

besmeared with mucus or muco-pus point to catarrh, possibly to ulceration in the rectum, and certainly to the retention of the fecal matter for some time in a given part of the canal.

Dark, blackish, or chocolate-colored stools suggest the presence of the coloring matter of blood,—blood arising from a point high up in the canal and changed by the secretions of the stomach and bowels,—or the effect of some medicament, as bismuth, hæmatoxylin, mercury, or iron.

Green stools are not always nor usually produced by excess of bile, as is often supposed, but by biliverdin, an oxidation product of bilirubin, and developed in the intestinal canal. When diarrhoea arises from disease of the kidneys, liver, spleen, pancreas, suprarenal capsules, or from some general disease capable of inducing it, the symptoms of the causative disease usually predominate and identify it. But diarrhoea in tuberculosis is not evidence of a tuberculous process in the small intestines, nor proof of its existence in the colon. In chronic diarrhoea the urine should always be examined for evidence of disease of the kidneys, the urine for twenty-four hours being secured, if possible, and an accurate determination made of the urea and total solids. The diagnosis of lardaceous change in the intestines cannot be made from the intestinal symptoms alone. Chronic dysentery and chronic catarrh of the colon of a severe type are indistinguishable by the symptoms, as in many cases they are pathologically identical. Dysentery and proctitis are occasionally mistaken for each other. But the distinction is not difficult usually, since in dysentery there are some constitutional symptoms—colicky pains, borborygmi, fever,—while in proctitis the symptoms are confined more to the rectum.

In typhoid fever of sufficient severity to cause diarrhoea there are always continued fever, cephalalgia, pain in the back and extremities, or other typhoid symptoms, as well as the typhoid Widal reaction. But an acute catarrh of the upper part of the colon may at first be attended with fever and other constitutional symptoms that, by their resemblance to typhoid fever, justify hesitation in adopting a diagnosis.

TREATMENT.—The majority of acute diarrhoeas are due to indigestion of some sort and are of short duration. Their treatment is simple; they are often corrective and remedial in themselves, expelling offending materials and subsiding promptly without any treatment. The restoration is more prompt if, after its contents have been evacuated, the intestine can have a brief period of rest. Hence, a low diet and fasting are among the best of remedial measures. Absolute fasting is not necessary, but till convalescence is established the diet should be low. Important as this is for slight attacks, it is much more urgent in prolonged and severe ones, especially in weakly people and in children. The patient may be nourished by gastric digestion as far as possible, and thus the intestine may be given rest. Stale bread and light crackers are the best farinaceous foods; corn starch, rice, tapioca, and arrow root are less eligible. Milk is the best fluid food. If fresh, it may be taken raw; otherwise it is better pasteurized (heated to from 160° to 170° F.; it should never be boiled, as thereby its digestibility is reduced.) Beef-tea is admissible only if largely composed of fine particles of muscular fibre; beef-tea that is transparent throughout is not good. Beef juice is highly nutritious and easily assimilated; scraped raw beef is one of the best possible foods for diarrhoea in any age or condition, and may be eaten almost *ad libitum*. It is rarely objected to by the patient, and if it is it can be easily made palatable by the addition of sugar, salt, pepper, and spices. Eggs, raw or slightly cooked, are always allowable; very slight cooking adds to their digestibility. Uncooked white of egg may be mixed with water and taken as a drink, or in any other way that the patient may prefer. Six to ten eggs may thus be used by an adult each day. Oysters, slightly cooked, or preferably raw, are digested easily and rapidly by the stomach, as are also tripe and pigs' feet. Liquid foods, especially

milk, may with great advantage be peptonized. Peptonizing of foods is an excellent procedure in any diarrhoea in child or adult. The time and frequency of eating should be regulated carefully, especially in severe and protracted cases. By trial of small portions of food the dose should be found which can be taken without disturbing the intestine, and this should not be exceeded. Next, by trial, the greatest frequency with which this small meal can be repeated without harm is to be determined and adhered to rigidly, whether the daily number be three or ten.

