

topic of conversation. He could, at this time, neither taste nor smell, and hearing and sight were much impaired. He recovered his mental faculties to such an extent as to be employed in Government service at Washington, and died five years afterwards. During this time he articulated distinctly; had no paralysis, but had occasionally slight attacks of epilepsy, but they were becoming slighter as time wore on.

I have culled these cases out of 559 persons who received penetrating or perforating fractures of the skull. These 559 were selected out of 4,350 cases of gunshot wounds of the cranium and its contents. Of that large number many were afflicted with functional and mental disturbance, but in no two cases of similarly injured were there like results.

Dr. Van Peyma gives a record of a singular case in the *Buffalo Medical and Surgical Journal*, December, 1873:

A man, aged fifty, was found comatose and brought to the Buffalo General Hospital. He subsequently was sufficiently roused to give his name and age. He died six days after admission. On *post mortem* examination, the meninges on the right side were found considerably congested. On removing the brain, a collection of pus was found at its base, extending from the medulla oblongata forwards. The lateral ventricles were also found filled with a purulent collection. At this moment, as the incisions were being extended, something was heard to fall on the tray on which the brain was lying. To our utter amazement this was found to be a bullet. The ball, which was of small size and considerably flattened, had been liberated by the knife. The conviction was forced upon us (says the surgeon) that the external opening, through which the ball had passed, had been overlooked during the life of the patient, but our astonishment was increased when, after a careful examination of the surface, no opening could be found. As a last resort, the cranium was examined from the interior; and on the anterior surface, above and a little to the right of the left orbit, was found a fracture of the frontal bone, the internal table of which was extensively fissured. With this as a guide, we again made search for the external aperture, and again failed in finding an opening, but found a discolouration of the skin over the seat of the fracture, of a lead colour, circular in shape. There was not

the least sign of a wound or the slightest scar. The wound, which must have existed, had healed perfectly, and left nothing but this leaden discolouration to show its former presence. The course of the ball through the brain could still be traced by a probe to the place where it had lodged, near the anterior surface of the medulla. The opening in the bone was filled in with a gelatinous material through which tenaculum passed readily. There was no previous history of the case, but it was evident that the wound had been inflicted a considerable time before death; and seeing the patient had not found refuge in a poorhouse, hospital, or asylum, the inference is fair that the intellect had not been much impaired, if any, up to the fatal attack. I am the more ready to think so, from the immunity enjoyed by patients similarly afflicted. There could not have been serious functional results, as he had been able to look after himself.

A somewhat analogous case is recorded by Dr. Prewitt, of the City Hospital, St. Louis (*St. Louis Medical and Surgical Journal*): A man, aged 32, shot himself with a pistol. The ball entered the forehead about an inch and a half above the supra-orbital ridge. He recovered in a little over a month, and *without marked impairment of intellect*. He died eleven months afterwards from erysipelas. No functional impairment is mentioned.

Asst.-Surgeon P. F. Harvey, U.S.A., reports the following case (*vide American Journal of the Medical Sciences*, July, 1879): It is that of an Indian Agency physician who received a Winchester rifle-ball three inches and a quarter above and one inch behind the right external auditory meatus. The missile took a transverse direction across both hemispheres toward the left supra-orbital convolution. A grooved director was easily passed in this track, a distance of five inches, without, however, reaching the ball. The patient did not lose consciousness on being wounded, and complained only of "seeing stars" and of some confusion of ideas. He recovered so rapidly that, after five days of convalescence, he took a journey of ninety miles, in December, in an open buggy, alighting several times to make his way on foot through deep snowdrifts. At the end of this exertion, however, two convulsions occurred, and the wound in the head re-opened. In a short time complete convalescence ensued. Six months