bear on the sutures when the effort to dislodge this impaction of faeces was made, I determined to wall off the balance of the peritoneal cavity and keep the line of sutures in sight and practically outside of the abdomen. A mat of iodiformized gauze five inches wide and about eight inches long was passed under the coil of intestine, the ends of which had first been united by suture, and was brought out of the wound on one side. A similar piece was inserted on the opposite side. Packings of loose tufts of gauze resting on the intestine above and below closed in the space, at the bottom of which rested the imprisoned four or five inches of intestine with the line of sutures traversing it. The cavity was filled in temporarily with loose gauze and dressing over all.

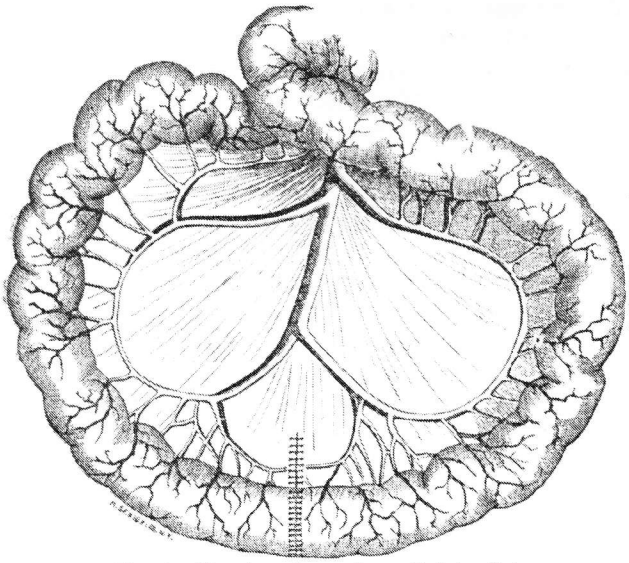

Fig. 4 Showing the ends united by Suture.

The patient rallied and did well. On the fourth day the gauze was all removed and the isolation of the sutured intestine was now perfect by adhesion.

Large enemata of warm water and olive oil were used every three or four hours to soften and wash out the impaction. The strain on the sutures was at times great. On the eighth day, under considerable straining the faecal impaction broke up and the continuity of the alimentary canal was restored after an interruption of three months. At the same time the line of union in the sutured intestine gave way for one-fourth of an inch, and fluid faeces escaped at intervals for a week. It is evident that had not this danger been forseen and provided against, the patient would have perished. This small opening closed spontaneously with the uninterrupted action of the bowels, and the patient recovered.

In conclusion, I wish to reiterate what I have so often insisted upon, that terminal (or end to end) anastomosis by the combined Czerny-Lembert sutures is far preferable and more surgical than lateral anastomosis by any method, and should always be done when possible and within the limit of safety as determined by the condition of the patient. The case here reported so closely resembles another case in which the small intestine was successfully resected by me in 1886, that I have employed the same illustrations to demonstrate the method employed.

(1) I wish to acknowlege the very efficient and faithful services of the House Staff of Mount Sinai Hospital, Doctors Sternberger, Brodhead, Brickner, Ware and Beck, who deserve much of the credit for the careful management of this troublesome case.—W.

THE MODERN TREATMENT OF SPRAINED ANKLE.

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Since November, 1888, I have adopted a method of treating sprained ankles that has given me uniform success and that I would not exchange for any of the older methods. In 1885, Mr. Edward Cottrell, of London, the late house-surgeon to the University College Hospital, published a brochure, the title of which was "On Some Common Injuries to Limbs; Their Treatment and After-Treatment, Including Bone-Setting (So-Called)." The publisher was H. K. Lewis, of London. I obtained the book shortly after its publication, yet my attention was not called to the treatment advocated for sprains of the ankle joint until the close of the year 1888.

