PROVINCIAL MEDICAL & SURGICAL JOURNAL.

CASES ILLUSTRATIVE OF THE BENEFICIAL RESULTS WHICH MAY BE OBTAINED BY CLOSE ATTENTION AND PERSEVERANCE IN SPINAL DEFORMITY.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND
SURGICAL JOURNAL.

SIR,

I have pleasure in forwarding, for insertion in your valuable Journal, details of the following cases of spinal disease. The first is a case of caries of the dorsal vertebræ, to such an extent, that the patient when first seen, with difficulty dragged himself upon his crutches, his chin resting upon the sternum, which had become much hollowed by the constant pressure; the occiput also rested upon the projecting spine, and each side of his head upon his shoulders: the second, an instance of the most extreme spinal curvature and general deformity from rickets, which has occurred to me in the course of my practice. An outline of the former of these cases, for the first eight months that it was under treatment, is inserted in the second edition of my work, on Diseases of the Spine; but the conclusion of the case being so exceedingly satisfactory, I have thought it desirable to give it publicity in the pages of your Journal.

I am, Sir,

Yours respectfully,

S. HARE.

9, Langham Place, London,
June 20, 1844.

W. F., was born in December, 1832. When an infant, although he was not stout, he was yet a fine child, and his flesh was firm; he had the whooping cough while at the breast, and was subsequently exceedingly ill from enlargement and hardness of the abdomen. In June, 1834, his nurse slipped and let him fall, in consequence of which he suffered so much that it was not thought he could recover; he did, however, so far improve, that it was hoped no further ill effects would follow. In the month of September, 1835, he had the measles; in the spring of the following year, a projection of some of the dorsal vertebræ, with an altered form of his chest, was observed, in consequence of the child walking in a singular manner,

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holding his head backwards, and having his shoulders much raised. Medical assistance was immediately procured, but the disease progressed rapidly, the spine and sternum becoming more and more prominent, which they have continued to do to the present time. In the course of the summer, he lost the use of his lower extremities, and, for ten months, had not any sensation in them, even when they were pinched, intentionally; the spasmodic contractions in them during the nights were most severe, his limbs being forcibly drawn up to his body. As the disease advanced, his head, which was at first thrown backwards, fell upon his chest, as he was not able to support the weight of it without some assistance; his strength entirely left him, and his emaciation was, and has been since, extreme. His whole trunk was now exceedingly deformed, being much diminished in length; his chest was greatly contracted, his cough very troublesome, and his breathing most distressing, especially when asleep. He had the greatest difficulty in turning himself in bed; if he did so, he would be ten minutes or more, before he would recover from the effects of the exertion; his complexion, at these times, was quite livid. From this period, 1837, he was confined altogether to his bed or a chair, until 1842, when he somewhat recovered the use of his limbs, so as to be able to walk a few yards with the assistance of crutches, but his debility was such, that it was painful to see him drag his limbs after him, and his difficulty in breathing was so great as to prevent him walking more than a few paces; but no symptom caused him so much suffering as his difficulty in micturition, being often twenty minutes or more in excruciating pain, without being able to relieve himself in that respect; the secretion from the kidneys was dark in colour, and exceedingly strong in odour.

June 27, 1843. At present the patient is suffering extremely; his cough is very troublesome, but he has no expectoration; his breathing is extremely difficult, being short, frequent, and altogether diaphragmatic, at times producing great lividity of the face; he is troubled with headach; his sleep is short, much disturbed, and apparently accompanied with increased difficulty of respiration; his complexion is sallow and unhealthy, his skin hot and dry; he complains of general and

great lassitude and debility, rendering him unwilling, if he had the power, to exert himself, while he is so feeble, that he is not able to lift even a trifling weight. His emaciation is extreme, his limbs are wasted to the bone, his cheeks are hollow, and his countenance expressive of suffering. The spine is exceedingly distorted, presenting a remarkable example of angular projection, including all the dorsal vertebræ, excepting the first and last, the most prominent ones being the fourth and fifth; there is considerable soreness on pressure in the course of the diseased vertebræ. The sternum projects forwards excessively, the ribs are much flattened externally, and project forwards and downwards, so that the extremities of the lower ones fall quite within the brim of the pelvis. The shoulders are so high that, on a lateral view, they almost prevent the ears from being seen, and the head is embedded, as it were, in a hollow formed by them; while, by the constant pressure of the chin on the sternum, the upper part of this bone has become very much depressed.

