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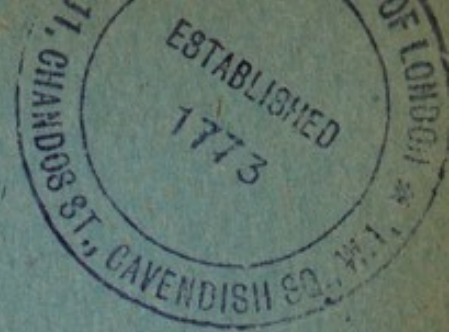
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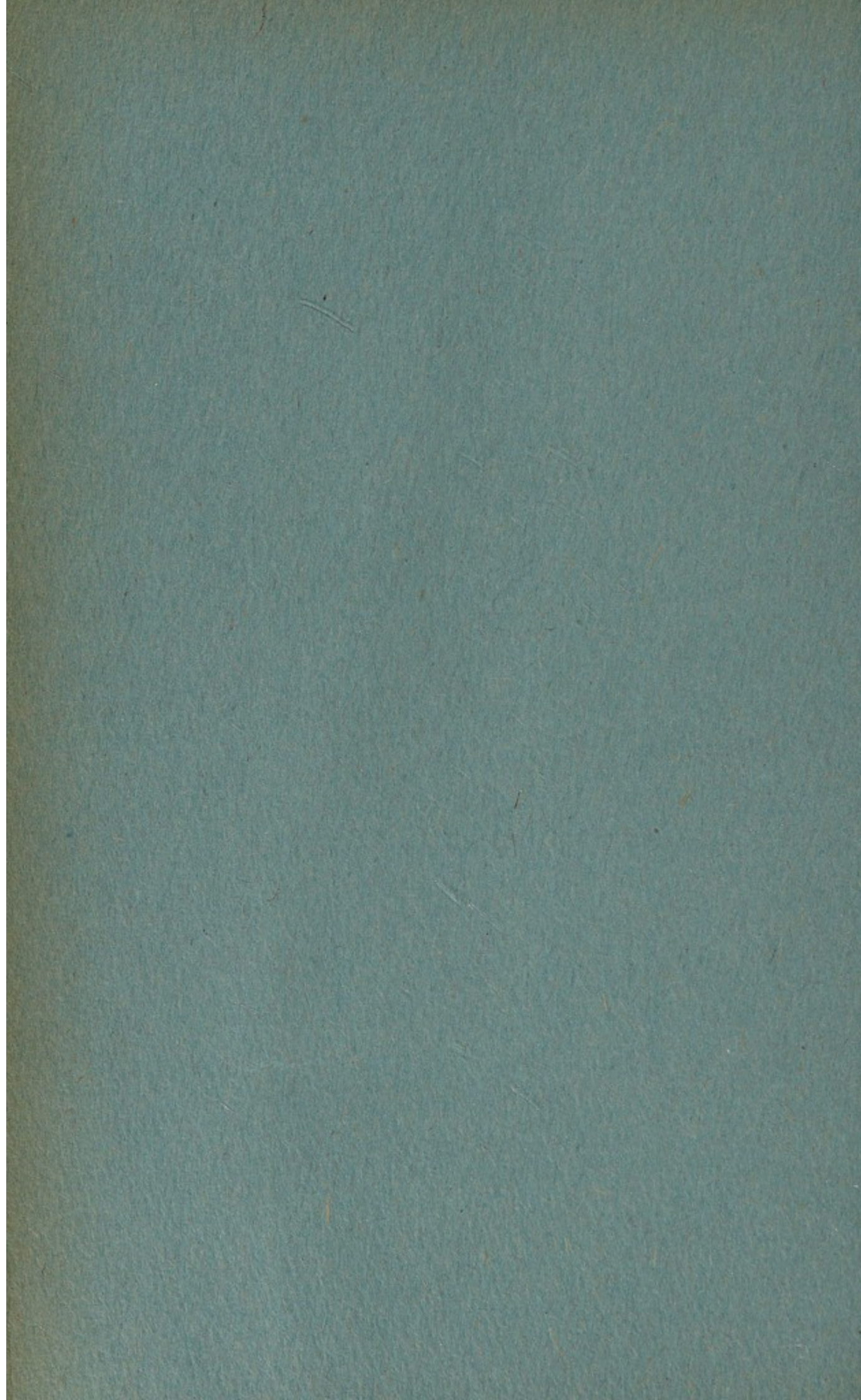
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## THE CONSTITUTIONAL EFFECT OF PROLONGED INTESTINAL TOXEMIA

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New York •

There may seem some necessity to apologize for again introducing a subject about which such a vast store of literature has been produced. However, the present writer thinks with John Abernethy "that if we believe propositions to be true, or perceive truths to be important, however unimportant they may at the time appear, and if we neglect to draw inferences from them, we fail in essential duties." My object in presenting this paper is to show how prolonged intestinal toxemia often may be the unsuspected underlying cause of diffuse autointoxication, and how, frequently, the most disseminated toxicosis may be controlled by the medical, mechanical, or surgical correction of morbid intestinal conditions.