I had learned to look upon a sprain as a kind of mystery involving a laceration of fibrous structures about the joint, "a rupture of the ligament or ligaments," sometimes a teno-synovi-

tis, sometimes a contusion of the cartilage, but was never able to say which was which, and was inclined to look with a certain degree of admiration or pity on the man who was able to say that this ligament or that ligament was torn or detached from the bone, and I treated my cases as most men do to-day, by fomentations for a little while, then plaster of Paris bandage or silicate of sodium, rest on axillary crutches, subsequent rubbing and massage, etc., etc. I confess I was never enamored of this treatment, and I had a grave apprehension always when I took charge of a case, lest I should get a stiffish joint following treatment, an irritable joint—one very much like the joints left after tuberculous disease in children where suppuration has not been a part of the disease. The external features of a sprain, the signs, were always very well pronounced. One could see the puffiness in the neighborhood of the malleolus or over the dorsum of the foot, the locallized swelling with extra heat, and sometimes ecchymosis. I was brought to a knowledge of the treatment I am to describe later by the following case:

CASE I.—Miss S., from a Western city, was stopping with her aunt, in this city, in November, 1888. On the morning of the 15th she turned on her right ankle and received a severe wrench. She walked about during the day as best she could, but found toward night that she was in a good deal of pain, and that swelling had come on. On the following morning, November 16, my friend, Dr. David Webster, asked me to see the case. I found the ankle quite painful under active or passive motion. Walking was extremely difficult. There was an ecchymosis and general discoloration of the skin over the external malleolus, with tenderness on pressure and extra heat. There was no swelling on the inner side of the ankle. I was unable to make out any fracture or dislocation.

It was about 10 o'clock in the morning when I saw the patient, it was close on to my office hours, and I asked her to remain on the sofa with her foot on the head portion until the afternoon. I instructed her aunt how to employ amateur massage, and in the afternoon I found the puffiness a little less, the parts less tender. I then proceeded to treat it as Mr. Cottrell had described in his little book on page 88. I cut strips of rubber adhesive plaster about one-half inch in width and long enough to completely encircle the foot. Then, with the foot still raised, I began strapping the foot, ankle and lower third of the leg, as I would an ulcer. The first strip came over the outer side of the foot down near the base of the little toe. It was put obliquely so that the next strip should cross this, one end beginning near the heel and terminating under the ball of the great toe. The third strip overlapped the first about one-half and was snugly applied, while the fourth overlapped the second in same direction, and so on until I had completely covered the foot, ankle and lower third of leg. It was, when I had finished, practically a Scultetus bandage. There was thus a firm anklet applied, and over this I put on a cheese-cloth bandage in order to make the plaster adhere a little more closely and prevent the stocking from sticking to edges of the plaster that might turn up. I had her put her stocking and shoe on at once and told her to walk around the room ten laps. She objected strenuously at first, said she could not possibly do it; but after a little urging she took a few steps, then felt reassured, and after she had walked once or twice around, remarked, "See how well I can walk." She continued then, this walking for five or ten minutes, and felt convinced that she was perfectly safe in making future efforts. I directed her then to go down to dinner by the stairway, rather than the elevator (she was stopping at a hotel), and to go out shopping next morning.

November 17.—She has spent the morning shopping and calls at my office in the afternoon on her way to the train. She has had very little pain. Is instructed, now, to leave the adhesive strips on the foot for at least a fortnight, and as they begin to turn up at the edges, to trim them off, and continue using the limb as if she had no sprain. Under my instructions, she wrote me on the 26th, which was as follows: "I think I can give a very favorable account of my sprained ankle since I have been at home. I have taken off three or four strips of the plaster, but have not ventured to take off any more, as I am still a little lame. I have not suffered any sharp pain in the foot, only there is an almost constant dull ache." I did not see the patient any more, but on the 20th of March, 1889, Dr. Webster, who was treating her aunt,

reported to me that the recovery in my case was perfect, and that there had never been any relapse.