September 27. The patient has now been three months under treatment, having been placed on an inclined plane and had gentle extensions by means of regulated weights, with pressure on the prominent part of the sternum; the state of his general health has also been attended to by correcting and improving his digestive organs. The symptoms already enumerated are all much improved; his breathing is less difficult and his sleep more composed; his shoulders which were as high as his ears are much lower and he feels, that when he has occasion to rise for necessary purposes, he has strength for it; he has increased in height two inches.

December 27. A cast has this day been taken of the patient, and certainly nothing but a comparison of this bust with the one taken when he first came under my care can give an adequate idea of the improvement which had taken place. His general health is much better; his breathing, which was, to use his mother's expression "awful," is now quite easy; he has nearly lost his cough, is much less subject to colds; he sleeps well all night and his spirits are excellent.

February 29, 1844. All his symptoms continue favourable; his strength has increased so much that he can walk across the room with perfect ease, and is quite erect, although some protuberance of the spine still remains; notwithstanding the development of his body generally, his chest has diminished an inch and three-eighths in its antero-posterior diameter, having increased proportionably in its transverse diameter; he has grown since September last, nearly two inches.

June 20. On this day week he will have been under my care twelve months, when the particular treatment of the case will be discontinued, as he can now run about with activity, and is in every respect better.

This great change has been effected, I am happy

to say, without subjecting him to a single hour's pain during the whole time he has been under treatment.

The following are the particulars of the second case:—

C. O., aged twenty-three years, was born a fine child in November, 1820. When five weeks old she had a severe inflammation of the lungs, from which she was not expected to recover; this attack left her exceedingly weak. In April, 1823, she had a fall by which her clavicle was fractured; she now became very ill, having a severe bowel complaint by which she was confined to her bed,—was very much emaciated, and, subsequently, unable to walk for upwards of three months. This illness was followed by the measles, after which she had a long confinement, attended with eruptions on the face and head, the exact nature of which it is now difficult to determine. She afterwards improved somewhat, but has never been entirely free from pain in her limbs, and indeed throughout the whole body since. In 1826, so much deformity had taken place in her back and limbs, that she had jointed iron supports made, which passed round the abdomen and down to each foot; she wore them from nine to twelve months, but was obliged to give up their use.

About this time she had a fall upon her knee, which was much hurt, and soon after another, by which her thigh was fractured; she again suffered a long confinement, and was subsequently obliged to use crutches for nearly twelve months, being weak throughout her whole frame, but especially in her limbs. In 1832, she had again the misfortune to have a fall, by which her left leg was so much injured, that she has not been able to put it to the ground since, being obliged to be wheeled about in a carriage made for the purpose. Since the autumn of 1835, she has not been out of the house; such indeed, have been her sufferings, that since June, 1837, she has only been once (in November, 1842) off the crib on which she now lies, and although the removal was effected with the greatest care, she was three or four days before she recovered from the pain which it occasioned. She is never able to lie down *entirely*, but has four or five pillows, generally the latter number, and cannot rest without them. Her sufferings are, and have been chiefly in the chest and abdomen, though her back and limbs have been nearly as bad; the pains and distress are almost unceasing, so that she has rarely any respite even for an hour. In January, 1842, she had the influenza, and was very ill for three weeks or a month, and had an almost constant cough for six weeks, with pain in the chest, and an increase of nearly all her symptoms, and was many months before she regained even her usual strength.