There can be no point in stressing the part which absorption from diseased tonsils, teeth, sinuses, prostates, uteri, tubes, and gallbladders may play in auto-intoxication, nor for enumerating the many pathological conditions, both mental and physical, which may be traced to these sources of infection. Overwhelming evidence of such selfpoisoning may be found on every hand!

Obviously, the first aim in the elimination of any toxic state is to determine the original and exact source of the focal infection—a particularly difficult matter when the source is centred in the intestinal canal, where the shifting and distention of the intestinal coils cause a constant element of uncertainty to be present even in the röntgen interpretation of abdominal conditions. However, x ray and fluoroscopic examinations, carefully executed and properly inter-



preted, combined with a skillful and thorough clinical diagnosis, should prove accurate methods of demonstrating any important defect of the intestinal tract.

Without doubt, medical science is agreed that there are many patients today who exhibit areas of local stagnation in the bowel. That these areas are due, in many cases, to mechanical causes—adventitious bands which form about certain sites of the gastrointestinal tract, causing kinking of the gut at points of fixation, is scarcely a fact likely to be disputed, though there may be some disagreement as to the etiology of these bands. They may prove of congenital or inflammatory origin; or, the evolutionary theory, by which Lane has interpreted their existence, may account for the greater proportion. Whatever their etiology, the result of their formation may cause an unequal support in different portions of the canal, in consequence of which obstructions, as a result of a kinking of the gut, occur and a slowing of the passage of the contents of the intestines is the result. The degree of obstruction will depend upon the extent of the kinking of the gut, the number and type of bands and the length of time the intestinal conditions have existed. The treatment, whether medical or surgical, must depend upon the amount of stasis present.

A point of delay in the passage of the contents of the intestinal canal frequently provides an ideal site for the absorption of toxins, although, as we know, the absorptive powers of the canal vary at different sites. Many interesting scientific experiments have been undertaken to establish the causes of symptoms and of death in intestinal obstruction. These experiments have seemed to prove that in such obstruction death is not due to the loss of the mechanical function in the obstructed loop, but rather to the toxic content of the blocked portion of the canal. While these studies refer primarily to acute intestinal obstruction, there seems little reason to doubt that the toxemia produced by an acute condition and one produced by a chronic condition differ largely in the



severity and rapidity of the climax. The toxicity in acute obstruction frequently will cause death within a few days, while that of chronic intestinal poisoning may produce symptoms over a period of years, particularly in autotoxic subjects who have acquired a certain amount of immunity which saves them, sometimes for years, from the serious sequelæ of their condition. The effect on the constitution of prolonged intestinal toxemia, I wish to emphasize in this paper.

The close relationship between a toxemia originating in the alimentary tract and the many apparently remote symptoms in the patient has long been recognized, though, perhaps, not duly stressed. One of the first symptoms exhibited by the autotoxic subject is the remarkable change in the skin which, in many of these cases, becomes darker and darker and progressively pigmented. On the back of the upper arm the skin may be thick and feel, in severe cases, as if it were affected by a firm, brawny edema. The skin on the forearm and hand is mottled, being bluish and yellow in patches, while the fingers may be blue or cyanotic.

Intestinal toxemia is common among the causative factors of so-called functional heart disease. People who suffer from so-called indigestion of long standing very often develop, in time, structural changes in the heart muscle. Sir James Mackenzie frequently referred in his writings to "poisoned hearts." He described these toxic heart patients as exhibiting other phenomena indicative of toxic poisoning—discoloration of the skin; general exhaustion with collapse and long periods of unconsciousness. Mackenzie reported a case of a woman who suffered from a *Bacillus coli* infection for some years. "Her heart muscle had been affected to such an extent that even the most elaborate methods of treatment for the heart condition had been without result. The prognosis was bad. Finally, medical treatment for the intestinal toxemia was instituted and, after eighteen months of such treatment, a complete recovery was secured, in



spite of the severity of the cardiac impairment."

Dr. F. A. Craig recently reported "that in nine thousand cases of intestinal toxemia which he treated, one third of the patients had had sanatorium experiences for so-called neurasthenia." He adds "that in many of these cases there were very clear evidences of toxic poisoning—sluggishness of the mentality, loss of concentration, memory and coordination." The mental depression and depreciation associated with prolonged intestinal toxemia are, in many instances, of severe type. Patients so handicapped are unable to concentrate. They are subject to attacks of faintness, vertigo, neuralgia and headache due to the large excess of toxic material in the circulation.

Sir Arbuthnot Lane reports the case of a medical man who for years had been so drowsy, much of the time, as to appear to be under the influence of a narcotic. In time, the condition became so intolerable that it was impossible for the physician to continue in practice. Finally, he was operated upon and, following the surgical correction of the intestinal stasis, the mental condition cleared and the patient was enabled to resume his professional life.

In an earlier paper, I recorded a series of cases of abnormal mammary changes apparently caused by autointoxication. In many of these breasts a condensation or lobular induration of the upper, outer quadrant, develops usually along the edge of the large pectoral muscle, and where the dependent breast drags on the upper axillary margin. In some cases there is an abnormal discharge from the nipple, in conjunction with the condition described above. Such terms as toxic breasts, lumpy breasts, or stasis breasts are applicable to mammary changes of these types.

