuing the opium and camphor, *pro re nata*. If the disorder be still not checked, we must resort to acetate of lead, with opium, or in solution with acetate of morphia [F. 111, 112, 113, 114.)

Perfect rest is indispensable to prompt recovery from dysentery; there is no disease in which this is more important.

The diet must be bland; as rice-water, arrowroot, or farinacea; chicken-water, or beef-tea in the feeblest cases. When thirst is intense, iced rice-water, or benne-leaf tea, or infusion of slippery-elm bark, may be used as a drink; or, during the active stage, ice in substance may be taken slowly.

Enemata are very important in dysentery. First, of flaxseed-tea as a demulcent (two or four ounces at once); the same with laudanum; or laudanum with starch [F. 115]. In decidedly *sthenic*, inflammatory cases, injections into the bowel of ice-water or finely powdered ice[1] may be resorted to; taking care that the effect be kept short of chilling the patient. In chronic cases, or obstinate acute ones, acetate of lead may be given by enema, with laudanum, in mucilage. So may sulphate of zinc and nitrate of silver. I have seen some remarkable cures of **chronic** dysentery by the use of an enema containing ten grains of sulphate of zinc, forty drops of laudanum, and four ounces of flaxseed tea. Such an injection may be painful at the time, and would be too irritating, except in an ulcerative case of considerable standing; for which it should be reserved. Solution of tannic acid, in water or in glycerin, will be worthy of trial for a similar purpose. Dr. Morse,[2] of San Francisco, reports success in chronic dysentery with injections of solution of Labarraque's chlorinated soda (one part to twenty of water), two or three pints at a time.

Asthenic, endemic form.—In this there will be need of the earlier use of opium, and often of quinine and stimulants. No leeching, or little, is likely to be well borne, and ipecac may be prohibited by the occurrence of vomiting. When it can be taken in small doses (not more than ½ a grain), I believe it to be a valuable remedy. When malarial influence is obvious, and most of all in the intermittent form, quinia or cinchonia will be the remedy, to which others are adjuvants [F. 117]. *Hope's mixture* will be more likely to do good in this, the adynamic, than in the simple acute form. (℞.—Acid. nitric. f℥j; tinct. opii, gtt. xl; aquæ camphoræ, f℥viij; dose, a tablespoonful.) In India, within a few years, the pods of the *mangosteen* (*Garcinia mangostana*) have been found to furnish an extract serviceable in dysentery.

[1] Bodo Wenzel; Berliner Clin. Wochenschrift, Dec. 1, 1873.
[2] California Medical Gazette, Sept. 1868.

Bilious dysentery.—As a distinctive variety, this is not uncommon, and, if it last over ten days, it may be very hard to cure. Ordinary anti-dysenteric medication will not be inappropriate to it, but may disappoint much more than it is apt to in simple acute cases. Without having a very satisfactory recollection of the results of treatment of such cases in my own experience, I should trust most to the *withholding* of mercurials in the first stage, the gradual introduction of one of them in the second week, the application of a blister at the same period over the liver, and, besides opium, acetate of lead, etc., as required for astringent effect, the administration of nitro-muriatic acid. Of course the chemical incompatibility of this with lead must be remembered; but this will not interfere with saturnine injections while using the acid by the mouth.

Some physicians treat dysentery, with asserted advantage, by the internal administration of small doses of sulphate of magnesium or sulphate of sodium. Dr. L. D. Harlow uses the following: Sulphate of sodium, 1 drachm; laudanum, 40 drops; cinnamon-water, 4 fluidounces; mix, and give ½ a fluidounce every three hours. This mode of treatment must, I think, be best suited to the early stage of rather sthenic cases.

Scorbutic dysentery may require the use of opiates and astringents, as in the other forms; but *anti-scorbutic diet* is apt to be the most important portion of its treatment.

HEMORRHOIDS.

Definition.—Piles; tumors at the verge of the anus or within the rectum.