May 1, 1844. The patient this day came under my care. The distortion of her spine to the left is of extreme extent; the ribs, especially the carti-

luginous portion of them, on the same side, and the whole abdomen, project excessively, and so much is the body twisted, that the left nipple is directly underneath the anterior border of the axilla on that side, while the umbilicus is in a perpendicular line with these two parts, so that it is displaced fully four and a half inches to the left; the ribs of the right side, in curving over to the opposite side, form a deep fossa above the right hip, where the folds of the integuments, from being in constant contact, and from the frequent friction which takes place between them, are often inflamed, and give rise to almost constant soreness. The right hip projects extremely, and above it there is very considerable incurvation of the spine. The bones, both of the arms and fore-arms, are distorted, and both thighs have an anterior curve; the tibia and fibula of the left leg are also much curved in the same direction, and rather outwards, so that the sole of the foot is somewhat bent inwards. This, however, is much more the case with the right side, for, at about two inches above the ankle, the bones of the leg are suddenly distorted inwards at so acute an angle, that the sole of this foot looks inwards and upwards towards the left shoulder, and she can see it as she reclines on her crib.

The patient suffers from very severe attacks of spinal irritation, giving rise to extreme pain in various parts of the chest, abdomen, and head, with corresponding tenderness along the course of the spinal column, and she has frequent attacks of hysteria. The tongue is white and furred, appetite very bad, thirst considerable, bowels irregular, sometimes not being moved for four or six days.

She was now removed from the crib, which had been, for seven years, her chair by day and her bed at night, and placed upon an inclined plane, and in a few days gentle extension was made by means of slight weights attached to the feet, axillæ, and head, the use of which was at first limited to an hour or two per diem, but which have since been increased both in weight and in the periods during which they have been used; besides which, frictions, compresses, and other means, were adapted and applied to the most projecting parts, and in addition to these, close attention has been paid to her general health, and the state of her digestive organs. Gentle purgatives, together with tonics and slight stimulants, (quinine, with tincture of cardamoms, camphor, and sulphuric æther,) have with this view been administered. Great pains were also taken to promote the expansion of the chest.

June 8. Under this plan the most satisfactory improvement has been, and is taking place. Her health is better, her appetite improved; the functions of the stomach and bowels are more efficiently performed, the spinal irritation and consequent pains in the chest and abdomen extraordinarily diminished, and of the hysterical attacks, from which she so frequently suffered, she has had but one single return. Such was the deformity of her chest,

and the state of her lungs, that, on the first of May, on taking a deep inspiration, she was able to expire only 25 cubic inches of air, while such has been the increase in the capacity of the chest, she is this day able to expire rather more than 50. This is ascertained by means of a glass vessel, marked with cubic inches, from 10 to 200; this is filled with water, and inverted in a pneumatic trough; the patient then fills his or her chest, and breathes through a glass tube into the meter; the quantity of water displaced showing, of course, the capacity of the lungs.

June 20. The form of the chest, &c., of the patient, continuing so obviously to improve, I have this day a third time ascertained its capacity in the way above-mentioned, and am glad to say that there is again an increase of 20 cubic inches over the number last named, as she is now able to expire rather more than 70.

There is much less projection of the chest and abdomen to the left, the umbilicus being within two inches of the median line, and the left nipple has resumed more of its natural position, besides which, the breasts are commencing to be slightly developed, they having before been as flat as in a girl of ten years of age. The deformity of the left tibia and fibula is diminished; and, as regards the angle in the right, which before was so acute that the little finger could not be placed in it, there is now a space of at least three-quarters of an inch.

The following measurements will give an accurate idea of the relative proportions of the different parts of the body, as regards the length on the right side. The first row of figures exhibits the state she was in on the 1st of May; the second, that on the 20th of June.

	May 1. Inches.	June 20. Inches.
From the vertex to the clavicle	9	9½
——— cavicle to the hip	6	8½
——— *hip to the knee	8	11
——— knee to bend in the leg	7	7
——— bend to the heel	6	5
	36	41

From the above table it will be seen that the body, from the knee upwards, has increased six inches, while the convex angle, formed by the bend in the right leg, has diminished one inch, consequently the increase in the entire length of the patient, since the first of May, is five inches.

It is satisfactory to be able to state that I have not the least hesitation in believing that she will continue to improve; and I shall have pleasure, at some future period, in transmitting an account of the further progress she may make.

* The distortion about the pelvis is so great, that it cannot be said to add to her length at all.