

Clinical Department.

TYPHOID SPINE (SPONDYLITIS TYPHOSA ; PERISPONDYLITIS TYPHOSA).¹

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The term typhoid spine was first applied by Gibney to a condition of the spine resembling Potts' disease, which occasionally occurs after typhoid fever, but without the deformity which follows the former. The condition was thought by Gibney to be due to an inflammation of the structures surrounding the vertebrae, that is, a perispondylitis. The cases which he recorded were characterized by excessive pain and stiffness of the back. All save one made a good recovery. In this one slight impairment of the gait persisted.

This complication occurs more often during convalescence, though it may appear at any time between the beginning of convalescence and three months later, but some cases have been observed late in the fastigium at the time of the morning drop of the temperature. The patient complains of pain in the lumbar or sacral regions, perhaps after a slight blow or shock or jar, or independently of such injury. The chief symptoms are stiffness of the back, pain on movement and tenderness on pressure, the latter symptom being the least constant. In addition there are certain nervous manifestations, sometimes even hysterical. The physical examination aside from the tenderness mentioned reveals nothing. Fever is not usually present unless there be other complications. The prognosis is favorable, complete recovery following in most cases, though deformity (kyphosis) has been observed.

The disease, according to Gibney, Osler, Kühn² and Taylor,³ is a spondylitis or a perispondylitis, though Osler considers that in most cases the condition is a neurosis. No post-mortem examination of the condition is on record so far as I know. The other lesions of bone which are recorded in the course of typhoid fever are periostitis and osteomyelitis, and the bacillus of Eberth has been discovered to be the source of the trouble in a large number of these cases. The staphylococcus pyogenes aureus has, however, been isolated as well in one case mentioned by Parsons.⁴

The treatment consists of rest in bed on the back and the application of a plaster or leather jacket to give support.

This case is reported because of its rarity and to secure a permanent place in the literature.

Henry Bohaker, age thirty-two, single; born in Nova Scotia, living in Manchester, Mass.; gardener. Entered the hospital Nov. 24, 1900, with a diagnosis of typhoid fever.

History as follows: Measles as a child; subject to headaches; otherwise always well. Constipa-

ted; appetite habitually good; denies venereal; no accidents.

Present illness.—Three weeks ago, that is, about Nov. 1, commenced to have sharp pains up and down back, groins and legs. Grew weak gradually; took to bed on 21st. No nose bleed or diarrhea; no vomiting; chilly at times. For a week has felt feverish, and worse in the last three days. Headache has persisted for three weeks. Slight cough, as he says, to clear out throat. Raises very little mucus; no palpitation. Moderate soreness in the abdomen a week ago; no swelling anywhere; sleeps poorly; passes normal amount of urine; bowels moved this morning; appetite poor.

Physical examination.—Well developed and nourished. Face flushed; apathetic; pupils equal and react; tongue dry and thickly coated. Prominent papillae; teeth in excellent condition; throat clear. Chest shows no abnormal differences in expansion, fremitus, voice or respiration. Heart apex in fifth space, one-half inch inside nipple line. No enlargement to right; action regular, good force; soft systolic murmur at apex and transmitted to pulmonic area. Aortic and pulmonic second sounds equal. Pulse regular, good volume, soft, slightly dicrotic; artery not thickened. Abdomen full, soft, tympanitic, not tender. Few scars in the region of umbilicus from electric belt. Liver from fifth space to costal margin. Spleen not palpable; no rose spots; skin hot and dry; no edema, no increased glands; reflexes present, mastoids not tender. Whites, 5,000; hemoglobin, 65%; Widal negative.

Liquid enteric diet; lemon, glycerin and borax mouth wash; Doebel's spray every four hours. Baths as per schedule if temperature is 102.5° or more.