In the simple cases due to indigestion, beyond the regulation of the diet, rest and warmth of the body, very little treatment is called for. A slight stomachic stimulant or an opiate, to check pain and nervous perturbation, may be needed at first, or later if the attack is prolonged. If pain is sharp and purging severe, opiates should be given promptly, and by the hypodermic method, if vomiting renders absorption by the stomach uncertain. One of the best combinations of opium for internal administration is the camphorated tincture; the deodorized tincture is an ideal fluid opiate; but the best preparation of all is morphine. Chloroform, ether, tincture of capsicum, aromatic spirit of ammonia, and other aromatics are frequently used alone, or added to the opiate with happy effect; but the opiate alone is nearly or quite as useful, and has the advantage of simplicity. The subnitrate and salicylate of bismuth are good adjuvants to the opiate.

For the diarrhoea of indigestion and biliousness, it is a good plan of treatment to give repeated small doses, or a single large dose, of some laxative, like castor oil, rhubarb, or the salines, with, or followed by, a few drops of tincture of opium. Much of the good effect of this plan of treatment is probably due to the free expulsion of offending material, including micro-organisms and ptomaines. For the diarrhoea of indigestion—especially the more chronic cases—nothing will take the place of measures to improve the digestion. Alcoholic liquors, tobacco, and coffee, as well as stimulating condiments, if they have been used, should be abstained from as far as possible.

Tonics are indicated for the general health and for digestion, and the patient should rest from labor and have the best of hygienic influences. Of the general tonics the most useful are quinine, iron, strychnine, arsenic, and mineral acids. One tonic that deserves to be more employed for diarrhoea than heretofore is the solution of nitrate of iron. Sulphate and phosphate of sodium, ipecacuanha and euonymin exercise a tonic influence upon the digestive function of the intestine, liver, and possibly the pancreas. Diarrhoea produced by fermenting and poisonous food tends to be severe, and treatment should be prompt. It is usually best to give morphine hypodermically, as it is unsafe to trust to slow absorption by the stomach. A dose of gr. ¼, repeated in thirty minutes if necessary, will usually stop the diarrhoea as well as the vomiting. Rest and warmth to the extremities must be enjoined.

Acute diarrhoea in children is usually susceptible of prompt improvement by an early regulation and lowering of the diet. But first the alimentary canal must be thoroughly evacuated of all undigested food and irritants. A slight diarrhoea, even for a day or two, is no proof of such evacuation. A laxative like oil or calomel should be given whenever it is suspected to be necessary. A cathartic has not infrequently removed undigested food taken several days before, with prompt relief of the diarrhoea. The diet should at once be reduced to one-third the usual allowance, and it should be taken in the form of numerous meals; this course should be pursued, if possible, till some improvement takes place in the symptoms, even if it requires a day or two. Then, as the conditions improve, the quantity of food may be gradually increased. Food in the slightest excess of the powers of digestion is generally harmful and aggravates the diarrhoea. If regulation of the regimen is not followed by prompt improvement, or if a catarrh of the

Diarrhoea.

- I. Acute.
 1. Non-infectious.
 - (a) Mechanical.
 - (b) Irritative (drugs, etc.).
 - (c) Nervous.
 - (d) Eliminative.
 2. Infectious.
 - (a) Acute mycotic.
 - (b) Cholera infantum.
 - (c) Hæco-colitis.
- II. Chronic.

I. ACUTE DIARRHOEA.

1. NON-INFECTIOUS.—(a) The *mechanical diarrhoeas* result from the ingestion of foreign bodies or of foodstuffs which, from their character or their unsuitability to the feeble digestion of the infant, act as mere foreign bodies. By directing blood and nervous energy to the intestine in the absence of absorption, this material then produces diarrhoea until nature or a purgative empties the intestines. The commonest materials leading to this diarrhoea are partly cooked cereals, the coarser vegetables, unripe fruit, nuts, etc. The symptoms are those of acute indigestion. Following vomiting perhaps, come colic, some distention, and diarrhoea. An uncomplicated case shows no pathological changes.

