

evidence of malignancy became apparent in the original growth. The line of the fracture in Case 2 can only be indefinitely surmised by the course of subsequent events. That the base of the skull was fractured in the anterior fossa was indicated by the ecchymosis of the eyelids with the subconjunctival hæmorrhage; and that there was rupture of the mucous membrane, either in the nose or in the upper part of the pharynx, was proved by the large amount of blood which was vomited soon after the patient's admission. It was probably through this lesion that the septic material spread which gave rise to the subsequent erysipelas, and the inflammatory products may have been the causes of morbid effects upon the chiasma and even the pituitary body. The emphysema noticed in the swelling over the frontal sinus was probably the result of decomposition, since the patient was unable by any effort to force air into this swelling. Subsequent inquiry elicited the fact that the patient had as a child been subject to fits, but had not suffered from any attacks since early infancy; his memory had never been good, and on account of the fits he had never learned to read or write. His eyesight seems to have been defective previously to the accident, but it has been very much worse since, and his memory is now so feeble that he cannot remember a name for two minutes together. The patient has been placed under the observation of Dr. Mott, who will watch and report any further developments.

HEREFORD GENERAL INFIRMARY.

A CASE OF PARTIAL RUPTURE OF THE SPINAL CORD WITHOUT FRACTURE OF THE SPINE; NECROPSY.

(Under the care of Mr. R. THOMASON.)

THIS case is a most unusual one and may prove of considerable importance from a medico-legal point of view, as it establishes the possibility of rupture of the spinal cord without any fracture of the bones containing it. The points of chief interest are indicated in the remarks appended to the case. For the notes of the case we are indebted to Mr. A. M. Watts, house surgeon.

A man, aged sixty-five years, while driving from Hereford to his home on Jan. 2nd, 1897, fell out of his cart. He was partly under the influence of drink at the time, but picked himself up and walked as far as his residence, a distance of a mile, put his horse away, and then sat down in a chair by the fire. Some time afterwards (three hours from the time of the accident) he noticed that he had no power in his right hand, then that his left hand was paralysed, and then that he could not move his legs; the paralysis came on so rapidly that it seemed to affect all his limbs almost simultaneously. On arriving home his neck felt a little stiff, but he had no pain in it. He had always been a healthy man and was not in the habit of drinking to excess. The patient was admitted to the infirmary on Jan. 4th. He lay in bed on his back and his respiration was entirely diaphragmatic. He answered questions rationally and had no cerebral symptoms. Movement of his neck caused pain. There was no bruising of the skin and no irregularity of the spinous processes. When he was lying still he had no pain in his neck or any pain in the course of the nerves. He could raise his arms from his sides to a horizontal position and could move them inwards across his chest; he could flex but could not extend his forearms; he had no movements of the hands or fingers. The knee-jerks and the plantar reflexes were absent. There was loss of all sensation of the trunk and the lower limbs below the level of the third costal cartilage; no hyperæsthesia was present above that level. There was also loss of sensation on the anterior and posterior surfaces of the forearms on the inner halves, on the whole of the dorsum of the hands, and on the inner part of the palms and on the palmar aspects of the little fingers. The patient had retention of urine and constipation. The chest was normal. The pulse was full and regular, being 56, and the temperature was sub-normal. The urine was acid, of specific gravity 1025, and contained a trace of albumin. No alteration in the amount of paralysis or anæsthesia was noticed and the patient's mind remained clear until his death, which was due to œdema of the lungs, and took place twelve days after the accident. The reflexes remained absent and the pulse slow. From the absence of any signs of fracture of the spine, and also from the absence of pain in the course of the nerves and hyperæsthesia, the injury

was thought to be probably limited to the spinal cord. As the patient had absolute loss of the reflexes up to the time of his death a total transverse lesion was diagnosed, the seat of it being just between the origin of the sixth and seventh cervical nerves as the musculo-cutaneous and external anterior thoracic nerves escaped, while the musculo-spirals, medians (with the exception of their cutaneous branches) and ulnars were paralysed. The circumflex nerves were not paralysed, and although they come off with the musculo-spirals from the posterior cord of the brachial plexus, their fibres seem to be derived and also the cutaneous fibres of the musculo-spirals and medians from the sixth cervical nerves. As regards treatment, there was little to be done except to keep the patient's spinal column at rest, to prevent bed-sores, and to relieve the retention of urine by the passage of a soft catheter.

Necropsy.—The spine was exposed by a vertical incision over the spinous processes. No irregularity or signs of fracture could be detected, so the spinal canal was opened by removing the spinous processes and laminae, but no hæmorrhage was found in it. The spinal dura mater was seen to be torn transversely across in its left half, so it was, together with the spinal cord, removed. On dividing the dura mater longitudinally on its posterior aspect the cord was exposed and the left half found to be torn across in the line of the wound in the dura mater, which extended round to the middle line anteriorly. An antero-posterior longitudinal section was then made of the spinal cord; at the seat of the rupture, and for a distance of half an inch above it, the cord was found to be very soft in consistence and greyish in colour, the limits of the grey area above being distinctly defined by a somewhat irregular transverse line; this condition of the cord apparently existed through its whole transverse section. On comparing the cord with the bodies of the vertebræ on its removal the rupture was seen to be exactly opposite the articulation between the sixth and seventh cervical vertebræ. A little movement could be obtained in this articulation, but the posterior common ligament was intact.

Remarks by Mr. WATTS.—As a rupture of the spinal cord is a somewhat uncommon accident, I think that it is worth while putting this case on record, especially as there was apparently no fracture of the spine, and although a little mobility between the sixth and seventh cervical vertebræ was found the posterior common ligament was not ruptured. The case is also interesting for the following reasons:—(1) After the accident the patient walked a mile and the paralysis did not come on until three hours afterwards; (2) because the paralysis on the one side of the body was exactly similar to that on the other; and (3) although there was absolute loss of reflexes, still the cord was not entirely divided. My thanks are due to Mr. Thomason, under whose care the patient was admitted, for permission to publish the notes.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Epidemic of Infantile Paralysis.—*Gastrostomy for Swallowed Esophageal Tube.*—*Removal of Cerebral Tumour.*—*Extravasation of Urine.*

A MEETING of this society was held on March 26th, the President, Dr. BUZZARD, being in the chair.

Dr. PASTEUR read a paper on an Epidemic of Infantile Paralysis occurring among children of the same family. The epidemic was limited to this household. Every one of the seven children in the family was attacked in rapid succession within the space of three weeks with fever of moderate severity, accompanied by severe headache. In three of the children—aged eleven, nine, and five years respectively—paralytic symptoms supervened within seven days of the commencement of illness. The type of paralysis varied in the different cases. In one there was flaccid paralysis of the left arm; in another right hemiplegia with marked and persistent muscular rigidity of the arm and the leg, with more transient paralysis of the face and soft palate on the same side; whilst in the third case there was paralysis with rigidity limited to the left lower limb. In two more the primary fever