The two following cases are reported to illustrate 1, the result upon an abnormal breast condition of the surgical correction of the intestinal stasis, and 2, the return to normal of the mammæ when a coexistent intestinal toxemia was relieved by therapeutic measures.



CASE I.—A.B.; twenty-five years of age; widow. In March, 1915, this patient had an attack of pain in the right iliac fossa. There were several recurrences of the pain which was so severe that it was necessary for the patient's physician to prescribe morphine.

In August, 1915, a lump developed in the left breast, accompanied by a bloody discharge from the nipple. A diagnosis of cancer was made by two physicians, and a radical amputation of the breast advised.

During February, 1916, the patient consulted me. On examination, I found distinct tenderness of the right iliac fossa, much abdominal gas, and a so-called lumpy condition in the upper quadrant of the left breast which on deep pressure exuded a bloody serum from the nipple. I advised that the breast be kept under careful surveillance, and that the abdominal conditions be corrected surgically.

Abdominal section was performed March 11, 1916. The cecum was found to be large and pendulous; the terminal ileum dilated; there was an incompetent ileocecal valve, and many abdominal bands and adhesions. These conditions were corrected.

Convalescence was uneventful. A short time after the operation, the lumpy condition of the breast and the bloody discharge disappeared. In May, 1924, the patient was in excellent physical condition, and upon examining the breast I found it normal.

In this case a definite pathology of the breast tissue was eliminated by the timely surgical correction of the factors responsible for the intestinal toxemia.

CASE II.—I. M.; twenty-five years of age; female; single. This patient consulted me in May, 1919, for a lumpy condition of the right breast. On examination I found general enteroptosis; masses of feces in the lower colon; considerable gas in the transverse and ascending colons; a floating kidney and a lobulated condition in the upper, outer quadrant of the right breast. Tonics, an uplifting corset, laxatives, spe-





FIG. 1

FIG. 1.—A, large cecal diverticulum; B, so-called Jackson's membrane; C, kinked and underhung appendix; D, ileocecal band; E, ileum held up by a retractor, it is distended by the backward flow of intestinal content from the large bowel.

FIG. 2.—A, band constricting large bowel; B, appendix; C, distended diverticulated cecum; D, dilated duodenum from backward pressure of bands.

FIG. 3.—A, so-called Jackson's membrane; B, appendix; C, diverticulated cecum; D, dilated ileum.

FIG. 2

FIG. 3





FIG. 4.—A, omental adhesions; B, adhesions between cells of small bowel; C, large bowel.

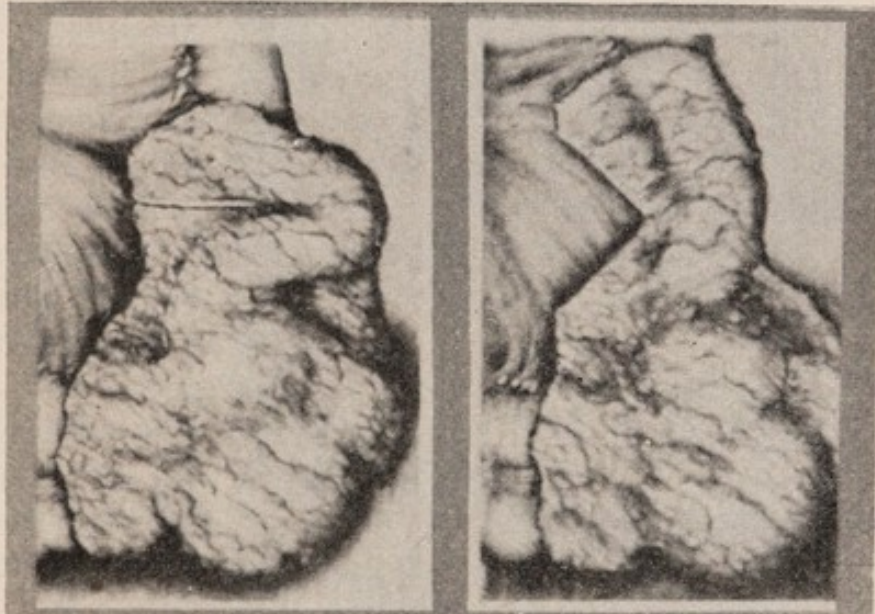


FIG. 5.—Omental grafts placed over raw surfaces of intestine.

