

gion, following the above rule. Now let us enquire into the condition of the parts as they probably existed at the time of the accident, and what we would most probably have found had opportunity served.

Blood would have been found extravasated into the surrounding tissues; the muscles lacerated and torn from their attachment, the supra and infra spinous ligaments torn, and the spinous processes fractured, accounting for the deficiency of the third lumbar spine which is still apparent, the body of the corresponding vertebræ comminuted, possibly displaced a wedge-shaped portion driven forcibly forward or possibly dislocation of the entire body of the vertebræ at this point, the ligaments torn and ragged, and the articulating processes wrenched asunder. In these injuries the intervertebral substance is seldom separated, the bone itself more commonly giving way; this is to be accounted for by the spongy texture of the bodies, and the great elasticity of the intervertebral substance. In some cases the injury to the bodies partakes of the character of an impacted fracture, or a wedge-shaped piece is driven backwards into the spinal canal, and may press upon, lacerate, or completely sever the cord, resulting in paralysis of all the parts below the seat of injury, and ultimate death.

In the particular case under consideration, there was no interruption of function of the nerves. No loss of sensation or motion, no continued paralysis of the bladder, no interruption of the function of the rectum; for although we had to resort to enemata to relieve the bowel, the constipation was not more than would be observed in a healthy robust man accustomed to much exertion, being suddenly deprived of locomotion and confined to the recumbent posture. Cases are mentioned by surgical writers of fracture occurring below the second lumbar vertebræ, in which there had been no paralysis; these are exceptional instances, and have been accounted for in the following manner:—If the seat of injury is below the terminal extremity of the medulla, the canal is occupied by the bundle of nerves constituting the cauda equina; these nerves possess considerable firmness, and are loosely held together; they are in consequence easily pushed aside in this capacious canal without danger of injury, and consequently their function is not impaired. In this case the posterior arch was forced backwards, and the anterior possibly in the opposite direction, so that the calibre of the spinal canal was enlarged, giving more room to the nerves, and precluding the possibility of injury to their substance. But this is mere conjecture, as we have no means of arriving at a positive knowledge of the state of the parts, and I trust it may be long for the man's sake, ere we can de-