Varieties.—External and internal; varicose and fibrous; dry and bleeding.

Symptoms.—At first, weight and fulness in the rectum; soreness about the anus; pain, increased upon having a stool. The pain may extend up the loins, and down the limbs even to the feet. As inflammation increases, throbbing and aching may become almost constant. Swelling, and then the formation of one or more distinct tumors, occur. If without the anus, there may be every variety of painfulness, aggravated at certain times. If internal, the prolapsus of the tumor during defecation, and its constriction or strangulation by the *sphincter ani*, cause great suffering; often the tumor requires to be put back by the hands. Occasionally it cannot be returned, but undergoes mortification, and sloughs away. **Bleeding** occurs from internal hemorrhoids. The amount may vary from a teaspoonful to a pint or more in a day. Cases are recorded by good authorities in which several pounds of blood have been lost in a single night. Commonly it is much less; but may be enough to blanch and reduce the patient to the extreme of anæmia and debility.

Anatomy.—Inspection shows **external** piles to be globate, broad-based tumors at the verge of the anus, covered by thin in-

tegument; livid in color when fresh, losing that hue when old; tense and elastic to the touch, and very tender, at least during inflammation.

The old idea that every hemorrhoid is a dilated vein has been corrected by observation. Piles consist of distended skin and connective tissue, with contained extravasation of blood, and deposit and organization of lymph, from local congestion.

Internal hemorrhoids are described as chiefly of three varieties: 1st. Solid, round or pear-shaped, attached by a peduncle, smooth, and dull in color, composed of mucous membrane, connective tissue, and thickened veins. These bleed very little, if any. 2d. Broad-based, bright red, spongy tumors, villous on the surface, and bleeding readily arterial blood; consisting of loose folds of mucous membrane, with hypertrophied connective tissue and enlarged capillary and small arterial and venous vessels. 3d. Florid, very vascular excrescences upon the mucous membrane, not of large size, but bleeding sometimes copiously.

Complications and Sequelæ.—These are, especially, ulceration, abscess, fistula, fissure of the anus, prolapsus ani, and sympathetic irritation of the urethra, bladder, prostate, or testicles in the male, or of the uterus and vagina in the female. *Sloughing* of a strangulated hemorrhoidal tumor is considered by some to endanger life; but my own observation of its occurrence would lead me to depreciate this danger. Certainly very good natural cures thus occur.

Moderate bleeding from inflamed hemorrhoids gives temporary relief. When habitual and not excessive, its sudden arrest may possibly promote some internal visceral congestion—as apoplexy.

Diagnosis.—Hemorrhoids may be mistaken for venereal excrescences, or polypi of the rectum, or for prolapsus ani. The first are harder, more abrupt in their elevation and margins, and of a quite different history; in addition to which other marks of the syphilitic constitution exist. Polypi are of slower growth, and unaccompanied by inflammation, or, as a rule, by hemorrhage, and their surface is smoother than that of piles. Prolapsus ought to be easily made out, by examination discovering the structure of the everted mucous membrane.

The source of bleeding from the rectum may sometimes be in doubt, as to whether it be hemorrhoidal or not. True hemorrhage from the bowels, other than from piles, is the result commonly of serious and obvious disease, as typhoid fever, yellow fever, etc. Such flow of blood is itself painless, and the blood is dark, clotted, and variously mixed with fecal matter when passed, and the symptoms of piles are absent.

Causation.—Hereditary predisposition sometimes exists. Hemorrhoids are uncommon in either sex before puberty; in females they are most frequent at the time of the cessation of menstruation. Warm and damp climates promote them, as in the East and West Indies, etc. The plethoric constitution is the most liable to them, especially with sedentary habits. Pregnancy is attended by them not unfrequently. Other causes are long standing, or sitting upon hard seats, excessive venery or self-abuse; over-stimulating

diet; misuse of purgatives, especially of aloes; ascarides, diarrhœa, dysentery, stone in the bladder. Constipation of the bowels always predisposes to hemorrhoids.

