HISTORY OF THE CASE
OF
A MAN
WHOSE
SPINE WAS FRACTURED.
WITH
THE DISSECTION.

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CASE.

A MAN twenty-eight years of age, whilst wheeling a barrow filled with gravel, was knocked down by the sudden falling of a tree, which some men were hewing; it struck him on the back, and fractured his spine. He was immediately conveyed to Writtle workhouse, where I visited him soon after his admission, being the surgeon of the establishment.

I found him quite insensible, and he appeared almost lifeless. On examining the course of the spine I discovered an angular projection in the situation of the last dorsal and first lumbar vertebræ.

In a short time his powers rallied, but he was still faint and his legs were completely paralysed ; a small quantity of brandy and water was given.

It seemed evident that the fractured parts were compressing the medulla spinalis, which induced me to attempt to place them in a more favourable position, by employing gradual extension. This was performed by persons pulling at the superior and inferior extremities, which had the desired effect ; for the angular projection was greatly lessened, and the patient did not seem to experience any pain during the extension.

He was placed horizontally on a firm mattress.

The day after the accident he complained of much pain, and of a burning sensation in the situation of the injured part. Leeches were applied, and afterwards an evaporating lotion with opium, which afforded great relief. The bowels and vesica not having been relieved from the time of his admission into the work-house, the urine was drawn off, and a brisk purgative given.

What appeared very singular in this case was, the absence of febrile action, and of the symptoms denoting inflammation of the theca vertebralis ; yet the lower part of the body was paralysed, and deprived of sensation. The urine was drawn off twice a day ;

his bowels were obstinately costive, and required active purgatives, such as croton oil, to relieve them.

In this miserable state he continued about eight months, when sensation began to appear in his thighs and legs, and with the assistance of a rope fixed to the upper part of the bedstead he managed to raise himself in the half-bent position without exciting the least sensation of pain in the spine.

Hopes were at this time entertained that the case would terminate favourably, notwithstanding the serious injury which the spine had sustained.

Although the sense of feeling in his inferior extremities improved, there still continued a want of power in the abdominal muscles and bladder. There was great difficulty in keeping his bowels open; but he would relieve the bladder by pressing with his hands firmly on the hypogastric region.

After twelve months' confinement in bed, he was able to bear the fatigue of being carried down stairs, and of being drawn about in a chair in the open air.

A few months from this period, he was attacked with a violent cold accompanied by fever, and was again confined to his bed; the integuments covering the left heel became inflamed, and sphacelation commenced. The febrile symptoms however subsided,

and the integumental parts which had been destroyed by sloughing, were gradually repaired.

But although he recovered from this attack, his health began to decline, pus was voided with the urine, his bodily powers gradually diminished, and the integuments covering the sacrum became gangrenous, although great care had been taken to prevent such an occurrence.

For fifteen days previous to his death he had suffered from incessant vomiting, and his stomach scarcely retained sufficient nutriment to support life.

Dissection.—The injured portion of the spine having been removed, and the soft parts dissected off, a longitudinal section of the vertebræ and intervertebral substances was made in order to show the changes which had been effected by the accident.

The theca vertebralis was thickened, and of a darkish-red colour; the medulla spinalis was greatly softened, and diminished in size near the fractured part of the spine.

The first lumbar vertebra had been fractured in a transverse direction, extending, obliquely downwards and forwards, through the upper third of its body.

The upper part of the vertebral column, together

with the upper fragment of the fractured vertebra, had been thrown forwards, the superior fragment resting on the fore and upper part of the inferior fragment, to which it was connected by callus.

The corresponding articular processes of the last dorsal and first lumbar vertebræ had been dislocated ; those of the former having been thrown upwards and forwards. On the right side, the inferior articular process of the last dorsal vertebra was separated from the corresponding process of the first lumbar to the extent of the third of an inch, while their surfaces were rounded and nearly obliterated, in consequence of the length of time the patient had survived the accident. On the left side, the processes were about the same distance from each other, but connected by an intermediate portion of new bone.

The foramen between the roots of the spinous processes was more than twice its natural dimensions.

The ligamentum subflavum must have been ruptured.

The most important point in the change which was produced by the accident consisted in the altered dimensions of the vertebral canal : immediately behind the line of fracture it was diminished one-half in calibre, and it is probable that the medulla spinalis projected in some degree through the enlarged opening between the spinous processes.

The infundibula and pelves of the kidneys were dilated with urine mixed with pus; their internal surfaces were inflamed, as was the substance of the kidneys. There was a considerable quantity of urine and pus in the bladder, and its coats were thickened.

According to Sir Astley Cooper's observations, patients with fractured lumbar vertebræ die within a month or six weeks; but he knew of one patient who lived two years, and then died of gangrene of the nates.

In Mr. Samuel Cooper's Dictionary of Practical Surgery, in the description of fractures of the vertebræ, it is stated, that any attempt to set fractures of the bodies of the vertebræ, even were they known to exist, would be both useless and dangerous. In the case which I have described, it is evident that deviating from the general maxim, did not produce any bad effects.