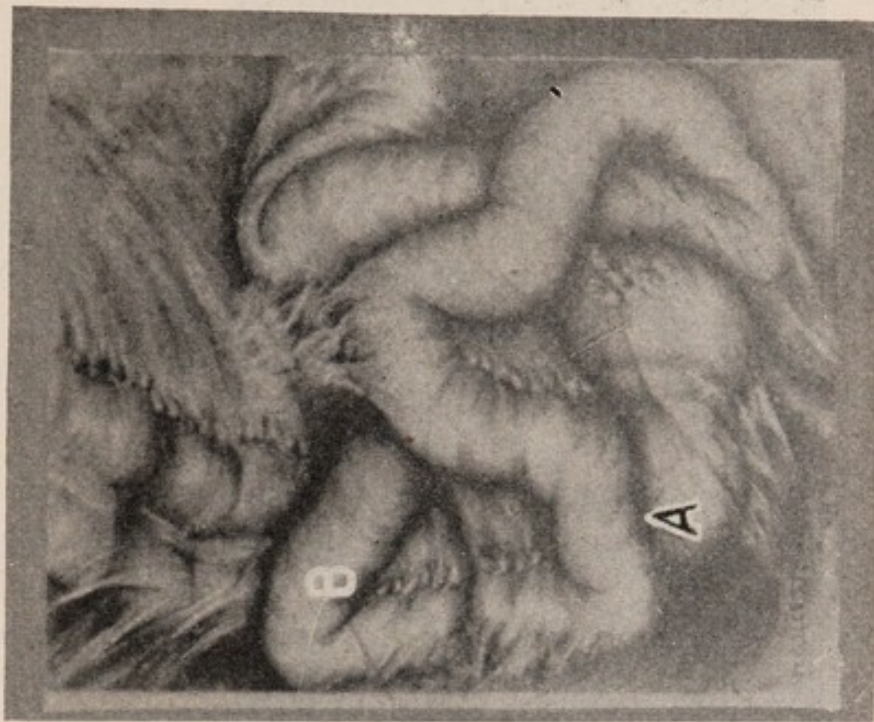


FIG. 6.—A, cecum; B, loop of small bowel over large gut, adherent to lateral wall.





FIG. 7.—A, accentuated last kink; B, adhesions.



FIG. 8.—A, cecum; B, terminal ileum adherent to caput coli.



FIG. 9.—Adhesions in right upper quadrant, involving stomach, liver, and large bowel.



cial abdominal exercises, and a general hygienic régime were prescribed. After following these therapeutic measures for one year the patient reported that the breast lumps had completely disappeared. By careful attention to the intestinal tract the patient has prevented any recurrence of the abnormal condition, and the breast is normal today, six years afterward.

Not only the breast, but the thyroid and other glandular tissues are dependent upon the type of the blood supply for their nutrition. The thyroid gland in particular must be supplied with the proper material in order to secrete and thus help maintain the proper endocrine balance of the individual.

Leonard Williams, in writing of thyroiditis, says: "There are hundreds of people who have a daily evacuation of the bowels but who are, nevertheless, walking septic tanks. These tanks are terrible depressors of the thyroid and unless you empty and disinfect them, your correct diagnosis of thyroid inadequacy, and its logical thyroid therapy, will avail you nothing."

The weight of evidence today tends to prove that alimentary toxemia is the basic cause of numbers of goitres, and that many goitres of this type diminish or disappear as a result of medical or surgical measures which have the effect of draining the intestines.

McCarrison (Robert), by the oral administration of fecal bacteria to animals, is able to produce goitre, cretinism and parathyroid disease in them. He has treated many goitres with vaccines prepared from organisms known to inhabit the intestines, and reports considerable success from such methods.

I do not wish to imply that all types of goitre can be cured by the measures, either medical or surgical, which restore the function of the intestinal canal. There are, however, cases of thyroidism which clear up completely when the toxic elements of the system are removed—as the atrophic gland, with small isthmus, which may increase in size and function when the toxemia is relieved, or the hyper-



trophic gland which also may resume normal functioning when the auto intoxication is eliminated. As early as 1779, the relation between goitre and a static condition of the intestines was outlined by Wilmer, a surgeon of Coventry, England, who, in an old and interesting volume of surgery, cited two cases of bronchocele (goitre) which were cured by "certain measures." In one case the prescription called for "a medicine composed of millepedes, burnt sponge and cinnabar of antimony." The patient was to be "purged at intervals with mercurial cathartic pills." Probably the "purging at intervals" had a more vital bearing on the cure of the bronchocele "in forty days" than was evident to the author of the illuminating old volume.

In many cases of toxic goitre, the medical or surgical treatment of the intestinal condition will relieve the abnormal stimulation of the thyroid gland. There are, of course, many patients who are so thoroughly poisoned with thyroid toxins that correction of the intestinal condition *alone* is useless and in these cases the necessity for thyroidectomy is evident.

The two cases herewith reported illustrate most clearly that the relief of intestinal stasis by surgical means may largely correct a persistently morbid condition of the thyroid, and restore the normal functioning power of the gland.

CASE III.—B. N.; thirty-five years of age; female; married. This patient consulted me February, 1917. She was suffering from pain in the epigastrium, and continued vomiting. There was tenderness in the right iliac fossa and over the gallbladder. Her weight was 203 pounds. Her breasts were large and dependent. The thyroid gland was atrophic. X ray photographs showed esophageal diverticulum, and intestinal bands and adhesions constricting many points.

Laparotomy was performed May, 1917. There was marked constriction of the ascending colon by a very tight band across the gut. The adhe-



sions which covered many other points in the intestines and a chronically inflamed appendix were removed.

The autointoxication had been present for years and the thyroid gland had become atrophic to such an extent that it was necessary to institute thyroid therapy.

