During the colic the history of stomach trouble, taken in connection with the sudden onset of paroxysmal pain radiating to the scapula and shoulder and the persistence of liver dulness, made a perfect picture of biliary colic.

It seems to me impossible in a similar case to be sure of one's diagnosis before operation, but safety appears to lie in the recognition of the necessity for immediate laparotomy, which fortunately can be early determined, the exact anatomic diagnosis being completed with the abdomen opened.

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A CASE OF TYPHOID SPINE.*

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History.—G. L., aged 56, had on July 14, 1907, what he terms a chill. The following week he did not feel very well, but continued his work, that of a bank teller. On July 24 he was taken to the nearest hospital suffering from a well-defined attack of typhoid fever. Cold sponge baths were given whenever the temperature rose above 102. These were continued for three weeks; then pneumonia developed. The lower lobes of both lungs were involved. Resolution followed in due course and the patient returned to his home three weeks later, having remained in the hospital for six weeks. His general weakness and disability were not more marked at this time than would have been expected. Three weeks after returning home he was able to get about fairly well, but always complained of stiffness in his back. Walking up or down stairs caused pain in the back, which was somewhat general, but more especially referable to the lower left dorsal region. An unsuccessful attempt was made to resume business. The pain gradually grew more severe. Massage and active and passive motion were advised, from which soon resulted an accentuation of the symptoms. Early in November jaundice developed. This quickly responded to treatment and within a week had entirely disappeared. The patient has had no second attack. In December steam baths were given, the after-effect of which was to depress and weaken the patient. The acute exacerbations of pain were now so severe at times that the administration of morphin was necessary. The actual cautery was used with slight temporary relief. Adhesive-plaster strapping was followed with better results, though administration of morphin had still to be resorted to. On Jan. 9, 1908, the case was referred to me by Dr. A. H. Moore of New Rochelle. At this time the symptoms of pain and distress were much accentuated. The slightest movement in bed caused a sharp shooting pain in the back, radiating toward the abdomen. Even the raising of an arm from the bed would cause a painful spasm. The patient also complained of marked tenderness over the costosternal junction of the sixth rib on the right side. Though a well-nourished man and of a naturally phlegmatic temperament, he was extremely nervous, and at times inclined to be hysterical. This was most noticeable when recounting the history of his illness, and especially when describing the pain. He wore a haggard, anxious look, which was not relieved between the painful spasms, but was exaggerated at these times.

Examination.—This showed a small but distinctly marked kyphosis of the seventh dorsal spine. To the left of this, of the size of the palm of the hand, was a hypersensitive area which was exceedingly tender on pressure. On either side of the spinous processes, in the dorsal region, there was marked hypersensitiveness and some swelling; a right dorsal curvature was also present. An enlargement of the sixth rib over the area complained of in front was distinctly palpable. This was quite painful on pressure. Breathing was painful. Knee-

jerk were exaggerated. Temperature was but half a degree above normal and pulse was 110.

Treatment.—It was not advisable to apply a plaster of-Paris jacket because of the severity of the pain the application of the jacket would involve. A plaster-of-Paris bed was made. This included the thighs and extended upward, including the neck and shoulders. It was retained in place by a plaster-of-Paris bandage below and a muslin bandage above over the thorax. This bed was applied on January 11, from which time the patient began to improve. No morphin was afterward administered, and though the patient was very nervous for the following week, there were none of the severe attacks of pain previously noted. On January 28 the patient was allowed to sit up for half an hour. No ill effects followed and he was up every day after this date. After getting up he complained of stiffness in the knees. This was at first quite a distressing symptom, as was also stiffness in the shoulder joints. The latter disappeared; the former was still a subject of complaint at times to a slight extent, especially after the patient had remained seated for some time. On Feb. 6, 1908, the plaster-of-Paris bed was replaced by a plaster-of-Paris spinal brace. This was made six inches wide, extending from the spine of the first dorsal vertebra to the tip of the coccyx, and having a pelvic band of steel and an apron and shoulder straps such as used with the Taylor brace. This was worn day and night for the succeeding two months, being removed but once a day to allow the back to be sponged and powdered. An unsuccessful attempt was made to isolate the typhoid bacillus from the urine and feces, though it was not expected that we should find any at this time.

Later History.—On March 20 the patient returned to his place of business, remaining for one hour. From March 27 he was actively engaged in business. He had no pain whatever, but walked with a slight scoliosis, which he said was noticeable before his present illness, the right shoulder being higher than the left, as he expressed it. There was still some slight tenderness anteriorly over the sixth costosternal articulation. The kyphosis was still perceptible, but much less prominent and distinct. The knee-jerks were slightly accentuated. The general condition was much better than it was previous to the onset of the fever in July. The plaster-of-Paris spinal brace was still being worn during the day.

This case is of particular interest because of the age of the patient and of the severity of his symptoms, in addition to the presence of a kyphosis denoting bone change. It also accentuates the importance of perfect immobilization, as has been so well emphasized by earlier writers.

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APPARATUS FOR CONTINUOUS SALINE ENEMAS IN PERITONITIS.

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Two of the chief factors in reducing the mortality after operations for general peritonitis have been the use of the Fowler position and the continuous rectal administration of salt solution as suggested by Dr. J. B. Murphy. One of the most difficult problems in connection with the use of salt solution per rectum has been to maintain it at a constant temperature. The usual custom is to surround a glass percolator with hot-water bags, which latter must be refilled frequently. I have devised a simple and inexpensive apparatus by which a constant temperature can be maintained either by the use of electricity or of an alcohol lamp or small Bunsen burner, and this has been employed in a number of cases at the Michael Reese Hospital.

It has seemed desirable to construct the apparatus so that either electricity or some other form of heat (gas or alcohol lamp) could be employed. It is designed on

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