(b) The above merges imperceptibly into the *irritative diarrhoea* where such irritating substances as the organic acids of fruit, or their seeds, or various drugs are added to the offending material. The various drugs, which in adults produce diarrhoea, do not frequently come into question, but too drastic purgatives often leave a hyperæsthesia which produces abnormal peristalsis and secretion until soothed by suitable treatment. Congestion and catarrh are rapidly produced, and steadily proceed to ulceration in the lower bowels if treatment is not prompt. The symptoms are those of the previous group intensified.

(c) *Nervous diarrhoeas* form a large and important group of cases. The process of dentition is probably an irritation which leads to diarrhoea by reflex action. There certainly are diarrhoeas which appear with the onset of dentition, persist in spite of ordinary treatment, and cease on the eruption of the teeth. These cases drag on longer than the above, the symptoms vary in intensity irrespective of careful regular diet, and the child remains irritable, restless, and sleepless.

Fright and surprise may cause slight temporary diarrhoea. Fatigue arrests digestion, and so causes diarrhoea. Cold, especially a sudden drop in the temperature, is a fruitful source of diarrhoea in infants as in adults, acting probably through nervous and vaso-motor mechanism. In the same way and by general depression, extreme heat is the all-important cause of summer diarrhoeas.

(d) *Eliminative diarrhoea* occurs in cases having an inefficiency of excretory organs other than the intestines, or toxæmias of any kind. Renal inefficiency provides the commonest example so far as we know, and Holt suggests that the diarrhoea met in acute infectious fevers is of this nature. In this entire group of non-infectious diarrhoeas, if the condition is promptly cured by nature or by treatment, and no complications are added, there is nothing typical in the stools. The bacteria found are those of the normal intestine. If the irritation is of moderate degree and of short duration, one may find only increased frequency of fairly well-digested stools, *i.e.*, the only result is increased peristalsis. Greater or longer irritation will produce more fluid in the stools—increased secretion. If the disturbance lasts many hours the liver's functions are affected, and one finds dark brown, greenish, or grass-green stools, on the one hand, or motions suggesting clay or chalk on the other, as the biliary functions are variously perverted or inhibited. Foods in various stages of digestion are recognized.

2. INFECTIOUS DIARRHOEAS.—(a) *Acute Mycotic* (Acute Gastro-enteric Infection).—This is the great summer trou-

bowels supervenes, minute doses of hydrargyrum cum cretâ, or of calomel, often repeated, may be efficacious. A tenth of a grain of calomel or an equivalent dose of the other preparation may be given every two hours, till some improvement shows itself in the stools. Next to this in value—perhaps superior to it, for children as well as for adults—is the subnitrate of bismuth, which, if pure, may be taken in large doses. A child of two years may take from gr. v. to gr. x. every two to four hours, although smaller doses are valuable. This medication should not be continued for a period of many days, for fear of the effects of retained insoluble bismuth salts.

If the diarrhoea persists, in spite of the bismuth, and if the discharges are of a watery character, the milder astringents, in small doses, may be tried, although they are not very useful medicines. The best of them are, perhaps, kino, catechu, and logwood.

To check a bloody flux, or a sudden attack of diarrhoea as it occurs in epidemics, the best course is the opiate treatment, with fasting. A hypodermic injection of morphine is probably the most potent remedy extant for checking an internal bleeding of any kind. In cases of hemorrhage from the lower bowel astringents are of little consequence, and ergot is harmful.