COMMENTS.—I continued to treat sprains in this way at my clinic and in the Out-Patient Department of the hospital. Both at clinic and at hospital we kept pretty full notes of cases, but they have not been tabulated. Suffice it to say, that members of my staff and students have been very much impressed with the facility with which patients get about when thus treated, and medical friends who have asked me about sprains and have adopted the plan here advocated, have reported to me almost uniformly the brilliant results they have obtained. I do not recall any adverse opinions.

CASE II.—A lady, 21 years of age, of this city, came under my care December 3, 1890, for a sprain of the right ankle, which had occurred a week previously. She applied cold compresses at the time, bandaged it well and began using it, but the pain had been very distressing, and when I saw her she was quite lame—the ankle presenting a puffiness just below the external malleolus. It was quite important that she have the use of her ankle, as she was preparing for her wedding, a few days later. I strapped her ankle, as in the case preceding, and gave the same instructions. On the 21st of December, a letter from the bride stated that her ankle was quite well again, and that she was to sail for Europe within a day or two.

CASE III.—On the 15th of July, 1891, my friend, Dr. Cypert, had me see with him in consultation a lady 45 years of age. The patient was quite fleshy and had sprained her left ankle nine weeks previously by stepping into a hole, the foot being sharply inverted. She hobbled home as best she could after the accident, suffered that night, but was kept reasonably quiet for two weeks with lotions, fomentations, etc. Then she went about, but after the walking sprained the ankle again, and now, at the time of my visit, there is a puffiness on the outer side, with pain along the gastrocnemius, especially when she puts her heel down. The pain frequently extends up the calf and thigh to the hip. The leg is a little oedematous. I did not treat this case myself, but explained to Dr. Cypert the method and advised him to apply the adhesive strips, although it was now a chronic sprain. I did not see her again, but learned from Dr. Cypert, toward the close of the season, that the patient made a prompt recovery, and that he had treated one or two cases since then with equally good results.

CASE IV.—A lady, 23 years of age, while playing tennis, turned on her foot, felt something snap, was disabled for a time, but soon recovered sufficiently to walk home. This was in Central Park where the accident occurred. She remained quiet the day following, and on the third day—September 4—came to me for treatment. There was puffiness about the external malleolus with tenderness, but no signs of fracture. I had her lie down for a half hour, employed massage from the toes down over the ankle and up the calf, then strapped with adhesive strips as in first case, instructed her to use her foot ordinarily, but not to play tennis for several days.

September 15.—"She walks and plays tennis without any difficulty. On deep pressure over the malleoli, especially the outer one, there is pain. Advised to leave the adhesive strips on one or two weeks longer, then begin to take them off four or five strips at a time, and report to me a week or two after all have been removed."

November 9.—"Plaster is removed to-day. There is no swelling anywhere about the ankle, inner side or outer side. Functions of the joint are perfect. Has complained a good deal at times, but this may be due to the frayed condition of the adhesive strips, all of which are removed this morning, and she is discharged cured." Subsequent reports confirm the permancy of the cure.

CASE V.—A lady, 25 years of age, sprained the perineal tendons of the left ankle by turning on the foot, and there followed a little effusion in the sheath of the tendons. I saw her two days later, April 12, 1892. There was some swelling over the tendon, a good deal of pain, and especially when she used the foot. Inner side of the ankle seemed normal. She was in bed at the time of my visit, and had made up her mind to remain there a week or two. I strapped the parts immediately with adhesive plaster, had her get out of bed and walk about the room. This was in the evening. Next day she dressed and went down stairs.

April 14.—Two days afterwards, I saw her at her dinner. When I called she came into the parlor and walked without any lameness or inconvenience. There was no re-application of plaster. The dressing of the 12th of April remained for a week or ten days, she removed the

plasters herself, and I saw nothing further of the case, but heard later that she made a perfect recovery.

