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THE VALUE OF MECHANICAL TREATMENT IN
OLD AND NEGLECTED CASES OF
POTT'S DISEASE.

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OF NEW YORK.

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**THE VALUE OF MECHANICAL TREATMENT IN
OLD AND NEGLECTED CASES OF
POTT'S DISEASE.¹**

BY HENRY LING TAYLOR, M.D.,
OF NEW YORK.

ONE of the most active and eminent operative surgeons of New York said to the writer, not long ago, that he got but little bone-surgery to do, because orthopedic work was so successful. Not the least important service that the pioneers in orthopedy have rendered to the profession and to the public is the diffusion of the knowledge of the relative curability of most crippling affections; and, as a matter of fact, the adult cripple in our large cities is now much less conspicuous than formerly. There is a class of sufferers, however, still unfortunately numerous, and for whom professional advice is often sought, namely, the class of kyphotics, in whom the inflammatory process has dragged out its tedious course through years of suffering and increasing deformity, and who, on account of inadequate treatment or too little persistence, have found no relief. The results of neglected and unsuccessfully-treated Pott's disease are so serious, and in

¹ Read before the American Orthopedic Association, Washington, September 23, 1891.



FIG. 1.

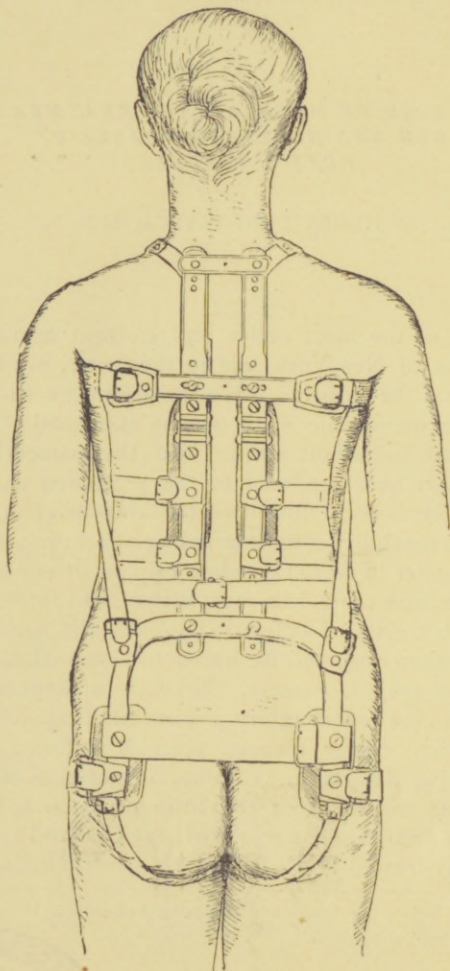


FIG. 2.

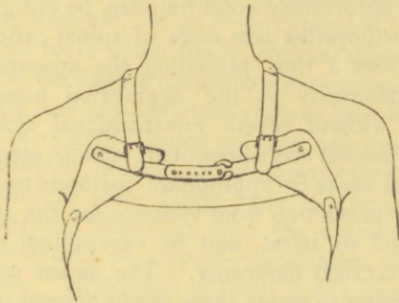
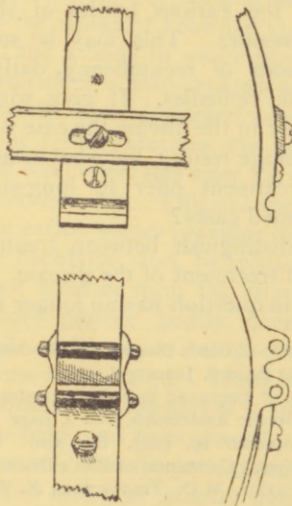


FIG. 3.



many respects so irremediable, that it seems desirable to ascertain under what circumstances and how far their unfortunate condition can be mitigated.

The orthopedist sees cases of spinal caries in all stages, from a time preceding the appearance of spinal deformity to the aggravated hunchback, with or without severe constitutional symptoms, and in whatever stage presented, modern mechanical treatment seeks by appropriate methods to procure rest and protection from violence for the inflamed spine, and to arrest, and in exceptional cases to rectify, accrued deformity.¹ The means employed by the writer to secure these results depend upon the principle of antero-posterior leverage, so applied to the spine by means of a specially-adapted apparatus² as to relieve the carious bodies of the vertebrae of harmful pressure. This may be supplemented by short periods of recumbency, daily rests, and other hygienic remedies. It goes without saying that, the earlier in the disease the case is treated, the better the average result; but what measure of relief does such treatment offer to long-standing and greatly deformed cases?

