instant death; the wall of the abscess was very thick and dense.

Dr. Millman spoke of two cases of cerebral abscess which came under his observation in the London asylum for the insane. One of multiple patient suffering from acute mania; abscesses in a he was subject to periodical attacks of excitement, and it was surmised that each of these attacks indicated an abscess formation. There was no history of pyæmia. The second case was that occurring in a girl, who was admitted with acute mania, from which she completely recovered, and was subsequently engaged as a laundress in the institution. Sometime after this she suddenly became very ill and developed symptoms of serious brain trouble, from which she died. At the *post mortem* examination one side of the cerebellum was found to be almost entirely occupied by pus, and a portion also of the opposite hemisphere was affected. The vermiform process was not involved, and this probably accounted for the fact that she had had no impairment of co-ordinating power.

Dr. Machell asked Dr. Graham if, on a careful study of his case, he has learned anything to aid him in dealing with a precisely similar case in future.

Dr. Pepler asked if the paralysis on the right side was not a more important indication for opening the skull than was the spasm of the left side and the seat of the external injury.

Dr. Acheson remarked that we never have suppuration occurring without the presence of organisms, and in that light it seems that the abscess in Dr. Graham's case had nothing to do with the blow on the skull. The great majority of cerebral abscesses must be due to pyæmia, or from direct infection from some evident source.

Dr. Peters stated that when a blow on the head is inflicted at one point the brain is bruised at a point immediately opposite, *i.e.*, on the opposite side of the head; it is stated that if these cases be seen *post mortem* soon after the infliction of the injury, a path of bruised tissue can be detected across the brain substance, from the side upon which the injury was received to the damaged brain upon the opposite side. In studying the location of the external injury in Dr. Graham's case, it being high up on the right side, we would expect the damaged cerebral centres to be about the arm centres on the left side of the brain. The fact that the cranial contents are injured in this way has been borne out by experiment, filling a skull with paraffin and inflicting a blow; the injury to the paraffin is on the opposite side to that on which the injury is received. As to the occurrence of suppuration, the great bulk of evidence goes to show that it is due to the injury; the bacteria have been carried by means of the blood and find a suitable nidus for their growth and development in the damaged brain tissue. The occurrence of the abscess in the tempero-sphenoidal lobe secondary to suppurative otitis, referred to by Dr. Reeve, is explained by the investigations of Schwalbe, who injected fluid under the scalp, and has been able by this means to demonstrate a continuous lymphatic connection from the scalp into the interior of the brain. The infection therefore spreads along the lymphatics. Instruments of a special kind are necessary for brain surgery. Horsley uses a trephine of large size, 1¼ inches in diameter. He opens the skull with this, after turning down a large flap of the scalp and pericranium, and having previously marked the part of the skull he wishes to remove by indenting it with an awl driven by means of a mallet into the skull. The trephine hole having been made, a large area of the skull is sawn through the outer table by means of a Hey's saw; an area, say two inches by three inches, is thus mapped out around the trephine hole. A series of radiating saw cuts are similarly made from the trephine hole to the margin of the area mapped out. Then the portions of bone are removed by means of strong bone pliers along the lines of the saw cuts. This is a rational method of operating; by it a large area of dura mater is laid bare, and one has an opportunity of comparing healthy tissue with damaged; this is undoubtedly a great advantage.

Dr. Carveth narrated the history of a man admitted to the Toronto General Hospital some years ago suffering from an apparently insignificant scalp wound. He did well for a time, but subsequently developed brain symptoms, and on the fourteenth day was trephined; no pus was detected. On *post mortem* examination an abscess was found on the opposite side of the brain to that on which the scalp wound existed. A further lesson learned from such a case as this is not to treat lightly any case of scalp wound.