up. Be inexorable. Keep it within the point of causing exhaustion, and each day do an ounce more if necessary. That is the whole secret of exercise in gouty patients Begin with a small measure and gradually increase the amount, and you will find it does more good than any drug. The bicycle is the great calisthenic of the world.

With regard to drugs, there are a great many people who tell you that salicylates do no good. Men do not get good out of salicylates because they do not use them properly. I do not believe that salicylates cure gout or rheumatism, any more than that bromids cure epilepsy. They simply aid in keeping down the diathesis. If there be any cure, it is exercise. If you use your salicylates on a case properly, and get no response, you have something more than ordinary gout or rheumatism to deal with. There are certain cases which approach typical gout such as we rarely see in America, in which colchicum does good, much more good than salicylates. I have seen two cases of typical English gout corresponding to Sydenham's description, and only two. We do not have it in this country. Those cases colchicum suits better than salcylates do. Sometimes, when the cases is on the border line, you will get the best results by a combination of colchicum with salicylates. If you have a strong robust man, he will stand it. Give him knock-down doses in addition to purging him and you will bring him through. But that treatment may be worse than the disease, and has to be used with caution.

In using salicylates the profession almost universally choose the worst salt they can find, and that is the sodium salicylate. It is, perhaps, not so bad as salicylic acid, but it is much more apt to turn the stomach, and is less effective and more depressing than the other salts of salicylic acid. The two salts which are truly useful are the ammonium salt and the strontium salt. The ammonium salt acts immmediately and severely; the strontium salt acts slowly. If you have an acute case, use salicylate of strontium, or use the two combined. The strontium salt has this advantage, that it does not derange digestion anything like the other preparations, and many a time have I seen the best effects on the intestinal condition from the use of the strontium salt.

In a large majority of cases you will find that salicylates produce depression, and perhaps a little nausea, general wretchedness, and the patient refuses them. Nine times out of ten you can overcome those effects by combining your salicylate with digitalis and strychnin in the same prescription.

As to baths, you can not cure a diathesis by baths. It can not be done. But baths are useful, hot baths, steam baths, Turkish baths. Any man who values his own life, who has had a gouty grandfather, ought to take a Turkish bath once a week. You can not wash out ancestral traces in any other way. The kidney disease and the atheroma will be far less rife if we use the hot bath more than we do. The baths eliminate, give a temporary result, and are very useful when employed with the understanding that they do not cure the disease but relieve the symptoms.

A word about the Tallman-Sheffield apparatus or dry heat, which I have had a good deal of experience with this year. For about three months I had a large clientele using it all day long. In the first place, it is absurd to suppose that this is going to cure the gouty diathesis any more than that any other application will. In the second place it is my experience that it has very little value in the rheumatoid arthritis. In the third place, it is of very little value in chronic inflammations, even of purely gouty character, in joints. But I had my office crowded with people seeking relief, and it is empty today and that is the best criterion of the result. If the results claimed for the treatment were obtainable, I could soon fill this hall with patients, for they all want relief, but every missionary I sent out converted the people to the wrong faith. On the other hand, when you have deposits in the tendons and outside the joints; when you have traumatic synovitis, whether in baseball men or other persons, the results of this apparatus seem almost marvelous. I have seen a pitcher's hand drawn up and disabled for three or four years, the condition pronounced by a distinguished physician as gout, treated by the dry heat method, and after three or four treatments the hand had become pliable and the use of it came back. So, in acute strains and tendinous inflammations, this dry heat is of great value. In subacute rheumatism it is of value through its sweating and local influence. It has to be used at high temperatures. I carried it up to 330 degrees F. You can scorch the lint wrapped around the limb without scorching the limb. It has no value at all, acording to my experience, in old cases of rheumatoid arthritis, and very little use in rheumatism of the joints.

GASTROPTOSIS.

Presented to the Section on Practice of Medicine, at the Forty-eighth Annual Meeting of the American Medical Association, held at Philadelphia, Pa., June 1-4, 1897.