Chronic diarrhoea in adults, when apparently due to atony, debility, tuberculosis, or other constitutional disorders, and not to demonstrable ulceration, may be treated with mild astringents; these will do some good, but little in comparison with regimen. Probably a diet of scraped raw beef, of egg, or of peptonized milk, in minute portions, promises more than all the astringents combined. But in some of these cases, even after the most careful regulation of the diet, and after a certain amount of improvement in the digestion has taken place, the diarrhoea continues to a slight extent. Such patients sometimes feel better, are more comfortable, and improve faster if they are continually taking mild astringents or astringent tonics in small doses.

When fermentation occurs in the intestinal contents, anti-fermentatives are indicated. Perhaps the most valuable of these are the salicylates, the sulphites, the naphthols, the carbolates, and salol. Salicylate and subgallate of bismuth are rational remedies for fermentation in connection with diarrhoea, and they may be taken in doses of from gr. v. to gr. xx. every two to four hours.

In all cases of diarrhoea that are severe or persistent the body should be kept constantly and consciously warm, thus lessening internal congestion. The body should be in a horizontal posture as many hours as possible every day, since this favors recovery from intestinal diseases.

The treatment of many of the more chronic forms of diarrhoea by enteroclysis or by injections of sterilized water containing various medicaments is very proper.

Norman Bridge.

DIARRHOEA, INFANTILE.—**DEFINITION.**—Diarrhoea is a term used to designate all conditions arising from an increased motor and secretory activity of the intestinal tract. It is thus but a symptom, and may be met with in every degree of severity, from a mere looseness of the bowels to a profuse watery drain, exhausting the patient and resulting in death within a few hours. Infants are peculiarly susceptible to diarrhoeal disorders, which tend in them to run a more severe course, and to terminate more often fatally, than is the case in older children or in adults.

CLASSIFICATION.—It is very difficult and probably, in our present state of knowledge, impossible to give a satisfactory and scientific classification of the diarrhoeas of infants. All do not fall into any grouping according to pathological anatomy, for some are functional and leave no lesion. Booker has made an attempt at a scientific classification based on the bacteriology of the discharges. But our present knowledge of bacteriology, and the fact that all diarrhoeas are not of bacterial origin, render this incomplete. One is forced, then, to make use of an enumeration rather than a classification. For convenience of study we would offer the following:

ble of infants, occurring as regularly as does the heat of summer. In this form of disease bacteria or their toxins make their way into the general circulation. Thus a grave systemic intoxication is added, and the most alarming symptoms now depend on the poisons which are circulating about the vital centres. These poisons are not necessarily introduced as such from without, but while the heat arrests all digestion, putrefaction produces toxic material which is duly absorbed. Thus, any cause of arrest of digestion may become the cause of acute mycotic diarrhoea. The exciting cause is frequently also the direct introduction into the alimentary tract of infection. Thus both saprophytic bacteria and the well-known infecting forms (proteus, pneumococci, streptococci, etc.) may be the immediate cause. Feeding infants upon cow's milk which has been brought from a distance, and kept perhaps, in hot weather and dusty cities, provides the ideal conditions for infection. (This suggests the question of contagion as well as infection; and disinfection, at least as much as we advise in the case of typhoid fever, is recommended.) Predisposing causes are age (from birth to two years), general feebleness from whatever cause, bad hygienic surroundings (including institutional life), and any interference with the barrier formed by the normal mucous membrane of the alimentary tract. Thus any influence which damages the mucous membrane is the all-important predisposing cause. As continued congestion lowers the nutrition of the epithelium, probably this alone prevents the perfect protection against absorption of toxic material. Greater degrees of damage are catarrh and superficial ulceration. As these are all produced by the previously mentioned non-infectious troubles when the latter are not promptly cured, we find that an uncured attack of non-infectious diarrhoea is a very frequent predisposing cause of acute mycotic diarrhoea.