We must distinguish between treatment of the deformity and treatment of the disease.

If the case in question has no longer any constitu-

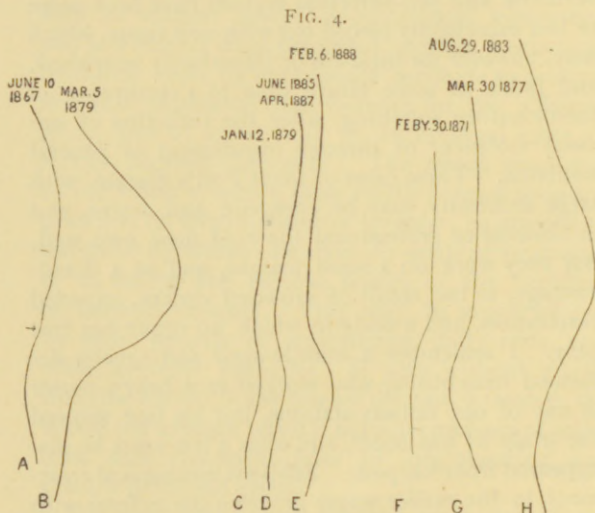
¹ See "The Cure of Pott's Disease with Recession of the Deformity," *Medical Record*, January 8, 1887.

² "Description of Improved Spinal Apparatus," *Transactions American Orthopedic Association*, vol. i, page 15, and *Medical Record*, November 19, 1887. See also "The Mechanical Treatment of Angular Curvature, or Pott's Disease of the Spine," by C. Fayette Taylor, M.D., *Transactions N. Y. State Medical Society*, 1863, etc.

tional symptoms, no symmetrical, lateral, or ventral pains, no reflex rigidity of the spinal muscles, and no sharp knuckle, but an evenly rounded boss; and if he can move about freely, without distress or exhaustion, the disease has probably spent itself, and the vertebræ and peri-vertebral regions have been more or less successfully pieced out with new tissue, which may, however, be inelastic or imperfectly nourished, and liable at some future time to a recurrence of inflammatory softening, after the infliction of unusual violence, or through impairment of general nutrition. These cases of spent Pott's disease, with large deformity, may be energetic and active, and in business or professional life hold their own well, but they work on a small margin, and at a disadvantage, as the result of crowded viscera, impeded respiration, and a body in which no organ has free play. I remember a middle-aged and cruelly deformed hunchback, who worked as a heavy porter at one of our railway stations, but his face showed the strain he was under, and after a few years he disappeared from his post. Efficient mechanical treatment in the earlier stages provides the sufferer with a substitute backbone, and, by relieving the organism in a great measure from the strain it is under, favors a more perfect bodily development and growth, while deformity is being checked and the healing process inaugurated. Many cases, however, run their course, or a large part of it, without pain, or with so little pain, and so noteworthy an absence of striking symptoms, that the patient and his guardians are often lulled into false security when help is most needed; and at certain stages the surgeon himself

may be at a loss to decide positively as to the presence or absence of disease.

I show the tracing from the back of a boy who came in 1867, at nine years of age, with beginning spondylitis (Fig. 4, A), but who declined treat-



ment, and reported twelve years later with a severe hunchback (B), and a freely discharging sinus. He was led by the mildness of his symptoms to indulge in athletic exercises, such as riding and fencing, to within four years of his second visit.

A boy of fourteen, from Chile, S. A., with a large kyphosis of the mid-dorsal region, who consulted me a year ago, came wearing a plaster-jacket. His disease began at four; at eight he was apparently well;

but, after violent exercise, symptoms recurred, followed by a paraplegia lasting six months. This patient was kept recumbent for five years, and had recovered perfectly from his paralysis. In spite of his deformity and his desire for support, as evidenced by the jacket, he had lately been in the habit of playing cricket.

A delicate boy, with disease of the lumbar region, who had done well, and whose deformity had been controlled (C D) for eight years by mechanical treatment, was free from symptoms, but after a six months' trip to Europe, taken without my approval, his deformity increased considerably (E), and there were symptoms of vertebral softening. It has taken several years to regain the ground lost; indeed, there is more irreparable damage.