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There is a dislocation of the stomach with which the physician in general practice meets quite frequently. It is usually associated with dislocation of sections of the intestine and other organs within the abdominal cavity. Gastroptosis, a term for which we are indebted to Glénard, is that condition in which the greater curvature of the stomach lies permanently below the navel, and therefore outside of its normal position. This condition is more or less connected with the descent of the intestines and other abdominal organs termed enteroptosis. It is believed that the dislocation of the right kidney, called nephroptosis, plays a great rôle in the symptom-complex of enteroptosis, inasmuch as nephroptosis is always joined with enteroptosis. The fact is, the stomach may reach lower than normal in the abdominal cavity simply because the abdominal walls become flaccid and the ligaments which support the viscera relax. Abrams' reported a case of gastroptosis with voluntary oscillation of the stomach. While in certain cases gastroptosis is accounted for by a kind of predisposition due to heredity or acquired by the force of various conditions, it may be maintained that the majority of cases is accounted for by incidental causes. It may be due to excessive emaciation, exhausting diseases, loss of blood, frequent births, pressure of garments and pendulous abdomen. Every experienced practitioner is aware of the sad fact that tight lacing is to be charged with many of these pathologic conditions. Before we speak of these, I wish to say that certain neurasthenic or hysteric disturbances characteristic of ailments of the uterus and its appendages are also present in dislocations of the abdominal organs.

That the ligaments and mesenteries become relaxed is probably due most frequently to the weight of the abdominal organs, but Glénard cites amongst other causes of gastroptosis also those diseases of a gastric or intestinal origin which lead to a state of auto-intoxication and produce a weakening and exhaustion of both walls and ligaments. Another account made as to the etiology of gastroptosis is suggested by Fleiner.[2] It refers to the special relations occupied by the several organs packed into the abdominal cavity and accounts for the abnormal forms and positions as results of adjustment to given conditions. This alteration is especially significant in the upper section of the abdominal cavity, in which, as is well known, the stomach, liver, spleen and part of both colon flexures are situated. Fleiner cites the case of pleural exudative affections in which the organs lying below the diaphragm do not find sufficient room in the hypochondrium, and are therefore constrained to project themselves out of it. It is here where the lacing habit has its widest explanation. I may call attention to a third theory, that of Meinert,[3] who has brought the phenomenon of gastroptosis into etiologic relation with chlorosis. While it is true that anemia is often coincident with gastroptosis, the probability is that the latter is the cause of the former. Chemic and microscopic analysis of the stomach contents has no value for the diagnosis of gastroptosis. All departures from the normal condition of the gastric juice may take place as they usually do and the motility of the stomach may be completely maintained.

It is also possible that the symptoms of gastroptosis may remain latent, while again insignificant incidents may produce functional disturbances due to a formerly unobserved displacement of the organ. The fact is that as in many other conditions, so also in this, the patient calls for assistance only when the disease has entered into an aggravated stage and has become plainly manifest. In all previous phases of the difficulty the patient seems to complain of light disturbances of digestion alone. But all the while the stomach and intestinal tract are in constant danger of effective disturbance. Independent of digestion and of the quality of the foods, the symptoms range from variable appetite to rabid hunger and loss of appetite, through almost every kind of irregularity. Abnormal sensations, such as are usual in abdominal disorders, set in. Pressure, fulness, hot burning sensations, belching, nausea and even vomiting may occur. These symptoms may be reduced by avoiding every kind of excitement by means of complete rest of both body and mind. Sometimes these disorders may simulate the whole series of gastric diseases. Epigastric pulsation, which is frequently present, is not only unpleasant to the patient but worries him very much and appears to him as a pulsating tumor. Constipation, which is a characteristic symptom of gastroptosis and which sometimes leads to intestinal catarrh, is always present. Nervous symptoms are quite common, and manifest themselves in the form of abnormal sensations in the stomach and back which often amount to severe attacks of pain. This backache is quite typical and never absent. The plexus of nerves connected with the dislocated organ may be the mediate cause of these phenomena, which may be produced by the occasional tuggings on them in the attempts to bend, and in quick movements.