Symptoms. The symptoms may, in mild cases, be those of the previous groups slowly and gradually exaggerated and prolonged. Mere diarrhoea may for a day or two be the only symptom, but at a time when, in the non-infectious cases, recovery takes place, the child in this disease becomes more peevish and fever may appear. Here time is often lost by parents, and the physician is called when too late to prevent systemic infection. The stools become more frequent and fluid, and evidences of systemic disease become prominent. These are fever, restlessness, rapid pulse, beginning pallor, and loss of weight. Other cases may be recognized as mycotic from the onset, which is sudden and severe. Violent vomiting, high fever, and severe nervous symptoms, such as stupor, delirium, or convulsions may usher in the attack. Increasing diarrhoea soon appears and rapidly leads to the usual signs of exhaustion of fluids from the body, e.g., thirst, dry tongue and skin, sunken eyes and fontanelles. The child's age, nutrition, and constitution now largely determine the course of the symptoms. Puny infants succumb in several days, perhaps in spite of treatment. Even mild attacks often linger a week or more with symptoms of varying severity, while severe cases linger longer. In all a marked indiscretion of diet precipitates a serious and prolonged relapse or throws the case into the group of ileo-colitis. As improvement sets in, fever and the nervous symptoms diminish and disappear more rapidly than the local manifestations.

Pathology. Stools rapidly become fluid and bulky, containing undigested food particles. Various tints from yellow and brown to greens appear, and the motions are early characterized by an unusual offensiveness and much flatus. Occasionally in a sudden virulent case the only discharge after the first few evacuations is a clear yellow fluid. At least at the onset, the stools are of acid reaction. Microscopically one finds food particles, epithelial cells, scanty leucocytes, and hosts of bacteria. The information from the stools is still unsatisfactory, and the list of bacteria is as yet incomplete.

The stomach may show patchy congestion, but it is in the lower part of the small bowel and in the colon that lesions are found. The upper parts of the small bowel

are generally empty and the mucous membrane is normal. The ileum generally contains such material as one finds in the stools in life, or its mucous membrane shows an intense congestion, while the lymphatic structures (Peyer's and solitary) are congested and swollen. Congestion has gone on to catarrh in many parts, particularly in the colon where mucus frequently adheres to the lining membrane. The stomach and various parts of the colon are often distended with gas.

(b) **Cholera Infantum.**—This term is still used for those severe virulent infections accompanied by rapid development of choleraform diarrhoea and grave depression of the heart, the nerve centres, and the nervous system generally. The terminal symptoms are due to the extreme abstraction of fluid. In some cases grave systemic symptoms, such as high fever and general depression, are present before any local symptoms appear. Vomiting and diarrhoea may come on simultaneously, and very frequent, large, watery discharges occur with alarming rapidity leading quickly to grave prostration and signs of extreme abstraction of fluid. The stools often resemble rice water and may be odorless, but are occasionally very offensive. Thus the onset, the symptoms, the course, and the pathology show this condition to be an example of the preceding group with greatly exaggerated virulence. Cases which do not end fatally in about twenty-four hours show, when treated, considerable control of the local symptoms, while the nervous manifestations linger more obstinately. Those dying early show extreme collapse, high fever, clammy skin, thready pulse, etc., as in cholera. Patients who slowly improve may lapse into ileo-colitis. Holt's experience is against the idea that renal or cerebral affection accounts for the nervous symptoms or the fatal termination. A very sudden relapse after marked signs of improvement, rapidly develops the most dangerous symptoms.

Pathology. The lesions still are confined to congestion and catarrh, especially in the above-mentioned localities, but the reaction appears more angry, and microscopically one finds much more numerous epithelial cells in the discharges. Thus we are here just on the verge of gross loss of substance, in fact, the patient generally dies before the poison has had time to erode the mucous membrane.

(c) **Acute Ileo-Colitis (Dysentery).**—In this group we place those cases which show a pathological process more advanced than mere congestion, with exaggerated function (mucus production) and degeneration (shedding of cells) of the epithelial lining of the intestine. We now find all grades, from a slight superficial abrasion to large deep ulcers with undermined edges, involving perhaps all coats of the bowel (dysentery).