Since the operation the patient no longer suffers with the abdominal pain or with the vomiting. She has lost fifteen pounds. As a result of the elimination of the intestinal toxemia, the thyroid gland is

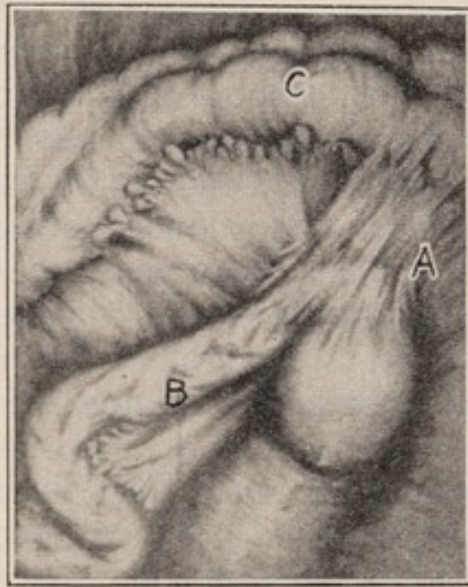


FIG. 10.—A, duodenal jejunal angle markedly accentuated; B, jejunum empty; C, transverse colon.

functioning in a more satisfactory manner but the prolonged autointoxication has damaged the gland to such an extent that some thyroid therapy, although less than formerly, is necessary in order that the patient may lead a comfortable and normal existence.

CASE IV.—A. S.; twenty-four years of age; female; single. This patient consulted me in May, 1916. She had a large goitre; there was pulsation in the neck, and the eyes were prominent. The patient complained of soreness and pain over the appendicular region.

X ray examination showed intestinal adhesions



and bands, and operation was performed June 10, 1916. The head of the colon, with very short mesentery, and terminal ileum were found to be apparently congenitally retropoised and attached to the posterior wall with a broad band. The appendix was subacutely inflamed and filled with material. There was accentuation of the last kink of the pelvic colon. These conditions were corrected and the patient's recovery was uneventful.

Four months after the operation there were no longer any abdominal symptoms and the goitre had completely disappeared. Five years later the patient reported that she was in excellent health.

The cases herein reported will bear out the premise that autointoxication, as a result of intestinal stasis, may be the basic factor in many abnormal mental and physical conditions. Premature senility of the organs and the impairment of the functions of the tissues are, perhaps, the most evident results of prolonged intestinal toxemia.

There are many cases of intestinal stasis, with resultant autointoxication, in which the static condition of the intestines may be obviated by early therapeutic measures, as I have repeatedly pointed out in previous papers. These are mild cases of stasis, some of congenital origin, which respond to purely preventive action. In an interesting paper (1) Dr. E. M. Mosher emphasizes "skeletal variations" as one of the causes of enteroptosis and resultant stasis and states "that in the measurement of one hundred enteroptosis cases she found, without a single exception, the sternum short and the sternopubic diameter long, whereas in women in whom no enteroptosis was manifest, a long sternum and comparatively short sternopubic diameter was the rule." Dr. Mosher adds "that marked disproportion between the sternal length and the length of the abdomen upon its median line means a weak abdominal wall. The congenitally short sternum cannot be lengthened, nor the sternopubic line shortened, but the costal angle can be widened and the abdominal



wall strengthened, in many cases, by well directed exercises." Dr. Mosher suggests "that physicians should carefully classify patients with reference to this anatomical defect and instruct mothers, teachers and physical educators regarding the importance of beginning with the child such developmental exercises as will tend to correct this skeletal defect." Physiotherapy, with special abdominal exercises, is often of great benefit in many of the earlier cases of intestinal stasis.

In all beginning types of stasis, with enteroptosis, a properly fitted and adjusted abdominal belt must be worn. This should be applied constantly to correct the tendency of the abdominal viscera to downward displacement—the result of civilized man's assumption of an upright posture and a primary cause of the change in the mechanical relations of the alimentary tract—the theories of which I have described in detail in an earlier paper (Bibliography 7). The belt should be retained until Nature has restored the tone of the abdominal supports and offset the visceroptosis.

Patients with autointoxication require more fresh air than the normal person—so that the increased toxic products of the system may be oxidized into a form which can be easily eliminated. Plentiful hydration is also an asset. Since the aim in all intestinal toxemia is to reduce the gastrointestinal fermentation, the diet should be antiputrefactive as far as possible and sufficiently laxative to produce a satisfactory emptying of the bowel, preferably night and morning. Too much emphasis cannot be placed on these daily evacuations.

Ochsner (E. H.), in treating patients suffering from chronic fatigue intoxication says, "that some of the most severely afflicted can be saved only if they are given one ounce of castor oil every evening, in order that the results of the faulty digestion may be removed from the intestines daily and the fatigue material which may have found its way into the gastrointestinal canal be eliminated before it is re-



absorbed." My own experience has proved that liquid paraffin, intestinal antiseptics and high colonic irrigations are among the most efficacious methods of overcoming the absorption of toxins from the intestinal canal, in early cases of stasis. Kaolin and belladonna are adjuncts suggested recently by some writers who state "that these drugs control the spasm in inflamed conditions of the bowel and help to reduce the infection of the food supply."