The following case may illustrate the liability of deformity to increase from lack of spinal rigidity after all disease may reasonably be supposed to be absent:

The patient, a girl, came in 1871, at the age of three years, with a sharp knuckle in the upper lumbar region, as shown in the pattern (F). After nearly six years of mechanical support, during which an abscess appeared and healed, her deformity was rounded and less prominent (G), and she was in good health, and free from symptoms. She was considered free from disease, but continuance of support was advised, lest there should be further increase of deformity from slow yielding of recently healed tissues. This advice was declined, and the apparatus discarded. Six years later, when thir-

teen, she reported with a large increase of rounded projection (H), but in good health, and with no recurrence of symptoms.

Cases that have been allowed to run along without adequate treatment often fail to heal completely, and are especially liable to exacerbations and relapses.

A gentleman of fifty, who was attacked with disease in the dorsal region at nine, came to me last year still wearing a corset. At thirty-nine he was completely paraplegic for four months, but recovered, and presented at his visit to me no positive evidence of disease. He had never had an abscess, but his deformity was of the extremest grade, and he appeared to be about four feet three inches tall.

A gentleman of forty was seen in 1883. His disease was in the dorsal region, and began at the age of five. He had been kept recumbent for two years, and had afterward had imperfect mechanical treatment. At about twenty he had had three attacks of paraplegia, and since then he had had reflex twitching of the legs, and from time to time attacks of pain. Deformity was very severe, with the apex of the projection in the lower dorsal region. After thirty-five years, disease was undoubtedly still present.

A gentleman, about thirty, who came to me a few years ago with extreme deformity, had had his disease from childhood, but was free from symptoms for many years, until he was injured in a cyclone three years previously. He was an exceptionally energetic and active man, but had been

obliged, by the severity of his symptoms, to give up everything. Careful mechanical treatment caused the disappearance of all symptoms, and his deformity did not increase during five or six years. After leaving off support, however, he injured himself again, and in a short time symptoms of softening recurred, and the deformity increased considerably.

Many of these relapsed cases, and those that have been affected for years by a spondylitis of low grade with gradually increasing deformity, respond kindly to treatment, and may be restored to health and activity.

Some of the cases cited would seem to suggest that a complete bony ankylosis after Pott's disease is much later, rarer, and more circumscribed than has usually been assumed to be the case.¹

If one will take the pains to make a series of lead tracings of the kyphosis in a number of so-called "ankylosed" cases, from time to time, repeating the observations on the same cases under different conditions, this statement will not seem too strong. This is also well shown in patterns taken before and after suspension in these badly deformed cases. Changes in the contour are observed that can hardly be wholly explained by compensation in the unaffected portions of the spine. Such cases can often add an inch or two to their height by a voluntary attempt to straighten. In many of the early cases, cured with little or no deformity, motion in the diseased areas can also be demonstrated. This explains the

¹ Vide "Cure of Pott's Disease, with Recession," etc.

necessity of prolonged treatment after subsidence of symptoms, and the slow yielding of the newly healed spine, which often occurs even without recurrence of rational symptoms, when support is inefficient or too soon discontinued; also, the liability to relapse from accident or other causes after long periods of immunity. It explains, too, the benefit to be obtained in certain cases from mechanically relieving the patient of the effort of self-support, even when there is little or no sign of disease. The patient's column is out of balance, and has to be supported with great effort by the patient's debilitated muscles in their disturbed relations.

In cases of Pott's disease of long standing and great deformity, whether in children or adults, the indications for carefully adapted and long-continued mechanical support to the spine are as clear and often as urgent as in recent cases, and such treatment is usually followed by gratifying and sometimes by brilliant results. Even when it is too late to improve the deformity the patient may often be restored to health and usefulness, and when no symptoms of disease are present a moderate improvement in the figure and carriage may occasionally be attained. No patient should be denied an opportunity for relief on account of age, severity of the symptoms, or the long duration of his disease.

Mr. Noble Smith, speaking of the lateral curvature, is reported to have said recently:¹ "The

¹ Last meeting of the British Medical Association.

surgeon should keep the mechanical treatment in his own hands, just as much as he would that of a broken limb." In Pott's disease, at least, he should also continue to control the case until the patient is sound and the spine is self-supporting.

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