and I lost it altogether just before the muscular movements commenced. As soon as the convulsive movements ceased the patient clambered to the sitting posture, and began talking in an incoherent manner, as was his custom, and although he looked "lost" he answered simple questions.

In about two minutes or perhaps three after his recovery from the first convulsion, he was again attacked in a similar manner. He seemed to "faint," and immediately after rolling over he was convulsed as before, but more strongly. On this occasion I happened to have my ear upon his naked chest listening to the heart sounds, which became weaker, or more distant, and then suddenly ceased; at this instant an attendant standing by called out "He has fainted again." The muscular movements continued for forty or fifty seconds and were appreciably stronger than on the first occasion. The respiration ceased with the stoppage of the heart's action, and began somewhat heavily on the cessation of the convulsive movements when the patient once more sat up and talked as before.

He was now made to inhale some chloroform, some of which was also applied to his bald scalp; this, he said, "made his head nice and cool;" "but," he added, "it is warm inside."

He soon regained his usual colour, and looked as if nothing had happened, except that he had entirely lost his pain, and could walk about and bend the spine with perfect ease. There was no return of faintness, and an hour later he made a hearty tea. He was kept under supervision for four days, and as nothing strange occurred he was allowed to go to work again out of doors, where he has been employed daily up to the present time.

Case of Cerebellar Hæmorrhage. Abnormalities of Cerebral Arteries. By James Shaw, M.D.

J. P., aged 74, was admitted into Haydock Lodge Asylum, on the 26th August, 1880. This was said to be the first attack, and of twelve months' duration. Patient was described as suicidal.

The following information was obtained from the medical certificates on which she was admitted:—

Conversation incoherent and irrational. Restless and excitable. Noisy and violent; screaming, scratching, kicking, and biting when she was being dressed. In constant fear that everyone wished to do her some bodily injury, bleed her, remove her skin, cut her up, &c., &c. She also feared that they were attempting to take her money. Disliked those about her.

Condition on 2nd September.—Circumference of head 21¼ inches. Left pupil larger than right. Gait staggering. Very talkative and incoherent. Irascible. Restless and sleepless at night. Clean in

her habits. Does not know where she is. Says she is "going to be chopped up into pieces."

Sept. 23.—Wanders about aimlessly, and converses incoherently. Has many changing delusions as to the identity of the people surrounding her. Suspicious, fancying people are talking about her.

Nov. 30.—Has had a transient attack of incomplete right hemiplegia with defective speech, from which she has just recovered. During this attack she articulated badly, but there was no true amnesic aphasia, and the hemiplegia only amounted to slight feebleness and diminished power of co-ordination.

Dec. 30.—Gait unsteady, but no localized paralysis. Fancies the Medical Officer is the king, and one of her fellow-patients the devil. Slightly deaf. Very restless and childish.

1881, Oct. 3, 8 a.m.—Seized suddenly with an attack marked by unconsciousness and frothing at the mouth. She partially recovered from this seizure, and was then very weak, lying with her legs drawn up to her body. The left side showed diminished cutaneous sensibility as compared with the right; and the left arm and leg were weaker than the right. She muttered, mumbled, screamed, and shouted, but the word "damn" was the only articulate expression she succeeded in emitting. When being examined she pulled, scratched, and pinched with her right hand. Nausea and vomiting. Pulse 100, and very feeble. Feet cold. Eyes shut, and patient resisted when the eyelids were raised. Left pupil larger than right. Patient incapable of understanding what was said to her, and inclined to be drowsy. Cold affusions to head. Sinapisms to legs. Enem. terebinth, &c. Became comatose in the evening. Stertor avoided by turning the patient on her side.

4.—Still comatose. Face flushed. Conjunctivæ insensible to touch, and pupils to light. Both pupils contracted, left more than right. Pulse 78. Respiration 24. Temperature 99° in left axilla.

5.—Coma continues. Pulse 104. Nutrient enemata after enem. cathart. Died on the morning of the 6th.

Autopsy.—Dura-mater adherent to calvarium. Arteries of brain atheromatous. Venous congestion of pia-mater. Right posterior cerebral artery given off by internal carotid. The basilar artery gave off, after the right superior cerebellar, a small branch from its right side, which wound round the crus cerebri, and then a small posterior communicating branch which joined the right posterior cerebral anteriorly. The arteries given off to the left by the basilar were normal as to their origin and distribution.

The right posterior cerebral divided near its origin from the internal carotid into two branches; one running posteriorly and terminating in the parieto-occipital sulcus, supplying on its way the gyrus lingualis, the inferior margin of the precuneus, and the superior of the cuneus; the other, and larger, passing outwards and backwards, sending one terminal branchlet into the calcarine fissure, and supplying

the gyrus uncinatus, lobulus fusiformis, third temporal convolution, and the occipital convolutions, including lower border of cuneus; this larger branch wound round the gyrus uncinatus close to the hook, and then passed over the lobulus fusiformis. The *cerebral* cortex was apparently healthy.

In the external capsule and external division of the lenticular nucleus in both hemispheres, and in the inner and middle portions of the right lenticular nucleus, there were several small lacunæ which were free from colour as to their walls.

Cerebellum.—The right lobe looked dark, inferiorly, and felt soft, and on cutting into it a clot weighing 5·248 grammes was discovered. The clot was fresh, close to the surface inferiorly and internally, and pressed on the pons and medulla. The fourth ventricle contained some dark fluid blood. The whole of the cerebellum was congested, and the portion of the right lobe immediately surrounding the clot was softened.

The posterior root zones (columns of Burdach) of the spinal cord were slightly sclerosed. Columns of Goll apparently normal.

Remarks.—The motor troubles which occurred in November, '80, probably arose from embolism of one of the arterial branches supplying the right lobe of the cerebellum, or from a slight hæmorrhage into that lobe, the traces of which were obliterated by the fatal attack nearly a year afterwards. Lesion of the right lobe would be accompanied by weakness of the limbs of the same side, in accordance with the opinion held of the direct instead of cross action of the cerebellum from its anatomical relation to the cerebrum, and pathological experience.*

The motor and sensory symptoms were much more marked on the side opposite to the lesion in the second and fatal attack, but this was manifestly owing to the pressure of a comparatively large clot on the cerebral fibres of the right side of the pons and medulla.

The unsteady gait, nausea, and vomiting pointed to the seat of lesion; and the defective hearing after the first attack (although, unfortunately, no examination of the ear was made) is noteworthy, taken in conjunction with Meynert's description of the root of the acoustic nerve, most of the fibres of which, as demonstrated by his preparations, run into the cerebellum.

* See Bastian's "Brain as an Organ of Mind," pp. 393, 507-8. Also "Case of Atrophy of the Left Hemisphere of the Brain," &c., by S. van der Kolk. New Sydenham Soc., 1861, p. 144; and Andral's "Clinique médicale," 1833, Vol. v, p. 679.—[Eds.]