In the midgroup of stasis are placed those cases which have progressed to the point where preventive measures—medical measures—are inefficient. These require surgical procedure of the first degree. In many of these conditions of stasis it is possible to repair the drainage system by severing bands, straightening kinks and angles and replacing the hollow organs. The bands should always be cut transversely and sewed longitudinally, in order to give action to the constricted part of the gut, and, since the appendix often plays a large part in the kinking of the ileum and the misplacing of the cecum, its removal will prove an added advantage. The great majority of stasis cases demanding any surgery may be placed in this midgroup class and, by careful plastic surgery of the intestinal canal, the patients may be saved the necessity of more radical operative procedure at a future date.

The following case reports illustrate the type of cases which come under the head of gastroenterological plastic surgery—the midgroup stasis—and something of the surgical technic which I employ.

CASE V.—J. B.; thirty-seven years of age; married; three children. This patient consulted me February 15, 1917, for pain in the epigastrium; excessive gas; a feeling of constant distention, and the loss of thirty pounds in weight in one year. There were many headaches and marked depression. Clinical and x ray examinations indicated that there were a number of adhesions causing intestinal stasis.

Operation was performed March 16, 1917. On opening the abdomen the great omentum was found



firmly adherent to the abdominal wall along the line of an old incision through which the appendix had been removed some years previously. The abdominal wall, the caput coli and about two feet of the small intestine, nearest to the ileocecal valve, were also caught in the omental adhesion. When the omentum was released from these attachments the last two feet of the small intestine were found angulated upon itself, twisted upon its long axis and kinked on its short axis; it was difficult to believe that anything could pass through a gut so angulated. The butt end of the cecum was found adherent to the flank with a marked ileopelvic band running down into the true pelvis. This was bisected transversely and sutured longitudinally and the small gut brought into position. A loop of the redundant sigmoid was also adherent to the cecal region and a section was grown together by an amalgamation of the appendices epiploicæ. There was a band across the duodenum from the gallbladder to the transverse colon.

All the bands were bisected and the raw surfaces turned in as far as possible. On the cecum and lower ileum some areas of raw surface had to be covered with omental grafts. The convalescence was uneventful, and in March, 1924, the patient reported that he was in excellent mental and physical condition.

CASE VI.—R. C.; male; forty-five years of age; single; lawyer. For sixteen years this patient had pain, off and on, in the region of the gallbladder and right shoulder. He had a great deal of indigestion; belching of gas; regurgitation of food; constipation and, at times, breathlessness. Seven years previous to consulting me he had had his appendix removed and a year later cholecystotomy performed, but the gastric symptoms had not disappeared.

On examination, I found tenderness midway between the appendical scar and the umbilicus, and on deep pressure, up under the costal arch. There was much gas in the intestines.

X ray examination showed adhesions about the



descending duodenum and in the region of the gall-bladder, with distinct points of kinking.

Operation was performed September 12, 1917. On opening the abdomen there was found a dense mass of adhesions in the right upper quadrant. Two and a half feet from the ileocecal valve the small gut was turned to the outer side over the ascending colon and was adherent to the posterolateral wall of the abdomen, and there were adhesions from the gall-bladder to the small intestine which kinked it at an acute angle. This extremely tight band was cut transversely, the intestine released and the raw surfaces turned in. A marked ileopelvic band which bound the terminal ileum tightly over the right ureter and internal iliac vein, and a band across the hepatic flexure were severed. The liver, outlet of the stomach and duodenum were all encased in the mass of adhesions. These were all released, raw surfaces carefully sutured, and the abdomen closed. The patient had an uneventful recovery and, in the eight years since operation, has remained in excellent condition.

CASE VII.—E. A.; eleven years of age; female. This patient came under my care in June, 1916, at the suggestion of Dr. Graeme Hammond. The birth and early childhood were normal except for chronic constipation which was present even during babyhood, when it was necessary to give the child an enema almost daily. X ray of the skull showed no abnormality. The family history is irrelevant.

In September, 1915, at ten years of age, the patient had attacks of what was apparently *petit mal*—as many as twenty a day. She was placed in a hospital where she remained for four months taking a rest cure; on a fruit and vegetable diet for eleven weeks and, later, on a milk diet for five weeks. The attacks did not abate. Dr. Hammond barred out essential epilepsy, and sent the patient to me.

On clinical examination, I found distinct tenderness over the head of the colon and appendix. The large intestine was prolapsed; the cecum was much



distended and lay in the true pelvis. X ray of the intestinal tract showed "a delay in the passage of the food through the terminal ileum, the transverse colon and sigmoid. The appendix retained barium for several days. The colon plates, twenty-two, forty-seven and seventy hours after the injection of the solution showed that a large amount of the barium was retained in the colon, and dilated the cecum and ascending colon."

Operation was performed June 23, 1916. The gallbladder was distended and attached to the first portion of the duodenum by a tight band which continued down over to the transverse colon near its hepatic flexure, which was prolapsed. The stomach was dilated to an unusual degree for so young a child, the greater curvature almost to the bladder. A band, about three inches broad, ran from within an inch of the tip of the gallbladder to the vessels of the gastrohepatic omentum. There was a duodenal kink of marked degree. Just above the cecum the ascending colon was bound down tightly; the hepatic flexure was grown to the ascending colon and the sigmoid was very redundant. There was an ileopelvic band, about three inches from the ileocecal valve, which was so placed mechanically that the cecum, which had already begun to form a diverticulum, caused a degree of ileal stasis which might easily account for the ileal delay. The bands were severed; the diverticula were turned in, first being treated with iodine; the cecum was plicated, and the cecum and ascending colon were elevated, rotated outward and anchored to the posterolateral shelf. The patient left the table in good condition.

