REPORT AS TO THE CONDITION OF A MAN THROUGH
WHOSE RIGHT CEREBRUM A BULLET PASSED FROM
BEFORE BACKWARD ELEVEN YEARS AGO.

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The case is that of a man, now aged twenty-four years. Eleven years ago a bullet entered just above the middle of his right eyebrow and made its exit 0.5 cm. to the left of the occipital protuberance. (Cicatrices of both wounds plainly visible now.) Unconsciousness at once ensued, during which state the surgeons removed (patient's statement) four or five ounces of brain substance and a large amount of bone between the wounds of entrance and exit. At the end of three weeks consciousness returned, but the patient was unable to utter a single word and was completely hemiplegic (left side). Speech returned at the end of four or five weeks. Motion returned to the leg slowly during two or three years; no improvement has taken place since.

In the accompanying photograph the heavy lines indicate the area of brain which is covered only by soft tissues, the bone being absent; and at the same time the situations of the longitudinal and Rolandic fissures are also roughly indicated by ink-marks. The skull depression measures 13 cm. in its greatest length and 7 cm. in its greatest breadth. It extends from a point about 0.5 cm. above the middle of the superior orbital margin to a point 2 cm. behind the parietal eminence, being somewhat the shape of a skillet with the handle directed anteriorly. The upper margin of the depression is 3.5 cm. below the median line of the skull. In the skull depression the brain pulsations may be plainly seen.

The man exhibits no mental defects. He walks readily without a cane although the left leg is quite spastic, and he, of course, limps. While the left leg is weaker than the right, it retains a large degree of power. All power of motion in the left hand and forearm is absent; but limited movements of the left shoulder can be made. There are marked contractions in the fingers of the left hand. There is a partial paralysis of the left face, scarcely noticable when the face is in repose.

All forms of sensation are greatly diminished everywhere over the left side, including face, tongue, conjunctival and nasal membrane, arm, trunk and leg. In the arm and hand all forms of sensation are entirely absent. Left hemianopsia is present. Of course the stereognostic sense is absent in the left hand.

The reflexes over the left side are much exaggerated, jaw-jerk, ankle-clonus, Babinski toe reflex and Bechterew's scapular reflex being present.

While the evidence afforded by this case is not exact, it still has a value in showing, in a rough way, the sensori-motor area of the cerebrum, especially as concerns the arm; and

at the same time the area concerned in the mechanism of the stereognostic sense. The middle Rolandic and parietal regions were most involved; and it has been seen that sensation and motion are absent in the arm. The superior and inferior Rolandic and parietal regions escaped largely; and we find a large degree of motion in the face and leg with a diminution of sensation only.

The hemianopsia may be due to destruction of the cuneus itself or to the fibers associating it with the primary optic centers.

Aside from other considerations, the case is remarkable as showing the reparative processes of nature and the extent of injury which the brain may tolerate.