Nov. 25: Temperature remained steadily high with small drops with baths. Spleen not felt. Urine high, acid; specific gravity 1,025; large trace of albumin; chlorides diminished; sugar none; diazo present, bile none. Slight sediment, consists of a very few hyaline and fine granular casts, with few to many renal cells adherent. Occasionally normal blood, and small round squamous cells and leucocytes. 26th: Continues about the same. Whites, 6,000. Shivers considerably after bath. 27th: Considerable distension accompanied by pain above the pubes. An enema with turpentine and glycerin and rectal tube gave relief and three good results. Whites, 6,000. During evening patient vomited several curds of milk. Received albumin water only during night. 28th: Much distended; icebag to abdomen; omit nourishment. 29th: Still distended. 30th: Distended, face flushed and apathetic; icebag.

Dec. 1: Distended most of time. 2d: Abdomen slightly softer. 3d: Required catheterization at 1.30 A.M. and 11 A.M. Urine normal, acid; specific gravity, 1,018; very slight trace of albumin; chlorides diminished; slight sediment, rare hyaline cast, no blood; occasional round squamous cell and leucocyte. Incontinence of feces from the 5th to the 10th; pulse 120. On the 10th

¹ Read before the Clinical Section of the Suffolk District Medical Society April 16, 1903.

² Münch. Med. Woch., June 4, 1901.

³ Philadelphia Medical Journal, Dec. 28, 1901.

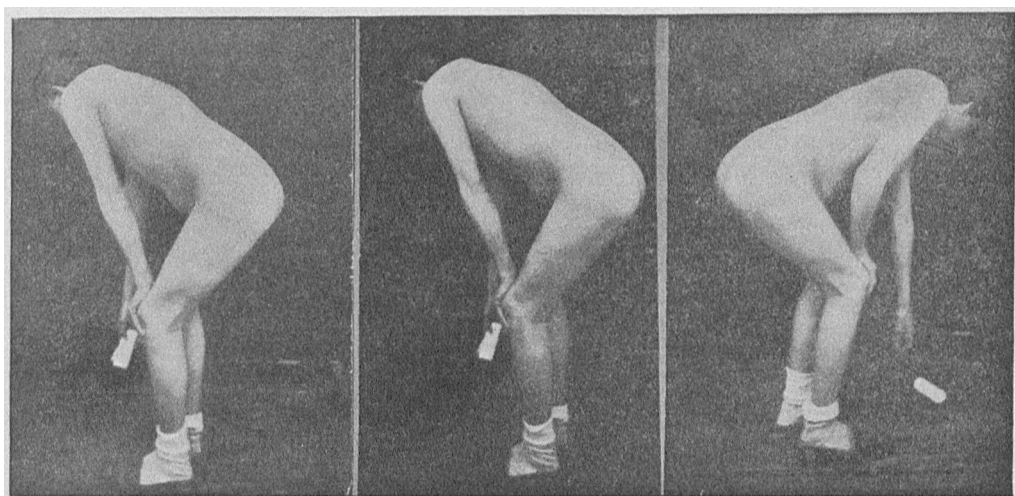
⁴ Johns Hopkins Hospital Reports, Studies in Typhoid Fever.

required strychnia on account of poor pulse, $\frac{1}{10}$ gr. every six hours. 17th: Stools streaked with dark blood. 19th: Some blood in the stool. 20th: Five bloody stools in twenty-four hours; pulse and temperature remain unaffected. 23d: Very delirious; pulse very poor, dicrotic. 26th: Marked delirium. 27th: Pad soaked with blood. 28th: There were two more hemorrhages. 31st: Fissure of the anus discovered which discharges pus freely.

Jan. 1: Urine normal, acid; specific gravity, 1,015; slight trace of albumin; chlorides diminished; slight sediment, consisting of a rare hyaline cast, no blood, few small and medium round occasionally pyriform cells, small squamous cells and leucocytes. 2d: Incontinence and retention continue. 12th: Condition better; passes urine voluntarily. 18th: Pain in ears; temperature normal. 19th: Right ear opened, large serous discharge. Back shows much tendency to hurt. (Apparently bed sore was a disturbing feature.)