Following the operation, the nerve condition rapidly improved. The seizures of *petit mal* were reduced to a minimum and, except for a slight attack at long intervals (and these usually follow a protracted excitement or fatigue), finally disappeared. The patient has remained in excellent physical condition—a member of the high school basket ball team—and has made a brilliant record as a student both



at high school and during her first year at college. She enjoys all the pursuits of the perfectly healthy girl and, on examination, August, 1925, I found her normal in every respect.

The most advanced cases of intestinal stasis are those which, because of neglect, or despite preventive treatment, have progressed to a point where plastic surgery is no longer effective and more than conservative measures are indicated. In previous papers, I have stressed again and again the importance of *early* surgical correction of intestinal stasis (cutting bands, anchoring, plicating, straightening kinks and angulations, etc.) and have emphasized particularly the necessity of corrective surgery at the site of the so-called last kink. Too little attention has been paid by surgeons to this angulation. It is this last kink which frequently attaches itself to the left ovary which, in consequence, may become cystic. The rectum, too, may become involved. In numerous cases of stasis which have come under my observation, the crux of the entire static intestinal condition was centred at this point of the canal and surgical repair of this one kink eliminated the intestinal stasis.

In my own experience, short circuiting in extreme types of stasis, where other surgical measures of lesser degree have failed, has often given most satisfactory results. I have always maintained that except in the rare instance, or where malignancy may have developed, partial or total colectomy is an unnecessarily radical operation. Recently, several operative measures have been proposed as substitutes for these more extreme surgical procedures. George E. Waugh (2) suggests an operation which he calls "fixation of mobile ascending colon." Roland Hazen (3) describes his operation "replacement and retention of the colon by fusion." Colonic exclusion is a surgical procedure suggested by Herbert J. Paterson (4). Paterson states "that in colonic exclusion nothing is removed; it is, therefore, less severe than total excision of the colon; the mortality rate



is lower, and there are no tags or raw surfaces left behind to lead to intestinal obstruction." I have been fortunate in having had the opportunity to observe the technic of Paterson, Waugh and Hazen, in their own operating rooms, and to see also some of the excellent postoperative results secured by these surgeons. I believe, therefore, that before resorting to any of the more radical surgical measures these substitute surgical procedures, or any others of equal practical value, should be given the most thorough investigation and thoughtful consideration.

In ileocolostomy the abdomen is opened and the lowest point of obstruction located. The ileum is divided slightly obliquely, encroaching upon the convexity; the distal end is invaginated by a purse string suture, and the proximal end is implanted into the lowest accessible portion of the pelvic colon (an end to side junction; or a lateral or oblique). A full sized esophageal tube may be introduced through the anus, up through this anastomotic juncture, its passage being facilitated by injecting paraffin into the tube by means of a Higginson syringe. The tube is passed through the opening in the colon and for about twelve inches along the ileum. It is secured in the anal region in the male and to the back of the vulva in the female—and the short circuit is complete. The tube remains for three to seven days.

The following case report illustrates the type of intestinal stasis, which, necessarily, is placed in this group, and the operative procedure employed to correct the mechanical defects of the intestinal canal:

CASE VIII.—C. Y.; twenty years of age; female; single. At thirteen years the patient began to have convulsions at intervals of two or three months. Simultaneously with the first convulsion there occurred an attack of constipation which amounted almost to obstipation—the bowels could not be moved except with an enema. The convulsions and attacks of constipation continued, and, after consulting a dozen physicians (and having an x ray of the skull,



which proved normal), it was decided advisable to do an exploratory laparotomy.

Operation was performed by me June 14, 1916. On opening the abdomen there was found a marked accentuation of the last kink and also a redundant sigmoid. The cecum was dilated and partially prolapsed. A Y shaped band extended from the lateral wall of the abdomen, its two prongs reaching across the ascending colon at about its middle point and almost completely obstructing the gut. From this band downward toward the butt of the cecum the gut was dilated; above the band it was collapsed. The ileocecal valve was incompetent, with great dilatation of the terminal ileum. There were numbers of pericolic bands across the ascending colon but the main support of the gut was the Y shaped band extending across it to the mesial line. There was a marked duodenojejunal kink with bands underneath the transverse mesocolon extending well up toward the free margin of the attachment of the transverse colon. When these bands were cut it was clearly seen by all those present that the small intestine below the band became greatly distended. The appendix was removed and the duodenojejunal kink corrected. A short circuit was performed in the usual way, care being taken to insert below the last kink. The patient's convalescence was prolonged because of the nerve element which entered into the case but she recovered and there were no longer attacks of obstipation. The convulsive seizures are now of very rare occurrence and light in character. The accompanying photographs will demonstrate the intestinal conditions revealed at the operation.