The diagnosis of gastroptosis is usually made by locating the size, boundaries and position of the stomach. For this purpose the usual methods are resorted to, viz., artificially distending the stomach with air or carbonic acid gas, by percussion after a quantity of water has been introduced and by passing a ray of light to illuminate the organ. Auscultatory percussion has recently received new help from the phonendoscope, which seems to become a somewhat popular method for marking out the organs of the abdominal cavity. While this method may be of material assistance when the introduction of the tube into the stomach is contraindicated, it seems to me that the results obtained do not always have an undoubted value. Manges[4] says that he has been disappointed in auscultatory percussion of some of the organs. The successive tapping produces changes in the tone which are very confusing. He finds that it is necessary to employ vigorous strokes in order to get percussive reaction for deeply situated organs, such as the kidneys, spleen, etc., and he sums up the record of the phonendoscope by stating that the expectations raised by Bianchi are not entirely realized. It would seem that the phonendoscope would be of greatest use in the examination of the abdominal organs and that it would help substantially to outline the stomach. It is stated that its advantages lie in its simplicity and the relative rapidity with which satisfactory results are obtained. Sound reaction, however, will in the very nature of the case hardly be able to compete with reaction by light.

For the best means for mapping out the stomach we are indebted to Einhorn,[5] who in 1889 succeeded in introducing an electric light into the stomach so that it became transparent through the anterior abdominal wall. It became possible by means of this method, which now passes under the name of gastrodiaphany, to determine the position and size of the organ, as well as its relation to neighboring normal or abnormal processes. By the force of extended experiments he could afford to make the assertion in 1892,[6] that we can safely diagnosticate gastroptosis by means of transillumination. The fact that we are able to recognize the upper border of the stomach in cases of gastroptosis enables us by transillumination to recognize the low position of the stomach. It must be remembered that the stomach when sunk has lost more or less its area of contact with the diaphragm, and it is on this account that the area of illumination, as Kuttner and Jacobson[7] have proved, shows no respiratory displacement. In cases of gastroptosis the organ has sunk with all its upper parts *in toto*, even with the cardia, small curvature and pylorus. On this account the anterior wall will be illuminated more or less, because a larger part of the stomach lies close to the anterior wall of the abdomen. Boas[8] says that just as in cases of gastroptosis transillumination furnishes characteristic data, for in many instances it enables us to determine the position of the upper border of the stomach.

The treatment of gastroptosis is mechanical, dietetic and medicinal. Treves,[9] however, reports a case of gastroptosis in which recovery was accomplished by abdominal section. The main purpose of the mechanical treatment is to support the dislocated stomach and along with it such abdominal organs as are abnormally movable at the same time, and to maintain them in their normal position as much as possible. This is usually accomplished by means of certain bandages. These should be constructed out of stiff material and should fit accurately. Their efficiency consists in a

pressure from below forward, upward and backward. I have modified the Ewald-Kuttner hypogastric supporter in such a manner as to prevent its gliding upward as most of the ordinary bandages do. A truss band fitting the body below the crest of the ilium and above the trochanter is connected with this supporter so that the pad of the latter lies just above the symphysis pubis. When tightened, the combination gives the desired pressure. Where this supporter (drawings of which I exhibit herewith) has been applied the patients seem to be relieved. It should be put on in the lying posture and be removed at night. In cases of gastroptosis where the symptoms are not relieved by the bandage, we may safely assume that the supporter does not fit or that it has been applied incorrectly. The bandage, upon proper application, exerts a pressure upon the hypogastrium from below upward, raises the intestines and invigorates the tension of the abdomen.

Every pressure upon the upper abdominal region should be avoided, and for this purpose sanitary garments are to be recommended. In cases where the abdominal walls have become flaccid and the muscles of the stomach need corresponding strengthening, their contractility can be promoted by the cold douche, faradization and abdominal massage. For the reposition of the internal organs the horizontal position is the most naturally helpful. In all difficult cases, therefore, prolonged bed rest is advisable.

In the *Muenchener Medicinische Wochenschrift*,[10] an interesting method of treatment for enteroptosis is given by Günzburg. A small quantity of baker's yeast is prescribed, the size of a bean; the fermentation provoked by the yeast is reported to cause a degree of flatulence which holds and immobilizes the intestines and thus allows the stomach to revert to its normal position. Should the flatulence prove to be too great and provoke a feeling of distension, the quantity of yeast can be diminished. It is reported that this treatment gives the patient a sensation of comfort, produced by the action of the carbonic acid upon the intestine, this carbonic acid being developed in the digestive tract under the influence of yeast. The stools become more regular and abundant. The distension of the intestine carries the aorta away from the abdominal wall so that the patient does not feel the beating of this vessel. (I report this ingenious method, but I have had no experience with it.)