Treatment.—This must be both *general* and *local;* the former depending upon the constitutional condition, and the cause of the affection. The bowels must be *regulated;* neither over-purged nor allowed to be costive; a *soluble* state is the most desirable. The bleeding of piles must be but cautiously interfered with, if it has been habitual, or if there be a tendency to apoplexy, phthisis, gout, or insanity.

The *diet* must be made to consist of digestible and unirritating food. Long standing and sitting, or rough riding, must be avoided; although active exercise in the open air may be very advantageous.

External piles may often be averted in the forming stage by attention to the bowels, along with the frequent application of the simplest unguents to the irritated and swollen part. Lard, tallow, cold cream, simple cerate, or spermaceti ointment, will answer very well; but the grease should be applied several times daily, and especially after a stool, so as to keep the part constantly soothed by it [F. 118, 119, 120, 121].

The laxatives most approved for hemorrhoidal cases are rhubarb, sulphur, and senna. The confection of senna is a very good preparation for such use. Magnesia is irritant to piles; and so are, though in less degree, the saline cathartics. Aloes is stimulant to the sensibility of the lower bowel; yet some practitioners (as Fordyce Barker) find it, in moderate or small doses, especially with hyoscyamus, a useful alterative in hemorrhoids. Enemata are objectionable merely because of the mechanical pressure of the instrument. In internal hemorrhoids they are often decidedly serviceable. When piles are inflamed, washing with cold water, or a cool sitz-bath, may relieve. Some patients prefer warm water or soapsuds under the same circumstances.

When *bleeding* is so considerable as to need to the checked, cold water injections, solution of alum, or tincture of iron, may be employed. A piece of alum made into a smooth suppository will sometimes do. In really threatening hemorrhage the patient must lie still in bed.

On the other hand, inflamed non-bleeding piles may require local depletion by leeches, or, as many prefer, cupping over the sacrum.

Prolapsed internal hemorrhoids often have to be replaced by the hand. Oiling will of course facilitate such reduction.

Astringent ointments, as of galls, tannin, carbonate of lead, or creasote, with regimen and laxatives, may cure piles even of considerable standing. [F. 118, 119, 120.] But old and obstinate cases demand removal by operation.

External hemorrhoids should be *excised*, with curved scissors or a probe-pointed straight bistoury; taking off no more integument than what covers the tumors. Pain during the operation may be prevented (Coote) by the ether spray. Allingham[1] employs a

[1] Diseases of the rectum, etc., 2d edition, 1873.

clamp. Good authority, however, pronounces touching carefully with *nitric acid* to be safe and successful.

Internal hemorrhoids ought, when operated upon, to be removed always by *ligature*. Excision is dangerous, and has several times been fatal by hemorrhage. Some prefer cauterization with nitric acid. In ligating hemorrhoids, it is best to apply a double ligature around the base of each tumor. Silk or hemp will answer; Bushe's needle-receiver is a good instrument for the application.

FISSURE OF THE ANUS.

This is a very painful and not uncommon affection, especially in middle life; perhaps most frequent in females. Neglected constipation and hemorrhoids, with relaxation of constitution and sedentary habits, are its principal causes.

Its symptoms are, at first, soreness or smarting at one point of the anus when at stool. This becomes afterwards very severe, with intense pain, burning, aching, and throbbing, and violent spasmodic constriction of the sphincter ani, lasting sometimes for hours.

Examination displays a lesion mostly of the mucous membrane only; though occasionally reaching even to the muscular fibres of the sphincter. In the beginning only a crack, it becomes at last an extended ulcer, and may exist on each side of the anus.

The stools are streaked with pus or blood, and often reduced in size by the spasm of the rectum; suggesting stricture of the rectum; for which this complaint has now and then been mistaken. The suffering of the patient in bad cases is extreme; pain being produced not only by defecation, but also by coughing, sneezing, stimulating food, or even by the sitting posture.

