

occurred. On the 29th two more similar fits occurred at about 10 A.M. but these were followed by paresis of the left side of the face and paralysis of the left arm and leg. The deep reflexes were not increased but were perhaps even slightly less marked than normally. Accordingly, at 2 P.M. the same day he was trephined over the right face area. No fracture was found and there was no extradural hæmorrhage, but on incising the dura mater a considerable clot was found below, and in front of, the trephine hole. The opening was therefore enlarged downwards and forwards and the bleeding was found to proceed from a point or points deeply situated which could not be controlled with pressure forceps. Accordingly, gauze plugging was used and two tubes were inserted, and the scalp was sewn up around them. This checked the bleeding. The tubes were removed the next morning and the gauze cautiously (with anæsthesia) during the next few days, which were uneventful, paralysis still remaining complete. Headache was much complained of. There were no more fits and no more vomiting. On June 4th there were signs that the paralysis in the limbs was not quite so complete and during the next few days attempts at movement of the leg were occasionally noted. The patient's headache disappeared and his appetite improved. There was no incontinence of urine or fæces after this date. The left knee-jerk was absent; the right was just obtained. On the 15th very good movement was noted in the left leg—the limb could be flexed on the trunk and the leg flexed at the knee. The patient remarked that he felt a tingling in the left arm and hand as though its functions were returning as in the case of the leg. The left knee-jerk was obtained for the first time and subsequently became somewhat exaggerated. On the 19th the facial paralysis was noted as diminishing, the left eye being closed with ease. Movement was just beginning to return in the left hand and arm. Sensation was quite good to touch and to pin-prick. From this date onwards he improved slowly but uninterruptedly and on July 6th he was well enough to walk out of the hospital and to pick up a pin with his left hand. In August he reported himself by postcard from Scotland as steadily improving, but unfortunately gave no address. He said he remembered nothing of the accident or of the ride which cost him so dearly, but he could recognise the companion with whom he was riding. Treatment throughout consisted of the application of cold to the head, purgation with calomel and croton oil when necessary, an occasional administration of phenacetin and caffeine or morphine hypodermically when the headache was troublesome, early massage, and careful nursing.

The points of special interest about the case are the following: (1) the presence of serious injury to intracranial vessels as the result of an external injury which itself left no external mark; (2) the delay in the appearance of grave symptoms; and (3) the extent of recovery after the severe manipulation of cerebral substance necessitated by the operative procedures.

BARNET VICTORIA COTTAGE HOSPITAL.

A CASE OF FRACTURE OF THE BASE OF THE SKULL (POSTERIOR FOSSA) THROUGH THE MOUTH.

(Under the care of Dr. WILLIAM THYNE.)

A BOY, aged five years, was admitted to the Barnet Victoria Cottage Hospital unconscious. There was no motor paralysis of the limbs. Convulsive movements of the right side of the face were observed. The pupils were equal, dilated, and fixed, with conjugate deviation to the left. There was no optic neuritis. There was persistent vomiting. Large tracheal râles were present. The pulse was 140 and the temperature was 105·8° F. The previous history of the case was that the boy was standing on a snow heap holding a piece of gas piping which contained a steel umbrella rib projecting some inches. The steel rib was inserted into his mouth to imitate the bagpipes. He fell and caused the umbrella rib to penetrate the posterior wall of the pharynx. It was extracted by a bystander. There was slight oozing of blood. He appeared to recover and ate some bread-and-dripping. On the afternoon of the following day he became suddenly worse and was admitted to the hospital in the evening. At 11.30 P.M. his temperature was 107·6°, at 12.30 A.M. it was 107°, and at 1.30 A.M. it was 105·2°, after which it gradually fell to 104·8° at 12.30 P.M. on

Feb. 18th. It began to rise again and reached 107° at 8.30 P.M., when he died.

Necropsy.—A post-mortem examination revealed congestion of the vessels of the meninges and brain, suppurative meningitis of the base, and laceration of the right cerebellar hemisphere adjacent to a fracture in the right posterior fossa, external to the posterior condyloid foramen. There were no internal hæmorrhage and no injury to the cord. Other organs were not examined. A probe was easily passed through the puncture into the mouth. It appeared that the umbrella rib had passed between the occiput and the transverse process of the atlas.

Remarks by Dr. THYNE.—The case is interesting owing to the route taken by the steel wire and the unusual situation of the intracranial lesion.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Discussion on Chloroform Anæsthesia.

A MEETING of this society was held on Nov. 22nd, Sir R. DOUGLAS POWELL, Bart., the President, being in the chair.

Dr. A. G. LEVY described an Apparatus designed for Regulating the Strength of the Chloroform Vapour Administered in the Atmosphere Inhaled and at the same time to restrict its maximum strength within such limits of safety as are compatible with all practical exigencies. The instrument indicated with an approximate degree of accuracy the percentage of chloroform vapour inhaled. He had not hitherto encountered conditions which required more than 3·5 per cent. chloroform and he had therefore made this the maximum. The main principle involved was the suction of air over a surface of chloroform by the respiration and the dilution of the mixture of air and chloroform vapour thus obtained by such a further proportion of air as may be desired before it reached the respiratory passages. The evaporating chamber was annular in form. At one point it was intersected by a vertical radial diaphragm and in the top, to one side of this, a short air inlet tube was attached and on the other side a similar outlet tube. The chamber was made of thin copper and it formed part of the cover of a larger vessel of about a litre capacity. This latter was filled with water at 20° C. and served as a water jacket to regulate the temperature of the chloroform. The chloroform chamber was connected with the regulating valves and face-piece by means of a length of aluminium pressure tubing. The tube was connected at its further end directly to a brass mounting which contained a circumferential air-slot, which might be covered up to any desired extent by a revolving collar. This device he had termed the compensator. This mounting was screwed on to the tubular valves which constituted the regulator. This consisted of two concentric cylinders fitted one within the other, the inner of which could be made to revolve within the outer by moving a lever. The cylinders contained reciprocally acting apertures, one leading from the chloroform chamber and the other communicating direct with the air. When either was partly open the other was shut in the same proportion. Thus the chloroform might be diluted to any desired extent. The lever before mentioned carried an index hand which travelled over a scale indicating percentages of vapour. This scale was plotted out by means of a series of experimental estimations. The air passed from this regulating apparatus through a glass valve chamber in which the strength of the inspirations were measured by the swing of a hinged inlet valve constructed of mica. The hinge was made of oiled silk and the necessary elastic resistance was supplied by a length of thin, spirally-coiled manganin wire. The swing of the valve was measured off on a curved index engraved with marks denoting various degrees of force of inspiration. A curved metal tube connected this chamber to the face-piece, into one side of which was inserted a spring valve, which opened during expiration. In use anæsthesia could be completely induced by this instrument in five or six minutes, proceeding gradually from a 0·5 per cent. mixture to a 3 per cent. or 3·5 per cent. When narcosis was complete the regulator was at once put