The nourishment prescribed in gastroptosis should be ample and nutritive. Caution should be observed on this account that the gastric difficulties of the patient have no relation to any affections of the mucous membrane of the stomach which may be present. For the treatment of the constipation incident to gastroptosis, fresh fruit and graham bread are to be employed. The medicinal treatment should be directed to the phenomenon of constipation alone, and should embrace the usual laxatives and alkaline salts. Boas[11] recommends strychnin, bismuth salicylate and resorcin.

1 Abrams: Medical News, April 13, 1895.
2 Fleiner: Krankheiten der Verdauungsorgane, 1. Haelfte, p. 209.
3 Meinert: Ueber Enteroptose; Sonderabdruck aus dem Jahresbericht der Gesellschaft fuer Natur und Heilkunde zu Dresden, 1891, 1892.
4 Manges: New York Medical Journal, Jan. 9, 1897.
5 Einhorn: New York medicinische Monatsschrift, November, 1889.
6 Einhorn: Ueber Gastrodiaphanie; Berl. klin. Wochenschr., 1892, No. 51.
7 Kuttner and Jacobson: Sonderabdruck aus der Berliner klin. Wochenschr., 1893, No. 39.
8 Boas: Diagnostik und Therapie der Magenkrankheiten, Leipzig, 1893, Georg Thieme, p. 87.
9 Treves: British Medical Journal, Jan. 4, 1896
10 Muenchener Medicinische Wochenschrift, July 7, 1896.
11 Boas: Diagnostik und Therapie der Magenkrankheiten, Leipzig, 1895, p. 155.

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PERFORATING WOUNDS OF THE EYEBALL.

Read at the Third Annual Meeting of the American Academy of Railway Surgeons, held at Chicago, Ill., Sept. 23, 24 and 25, 1896.

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Perforating injuries of the eyeball are quite common among railroad employes and occur in all forms and degrees from the slightest perforation of the cornea with the loss of scarcely a drop of aqueous humor to the complete opening up of the globe and the entire loss of all its contents. Perforating wounds of the eyeball, with few exceptions, should be looked upon as serious injuries and be treated with the care that such cases deserve. Beginning with the wounds in the anterior part of the eyeball a small cut with a clean and sharp instrument through the cornea is not generally a serious injury, unless the agent producing the wound be infected, or penetrates beyond the posterior surface of the cornea far enough to injure the iris, lens or deeper structure of the eye. But if this cut should be situated within the pupillary space, the injury would be a serious one, not on account of the danger to the integrity of the eyeball, but because the resultant scar would interfere with the vision of the injured organ. If the opening should be sufficiently large, prolapse of the iris is almost certain to occur, followed by the dangers of infection, iritis, or deeper seated inflammations. If the agent producing the injury be rough or dirty, infection is liable to be carried into the corneal wound or into the anterior chamber, setting up a suppurative inflammation which may cause loss of a part or whole of the cornea, rendering the eye useless as an organ of vision for all time to come. Wounds extending deeper injure the iris or the lens or both. With the injury of the lens another danger is added to the case. As a rule as soon as the lens or its capsule is injured it immediately begins to swell and usually causes enough irritation to set up an iritis or cyclitis. The younger the patient the less the danger of these results occurring, as in children an injured lens with proper management will often break down, disintegrate, and be absorbed without causing any serious trouble. But railroad employes are not often below the period of adult life and an injured lens in these cases is a serious matter and is capable of doing damage in a number of ways, unless properly managed, as the opacity of the lens resulting from the injury causes loss of all useful vision until the lens itself is removed either by absorption or operative measures; the swelling of the lens substance causes iritis, or cyclitis, which may result in the destruction of the eye as a visual organ, or the swelling by increasing the intraocular tension may cause a traumatic glaucoma with the bad results following non-traumatic cases of this disease. Should a wound penetrating the anterior wall of the eyeball extend beyond the lens into the vitreous there will be in addition to the trouble already mentioned, danger of hemorrhage into, and infection of the vitreous, both of which conditions as a rule eventually cause the loss of vision, and oftentimes the latter causes destruction of the eyeball itself. The wound may not