In these various types of stasis (the beginning cases, the midgroup and the advanced), the treatment must be modified according to the individual. In many, the simpler surgical procedures will prove effectual to remove the intestinal stasis, and, thus having eliminated the causative factor, the autointoxication, with the resultant morbid conditions of the system, will disappear. The disastrous possibilities



which may be the outcome of permitting these conditions of intestinal stasis—these sites of mechanical irritation, exposed to contact and strain—to remain uncorrected, can only be surmised. This much we do know of malignancy today, that cancer frequently develops at the site of prolonged chronic irritation. Sir Arbuthnot Lane writes “that as a result of his observations, which have extended over many years, he is exceedingly impressed by the sequence of cancer and intestinal stasis.”

In closing, I wish to repeat that herein are presented no new principles in medicine. My chief aim in contributing this paper today is, 1, to reemphasize the vast importance of toxic absorption from the intestinal canal as the factor mainly responsible for many widely diffused and apparently unrelated morbid conditions of the body; 2, to suggest the therapeutic and surgical measures through which the intestinal stasis which produces this autointoxication may be eliminated, and 3, to offer these case reports in evidence that as soon as the prolonged intestinal toxemia is relieved, often the impaired organs and tissues resume their normal functioning powers and a cure is effected!

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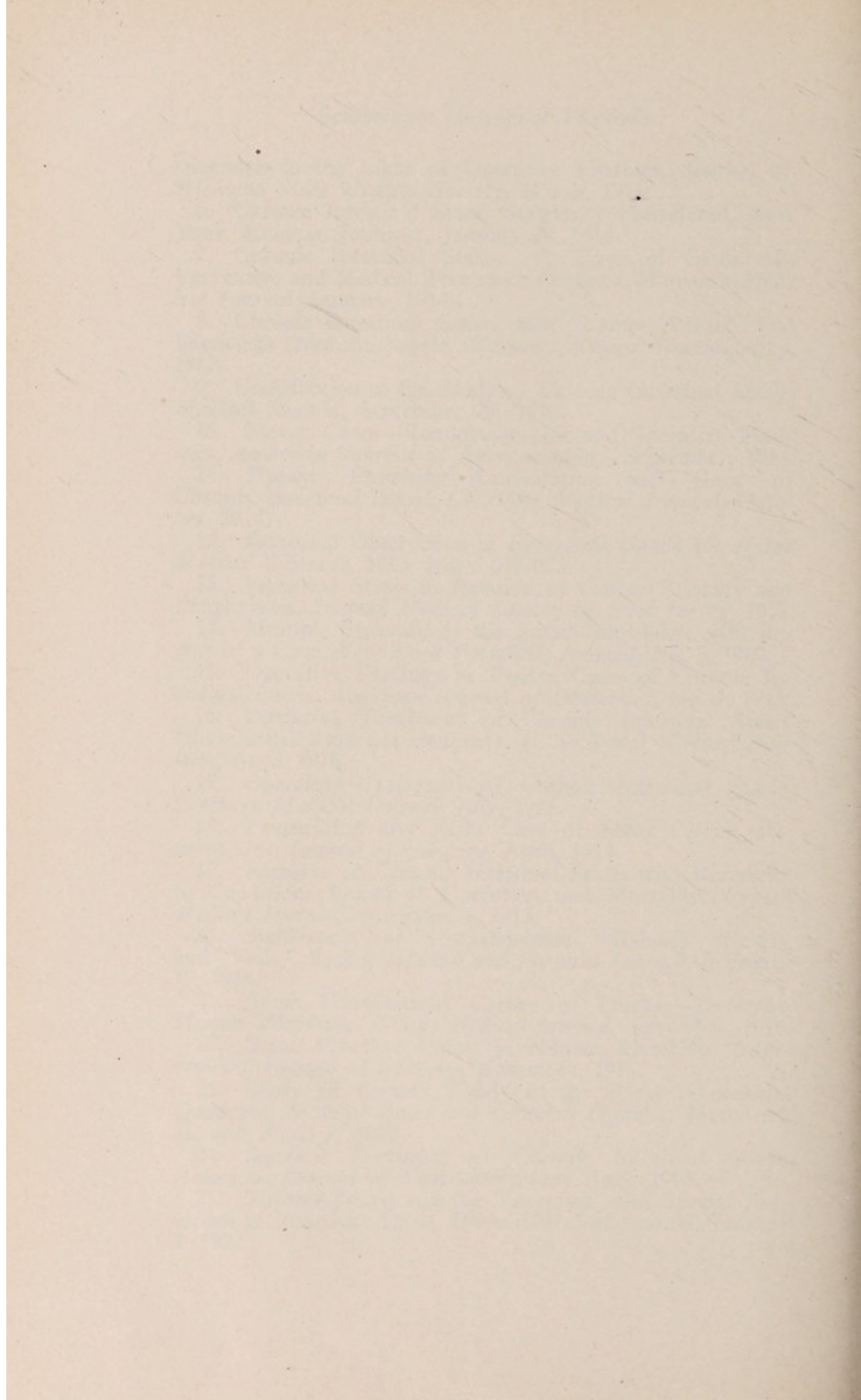
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