since his discharge, so that he can hardly stoop forward. Can walk slowly without much trouble, but has a dull ache in the left iliac bone and lower lumbar region, on sitting down or standing still. Has to lie flat on his back for an hour or two after going to bed, because of pain in the bones. Similar but less severe trouble with right side. Kept about for ten days after discharge; then in bed for two weeks. Pain at this period was in the right side and so severe that sitting up was impossible. After this, pain shifted to the left, where it has been ever since. Slight cough for two weeks. Slight dyspnea. The jar of any sudden movement, such as stooping or going down stairs, causes much discomfort in lumbar regions. To raise from stooping, has to aid himself by his hands on his knees and thighs (see figures). No chills or fever. Steady gain in weight. Bowels moved today.

Physical examination.—Cheeks full and brown, considerable subcutaneous fat. Abdomen promi-



21st: Temperature up, ear much quieter; whites, 18,000. 23d: Whites, 11,400; much brighter. 27th: Ear discharges but little.

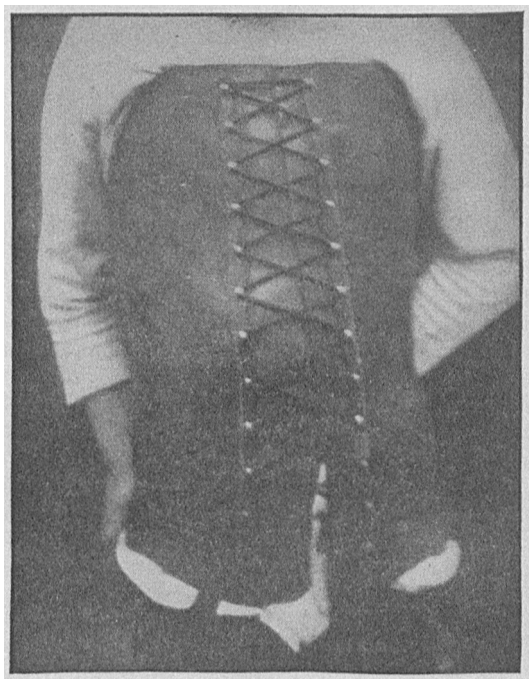
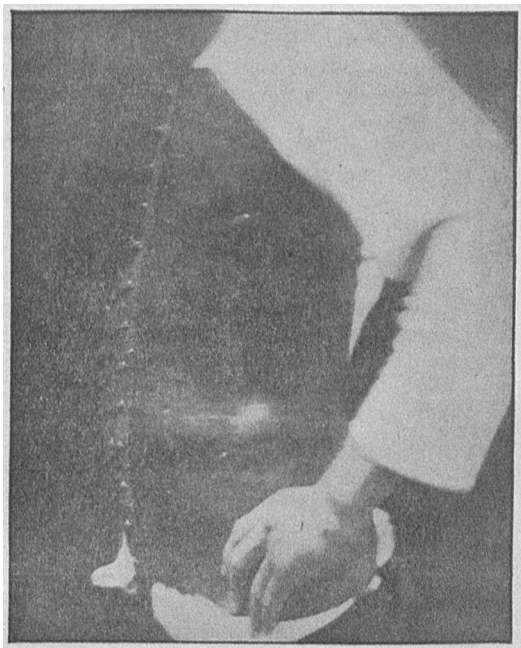
Feb. 5: Drum punctured and the patient improved up to the 16th, when patient complained of hunger, and urine was in the following condition: Specific gravity, 1,012; acid, pale, no albumin, diminution of chlorides, urates 26 gm.; sugar, bile and diazo none; no sediment; occasional squamous cell and leucocyte. 24th: Ear still discharging slightly. Was referred to Out-Patient Department for treatment of his back, which was nearly well, and to the Eye and Ear Infirmary for ear. Discharged well.

