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CONCUSSION OF THE SPINE.*

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Perhaps this subject will be best considered and present an amount of interest equal to any other, by taking up "Concussion of the Spine," the pathology of which presents such varied and remarkable features. Mr. Robert Liston has said that "no injury of the head is too trivial to be despised," and Mr. J. E. Erichsen says in his lectures on "Injuries of the Nervous System," p. 84, the "observation, true as it is with regard to the head, applies even with greater force to the spine." Few clinical details are to be found in works on surgery, and there is not an abundance of clinical writing on this subject by specialists. Three classes of injuries are mentioned by Mr. Erichsen. 1st. Concussion of the spine from direct and severe injury. 2nd. Concussion of the spine from slight injuries, concussion from carriage accidents and from falls and shock. 3rd. The effects produced by wrenches or twists of the spine. The following case will illustrate the first class:—J. R., a clerk by occupation, was admitted under the care of Mr. Erichsen, into University College Hospital, October 2nd, 1862. He had been knocked down half an hour previously by a cab, the horse's knee striking him on the neck. He was conscious, but quite unable to move, and passed his urine and fæces involuntarily on his way to the hospital. There was abrasion and ecchymosis on the left side of the neck. There was no irregularity or inequality of the spinous processes or evidence of fracture. There was also complete paralysis of sensation and motion from the shoulders down. The breathing was wholly diaphragmatic. He

*From the report on Surgery and Surgical Pathology of Diseases of the Nervous System, read before the Ontario Medical Association, in June last.

complained of great pain at the point of injury, and in the right hand and arm which was bruised. Motor power not entirely lost, as he could raise his legs and cross them, but sensation is entirely gone. His great distress was a feeling of tightness as of a cord tied tightly round the abdomen below the umbilicus. 5th October, had slept well, pulse 64, strong; passes fæces involuntarily. 8th. Is able to move his head and neck from side to side; has less pain; urine has been ammoniacal from the beginning; bedsores over sacrum have much extended. 10th. Difficulty of breathing came on, but was relieved by the 11th. On the 12th it returned with mucous râles, and he died that night, ten days after the accident.

Autopsy.—The brain was found uninjured and healthy; the 6th and 7th cervical vertebræ had been separated posteriorly; the vertebræ themselves and their arches were quite sound, but there was a fissure extending through the articulating processes on the left side, without displacement. A large quantity of blood was extravasated into the spinal canal lying between the bones and the dura mater, also a quantity of reddish brown serum in the arachnoid. The pia mater had some blood patches on it in the lower cervical region. The cord itself was quite healthy.

Boyer* relates two cases. In one the patient struck his loins by falling into a deep ditch. He was affected by complete paraplegia, and speedily died. On examination no morbid appearances could be detected; neither fracture, dislocation, effusion or any lesion of the cord or its membranes. In the other case, a man amusing himself with gymnastic exercises, strained his back between the shoulders. He became paraplegic and died in a few weeks. After death no lesion of any kind was found in the spine or cord.

Twists or wrenches of the spine without fracture or dislocation of the vertebræ are among the most serious affections of the spinal cord which are met with in surgical practice. In all the various forms and degrees of injury sustained by the spinal column, some or all of the same train of symptoms follow soon or later. If immediate or secondary the countenance is usually pallid and has a careworn anxious expression. The memory is defective; the thoughts are confused; all business

*Maladies chirurgicales, p. 135 and J. E. Erichsen's Lectures, p. 28.