Treatment.—Most cases, even of long standing, may be cured without an operation. The fissure may be managed as an irritable ulcer, by the constant application of soothing unguents—as spermaceti or oxide of zinc ointment, lead cerate, unguentum belladonnæ, or lime-water with oiled silk dressing. The latter will be convenient only in the recumbent posture. Experience leads me to have especial confidence in *collodion* to which one-fiftieth of glycerin has been added to lessen its constricting effect. This may be painted upon the part with a camel's hair pencil, as in fissure of the nipple; it makes an excellent artificial cuticle. Glycerite of tannin [F. 205] will also be useful.

Obstinate cases may be treated with nitrate of silver or sulphate of copper, applied every day or two, lightly, to the surface. Where suffering is great, suppositories of opium and cocoa butter, or of belladonna, may be introduced after defecation. Washing with soap and water, twice daily, will be serviceable.

Should all such measures fail, Boyer's operation, as modified by Copeland and Brodie, should be resorted to. It is, incision through the ulcer, with a bistoury, either from within outwards, or from without inwards. It is only necessary to cut through the mucous membrane, not through the sphincter. Mild dressings must follow the incision; which will usually produce rapid recovery.

Dr. W. H. Vanburen's operation consists in the forced dilatation of the sphincter ani, by the two thumbs of the operator; so as to overcome the spasmodic contraction.

PROLAPSUS ANI.

Partial descent of the rectum without the anus is not rare in the adult, but is more common in children. Relaxation of the mucous membrane, or weakening of the anal muscles, may induce it; straining at stool is its usual immediate cause. Tropical countries afford its most numerous examples.

Treatment.—The protruded bowel must be replaced. Commonly, gentle pressure, with lard or oil, and *tact*, will succeed at once. If not, leeches and cooling applications must be applied to reduce congestion and swelling. Sometimes anæsthesia will be a needful aid; but not often.

Having effected the replacement, a pad and T bandage will maintain it for the time. The bowels must then be carefully regulated. For the rest, *preventive care* is the main thing. Children affected with prolapsus must not be allowed to strain. The chair or other seat used by them ought to be *high*, so as not to flex the thighs much upon the body. The more nearly erect the posture, the less force in bearing down.

Old prolapsus in the adult may not be curable without operation; although the air-dilated gum-elastic pessary will sometimes give relief. I refer for the *operation* to works on surgery [1]

AFFECTIONS OF THE LIVER.

ACUTE CONGESTION.

This, with deficient secretion of the bile, is very common, as the result of exposure to cold and wet in warm seasons or climates, of the chill or intermittent, or of excesses in diet. Its symptoms are, a sense of weight and slight or moderate pain in the right hypochondriac region and under the right shoulder-blade, constipation and lead-colored stools, nausea, a furred tongue, bitter taste in the mouth, a yellowish skin and conjunctiva, and headache or dizziness.

Treatment.—Two or three grains of blue mass[2] at bedtime, one, two, or three nights (two grains only if repeated.) When

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[1] See Ashton on the Rectum, p. 157.

[2] It has been remarked already, that Prof. J. H. Bennett's experiments, appearing to show that mercurials, in healthy animals, rather diminish than increase the flow of bile from the liver, do not in the slightest degree affect the value of the evidence which has established the usefulness of blue pill and calomel in acute or subacute hepatic disorders. It is only the *explanation* of their remedial action that can be thus brought into question; *not* the *facts* which prove it. Some experiments, moreover, have differed in their results from Bennett's; and we cannot argue with *certainty* from the case of dogs in the state of health to that of men in a condition of illness. See remarks of Dr Da Costa upon a case in which increase of bile after calomel appeared to be proved. Proceedings of Pathol. Society of Philadelphia, July, 1869.

Röhrig, with an improved method of experimentation, approved by Stricker, showed (1872-3) that, in dogs, the secretion of bile is augmented by any cause of determination of blood to the liver. Several kinds of cathartics had this effect; salines, rhubarb, calomel, and castor oil.