CASE VI.—A lady about 40 years of age, from Kentucky, while visiting in the city last April (1892), sprained her right metatarsus while stepping off a car. She was quite stout, and the sprain was a severe one. She hobbled with difficulty to the hotel, and I saw the case in the afternoon. The whole ankle and foot was swollen. She was suffering acutely. The tibio-tarsal joint seemed to be free of any lesion, but from the base of the little toe back to the cuboid there was a general swelling, painful to pressure, and the skin quite hot. I rubbed the parts for about fifteen or twenty minutes with foot raised on the end of the sofa, then strapped with adhesive strips, over which a cheese-cloth bandage was applied, the shoe and stocking put on immediately thereafter, and she was ordered to walk about the room. She went through the same objections as Case I did, but soon found it was possible for her to walk, and the case progressed as usual. On the 28th of April she was able to walk with very little lameness, but a good deal of pain, however, about the foot and a throbbing sensation. I removed the plasters and applied others. On the 6th of May made note as follows: "She has been about ever since the date of last note; is doing well; has no pain to speak of in foot; a little swelling around the malleoli. The plaster strips are reinforced." I saw her a week or two later and the recovery was complete.

CASE VII.—A physician from St. Louis was passing through the city in June, 1892, on his way to Boston. His wife, who accompanied him, about 30 years of age, was walking in front of the Fifth Avenue Hotel on the afternoon of June 15. She turned quite suddenly as she was crossing the street and sprained the metatarsus of the left side. She felt a sharp pain at the time, but managed to get into a stage and reach the Plaza Hotel with comparative ease. On getting into her room she found the foot much swollen. She went to bed and applied hot fomentations with arnica. When I saw her next day, the 16th of June, the parts were quite sensitive and movements of the foot caused pain. I assured her that she could be up that evening, go down to dinner, and accompany her husband next day to Boston. I strapped the outer half of the foot, not carrying the strips completely around the limb. She walked immediately afterwards. On the 17th the report came that she was quite well. Two or three weeks later, on her return from Boston, I was assured that she had had no trouble and that the recovery was complete.

CASE VIII.—A gentleman, 27 years of age, from Belfast, Ireland, sprained his right foot and ankle in the latter part of March, 1892, while jumping. He struck, as he jumped, the ball of his foot near the insertion of the toes, and the foot was sharply flexed (dorso-flexion). The toes felt as if they were bruised. The top of the foot was painful the same day. He hobbled into a jaunting car and went home, got on a sofa and did not walk for at least a fortnight. The distal end of the foot was swollen a good deal at this time. Local applications were made, and he was put on crutches, the foot being bandaged firmly, and instructed not to use his foot for many weeks. It so happened that he was engaged to be married to a lady near New-York, and he came over to this country on crutches and got married on crutches. I saw him on the 20th of June, 1892, three or four days after the ceremony. Found the right ankle measuring, just above the malleoli 8 1-2, left 8. Over the malleoli, right side 10 1-4, left 10. Right heel and instep 12 3-4, left 13. Instep, right side 9 1-2, left 10. He could flex and extend the toes well, though there was a crackling sensation in the course of the tendons. There was no tenderness along the metatarsus, but at the bottom of the foot, where the plantar fascia is inserted into the os-calcis, there was an area of tenderness about the size of a half crown. I had no hesitation in telling him that he ought to have seen me before the ceremony and that he could have been married without the use of crutches. He was naturally skeptical, but I took the bandages off and applied adhesive strips, including the toes first in the process, strapping each toe separately. The foot and ankle and lower third of the calf came in for the same treatment, and I made him walk about my office without the use of crutches. He left that night on his bridal tour, and on July 1 reported. He was practically well; plaster was removed; no excoriations anywhere; it was difficult to find any points of tenderness. As a matter of precaution the instep was strapped, as he was to sail for Europe in a few days.

September 3, 1892.—I received a letter dated August 15, which reported that he was "entirely well again. In fact, beyond the fact that it is still easily tired, which of course, will pass away with exercise, I may say that I am quite recovered."

The cases just reported, represent a variety of sprains in different classes of people and at varying periods after the original injury. They are taken quite at random from my records, but serve to illustrate the efficacy of the "Modern Treatment of Sprained Ankles."