Etiology. What has been said above on etiology applies here, as we are generally dealing with an advanced stage of one and the same process. Typical cases are seen up to five years of age or more.

Pathology. Booker found streptococci almost constantly present in the deeper ulcerations, but they may be only secondary. Cohen and others have found, in a small number of cases, the amœba coli in the stools of typical examples. But such is not the cause of the host of cases occurring with regularity in every summer and following steadily on the milder forms when improvement does not occur.

As in the milder forms, the lesions are found in the lower ileum and the colon.

1. The mildest form of lesion is an inflammatory infiltration into the catarrhal area with swelling of the mucous membranes, and particularly the solitary follicles. The infiltration may extend into the submucosa, and produce œdema which gives the surface a velvety appearance. Microscopically one finds great shedding of epithelial cells, the goblet cells distended with mucus, the glandular orifices narrowed or obliterated by pressure, and a large amount of mucous debris, great congestion, and occasionally hemorrhagic areas.

2. A more advanced stage is a catarrhal ulceration, which is extensive perhaps, but not deep, being limited

by the mucosa and showing generally a lymph follicle within it. If the ulcer is extensive the submucosa is infiltrated, but one does not see prominent edges to the ulcer.

3. Follicular ulceration is the commonest lesion. A small ulcer is seen on a solitary follicle in places, while in others the entire follicle breaks down leaving a round ulcer with overhanging edges, and often exposing the muscular coat. Infiltration continues extending beyond the follicle, and later this infiltrated area breaks down chiefly in the submucosa, thus enlarging the ulcer by undermining the mucosa. In severe prolonged cases the circular layer of the muscularis ulcerates. Perforation rarely or never occurs. If recovery takes place cicatrization is delayed for several months.

4. Membranous ileo-colitis, which is fortunately rare, is the most virulent form. Slight pseudo-membrane is seen in the lower ileum and throughout the colon, of a gray or green color with deficiencies here and there, through which the mucous membrane may be seen intensely injected, dull, and rough. Microscopically, fibrin containing small round cells, red blood cells, and bacteria, is seen to form the membrane, and may be seen invading the mucosa and submucosa. Inflammatory infiltration, œdema, and the pseudo-membrane greatly thicken the bowel.

Symptoms. In the cases due to inflammatory infiltration the onset is sudden, though the first twenty-four hours may be taken up by symptoms of mere indigestion, pain, vomiting, and repeated stools. Later, the old classical symptoms of dysentery appear, frequent small stools consisting mostly of blood-streaked mucus, passed with great pain, and tenesmus threatening prolapse of the rectum. The motions generally become dark brown in color, and tenderness is elicited over the colon. High fever slowly and gradually becomes moderate, while prostration slowly increases. Symptoms always remain severe as long as a week, the first improvement in the stools being the disappearance of blood; then the frequency and tenesmus diminish, while the mucus lingers for weeks. In catarrhal ulceration all is more severe, the noticeable additions being steady high fever, very frequent stools now containing much blood, greater prostration, and nervous symptoms. If death does not occur the case remains obstinately severe for weeks when complications are likely. Improvement and convalescence are very tedious, and recovery is occasionally incomplete.

Follicular ulceration may be ushered in with suddenness or, as is more frequently the case, symptoms are subacute and gradual, as one would expect from lesions of a chronic inflammation. In the former case one finds high fever and in the latter a rather steady moderate fever (about 100°). The lesions are so chronic and sluggish that blood is generally absent from the stools, whose typical feature is abundant mucus with numerous epithelial cells and small round cells. Very steady, though slow, failure in nutrition, color, and weight continue, with loss of appetite and grave trophic disturbances (bedsores); ulcers in the mouth, pain, and absence of tenesmus confirm the chronicity of the local inflammation.