May 22, 1901: Patient at the hospital was diagnosed to have had typhoid fever from Nov. 24 to Feb. 24. When discharged he had a slight raised red fluctuating mass over the left sacro-iliac spondylosis, without tenderness (furunculus). The temperature was normal for twenty-four days after the drop while in the hospital. The lumbar part of the back has felt weak ever

since. Left pupil slightly larger than right. Scars of turpentine stipes on the abdomen, applied during typhoid. Heart and lungs negative; liver fifth rib to costal margin; spleen undetermined. Abdomen generally tympanitic, not tender, no masses. Rises to sitting position with some difficulty; props himself up with hands. On leaning forward from upright position the whole spine moves as one piece, and patient points to the lumbar region as the seat of pain. Slight prominence of third, fourth and fifth lumbar and upper sacral vertebrae; no tenderness. With patient lying on abdomen, limitation of lumbar flexibility backward, with slight muscular spasm. Rectal examination negative; reflexes normal; blood: whites, 9,200, hemoglobin, 90%; Widal, instantaneous; extra diet; slept well, no change. Urine: Pale, acid, specific gravity, 1,012; albumin, slightest possible trace; chlorides normal; sugar, bile, diazo, negative; urea, 1.47%. Slight flocculent sediment; no casts, no blood, few squamous cells and leucocytes.

Diagnosis of typhoid periostitis of the spine was confirmed by Dr. J. E. Goldthwait, who advised fixation and observation. A radiograph showed on careful study no difference from that taken in a healthy subject.

May 25: Some pain, with movements in lower back and above iliac crests. 28th: Patient com-



plaints of pain in back, lumbar region, through the groins and lower abdomen, promoted by turning from side to side; not present when quiet.

June 2: Plaster applied for cast of spine; removed and sent to harness maker's. 12th: No

improvement. Occasionally waked from sleep by pain from turning in bed, which persists frequently for hours. 13th: Leather jacket fitted (see figures). 15th: Great relief of pain with jacket; patient can move about much more freely; stoops forward with greater freedom. To report. Discharged much relieved.

July 3: Reports that for first week after discharge felt about the same, with pain in the left lumbar region on movement and dull ache in the left groin. For the past week much better. No pain while lying down. Slight dull ache while walking about. Walked two miles this morning without more than slight discomfort.

A letter received from the patient is as follows:

August 10, 1901.

DEAR SIR: In reply to your note of the 9th, would say, for the first week after leaving the hospital I could not see any improvement whatever; after a week or so I could see a gain every day, less pain each day until it was all gone. I have had no pain in back for about three weeks or so. Yes, I am better than when I was at the hospital July 3. I was there on the 29th. Dr. Lord examined my back. He advised me to take the jacket off for a while every day. I have done so. I can get around very well without it, but the back is stiff and lame without the jacket. There is a dull ache in the groins, which runs down in the private parts, sometimes in both sides; most, when walking or standing. The parts sweat very much. If you could recommend anything for this I would be very thankful. I remain,

Yours very truly,

HENRY O. BOHAKER.

In a letter just received the patient gives his present condition:

April 22, 1902.

DEAR SIR: In reply to your note would say my condition is about the same as when I saw you last September. My general health is good; appetite good. My back seems to be all right except when stooping at work. The muscles of the back seem lame and stiff at times, and there is a slight pain down the groin, more so after hard work. I weigh about 150 pounds, 20 pounds more than I did before I was sick.

ANALYSIS OF TWENTY-SIX CASES OF TYPHOID SPINE.*

BY FREDERICK T. LORD, M.D., BOSTON.

FROM 1889 to Jan. 1, 1902, twenty-six cases of typhoid spine have been reported in the literature. An analysis of these has been made in the hope that, in the survey of a number of cases, some general data may be obtained. Of the reported cases twenty-two of the twenty-six were in males.

To no especial factor, other than typhoid, can the occurrence of the spinal symptoms be ascribed. As a precipitating cause, however, mechanical strain is mentioned in six. Of these, two followed a fall,^{2 3} two the reassumption of blacksmithing,^{13 15} one stair climbing¹⁴ and one twisting the spine while sawing.²² The time of onset, as indicated by pain which was constantly the initial symptom,

* Read before the Clinical Section of the Suffolk District Medical Society April 16, 1902.