The most virulent form, the membranous inflammation, produces a sudden, severe onset of symptoms with vomiting, high fever, and fluid stools. Very early the temperature may be between 102° and 105°, and it is typically steady and high. Systemic symptoms, prostration, delirium, etc., appear at the onset and are grave. Pain and tenesmus are severe, but wellnigh constant, not intermittent, as in the previously described cases. Prolapse is frequent and reveals sometimes an angry mucous membrane, supporting pseudo-membrane. Stools show more blood than less virulent cases, and portions of pseudo-membrane are to be looked for. Small pieces, gray and opaque, are easily recognized.

II. CHRONIC DIARRHOEA.

Chronic diarrhoea completes our classification, but is not a specific affection, inasmuch as it may be the result of any lingering, obstinate acute case of the previous

groups. Thus it may be caused by an acute diarrhoea lapsing into chronicity or, as it often does in young foundlings, it may result from months of indigestion with the irritation of partly digested food particles. In the latter cases atrophic conditions of secretory apparatus and of the mucous membrane generally, plays an important part. In such conditions fermentation is ever present and toxic material is constantly being absorbed, and a mild chronic intoxication occurs and may lead toward marasmus, while intercurrent disease is always probable. These are the cases one meets with in puny foundlings which show slight gains alternating with slight losses or a long, slow decline without any acute disease.

Diagnosis.—Gastro-enteric symptoms frequently usher in almost any acute disease in infants in summer. This is particularly the case in pneumonia and tonsillitis; hence in every case a careful examination of the chest and throat should be made.

The non-infectious diarrhoeas are characterized by their mildness and by the rapidity with which they subside. The infectious forms are generally characterized by higher temperature and more severe disturbances of the nervous system than is the rule in the former class of cases. The infectious forms are generally marked by highly offensive fluid evacuations, and they occur epidemically in summer.

Ileo-colitis can be recognized, only after the lapse of several days, by the persistence of temperature and the appearance of blood and large quantities of mucus in the motions. The pain and tenesmus are more marked than in any other form.

Cholera infantum can usually be recognized without difficulty by the severity of the general symptoms and by the fluid and offensive motions.

The onset of typhoid fever may be accompanied by diarrhoea, but this disease is rare in infancy, and is not likely to occur unless the disease is epidemic. The Widal test may be resorted to, but cannot be relied upon for diagnosis; it is not infrequently absent until later on in the disease in the case of infants.

Intussusception, which may be confounded with ileo-colitis, is to be distinguished by the absence of elevated temperature for the first few days.

Prognosis.—In the non-infectious forms the prognosis is invariably favorable, except in so far as they open the way for general gastro-enteric infection. In the infectious forms the prognosis depends on the general condition of the child, the virulence of the infection, and the efficacy of treatment, hygienic and medicinal.

In the case of young infants suffering from chronic dyspeptic troubles, the occurrence of an infectious diarrhoea is an extremely serious matter. Even an apparently mild attack may prove fatal, hence a guarded prognosis should always be given. The favorable symptoms are a decrease in the temperature and in the frequency of the motions when associated with an improvement in the general appearance and in the character of the pulse.

The prognosis is rendered more serious by the presence of a higher temperature, more watery movements, suppression of urine, sighing and feeble respiration, and a weak and intermittent pulse.

Complications.—No complications are to be met with in the non-infectious forms of diarrhoea.

Probably the most common complication of the infectious forms is broncho-pneumonia. Its onset is generally very insidious; it is generally accompanied by an increase in the respirations and a distinct rise in the temperature. The physical signs are obscure, but when noted are generally found at the base of the lungs. Symptoms of cerebral congestion are occasionally encountered.

Parenchymatous nephritis is a rare complication, but it has been noted in several instances. Koplik (*Medical Record*, April 1st, 1899) considers that it is more common than ordinarily supposed. When the affection is of a mild type, nothing may be found but a slight albuminuria; when severe, it is manifested by restlessness alternating with periods of a sort of stupor. It may be accompanied by œdema of the skin and subcutaneous tis-