There is no unnecessary loss of tissue, the compressing portion alone being removed, the normal lumen of the vertebral canal restored, and the vertebral arches replaced.

The indications for the operation are: (1) Vertebral fractures with compression of the cord. The operation may be performed early, unless the symptoms are improving. (2) New formations in the spinal canal. (3) Tubercular spondylitis, when the process has been arrested and no abscesses are present. (4) The operation is justified in all cases of localized compression on the spinal cord.—*Arch. f. Klin. Chir.*, XLIV, 4, 1892.

HEAD AND NECK.

I. A Case of Craniectomy for Microcephalus. By Dr. B. Joos (Winterthur). A boy, four years of age, a microcephalic idiot, unable to talk, and not even knowing his name, very restless, with incontinence of urine and feces, very irritable and with a prolapsus of the rectum, was admitted to the hospital for operation. Linear craniectomy, under chloroform narcosis, was performed by Dr. Walder, the incision being made to the right of the sagittal suture, from the lambdoid suture, to the anterior limit of the hair. The skull was opened with the chisel, and a canal was cut in the skull with cutting forceps, as wide as the index finger and the whole length of the cutaneous incision. The skull was very thick and sclerosed, hæmorrhage considerable. The dura mater was left intact, as the general condition and pulse were bad. There was slow but distinct improvement, but not in speech. Seven months later a second operation was undertaken, and a transverse linear excision of a portion of the skull was made on the left side of the head, a strip 2 to 2½ cm. in width, running from 2 cm. above the left ear up to the former longitudinal excision. The wound healed in a few days, and the child, now one and a quarter years after the first operation, is markedly improved. He pronounces words, calls correctly for objects with which he is familiar, plays with other children, but still continues to be very irritable.

An oblong groove along the sagittal suture and a transverse one on the left side are distinctly visible, and in the transverse line the cerebral pulsations are still visible. The skull measurements have increased several centimeters.—*Correspondenzblatt f. Schweiz. Ärtz.*, March 15, 1893.

II. Extirpation of an Endocranial Sarcoma. By J. NICOLAYSEN (Norway). A man, fifty years of age, had suffered for many years with right-sided headache, vertigo and nausea. A tumor in the right temporal region had increased until it reached the size of a child's fist, when he was admitted to the hospital. The patient was not very intelligent. The tumor was solid, elastic, immovable, pulsating, and projected like a fungus from a depression of the skull. There were no spasms and no paralysis. The deeper portions of the temporal muscle were infiltrated with tumor masses, and the whole muscle and the fascia were removed. The tumor was yellowish white, of the consistency of coagulated albumen, and was not surrounded by a capsule. It had evidently started from the diploë. It was only slightly adherent to the dura mater, and this membrane was not infiltrated. There was a depression in the surface of the cerebrum, of a depth of $3\frac{1}{2}$ cm., and $4\frac{1}{2}$ cm. wide, made by the tumor. The whole mass, together with 1 cm. of the surrounding bone, was removed, and microscopical examination proved it to be a round cell sarcoma. The patient appears to be cured. It is surprising that there should be so few symptoms of cerebral compression with so great a depression in the frontal and temporal convolutions.—*Norsk. Mag. for Lægetid.*, November, 1892.

III. Trephining for Traumatic Epilepsy. By Dr. A. FRAENKEL (Vienna). A soldier had a longitudinal scar on the head, 4 cm. long and a few cm. to the left of the anterior third of the sagittal suture; in its centre a small fistula was present, surrounded by granulations from which small quantities of pus were discharged synchronously with the beating of the heart. A depression of the bone below the scar, and the purulent secretion from the fistula,

together with hemiplegia and fever led to trephining. When the bone was laid bare some splinters were discovered, and their removal was followed by an escape of more pus, and a black object became visible at the bottom of the wound. This proved to be a bullet. The bone was chiseled away circularly for about 3 cm., and an unusually large projectile was removed from a cavity about 5 cm. in depth. A loose splinter of bone lay beneath it. The foreign body was imbedded in granulation tissue, which penetrated the cerebral substance and contained a great deal of pus. All symptoms quickly disappeared, and on the tenth day functional power began to return, and he was cured in six weeks.

Genuine epilepsy is not considered a subject for surgical interference. The published successes in these cases are only apparent. Only one form of epilepsy, Jacksonian, should be treated by operation. It is established, without doubt, that a complete destruction of the motor centre is followed by complete and lasting paralysis, descending degeneration of the pyramidal tracts in the spinal cord, and by a secondary contraction of the paralyzed limbs. It is, therefore, evident that the extirpation of a part or all of the psycho-motor centre gives rise to a corresponding loss in the functional relations, that is to lasting paralysis of the groups of muscles controlled by the centre involved. When, therefore, the extirpation of diseased motor centres of the cerebral cortex are not accompanied by a lasting loss of function, and the removal of the focus of the disease was consequently not complete, it should not be surprising when the pathological conditions return with the return of functional power.

The incomplete extirpation of the centre from which the epileptic spasm originates, is, therefore, one of the reasons for the return of the morbid condition.—*Wien. Klin. Woch.*, December 8, 1892.

IV. Intracranial Abscess of Otic Origin. By M. PICQUÉ (Paris). For this variety of abscess there may be no symptoms other than pain and fever; even the mastoid inflammation may be absent. Prompt intervention is required as follows: Open the mastoid cavities,

enlarge the opening upward so as to open the cranial cavity in the neighborhood of the upper face of the petrous bone. This procedure, though hitherto regarded as exceptional, must be considered as preferable. Even in encephalic abscesses, with clearly defined psychomotor localization symptoms, this method should be resorted to at the first operative step before employing the trephine on the exact level of the abscess.—*Bull. et de Mem. de la Société de la Chirurgie de Paris*, February, 1893. SAMUEL LLOYD, New York.

V. Pyæmic Thrombosis of the Lateral Sinus Following Acute Otitis; the Sinus Opened and the Internal Jugular Vein Dissected Out. By G. LENTHAL CHEATLE, M.R.C.S. (London). A girl, aged thirteen years, with a history of eight days' left earache and headache with pain in the upper left side of the neck, increasing in severity and complicated with vomiting, rigors two or three times a day and twitchings during sleep, presented nothing abnormal externally; percussion within an area of two and a half inches posterior to the left pinna gave rise to moderate pain, which was felt more intensely upon digital examination of the upper part of the neck, which was then seen to be swollen but without fluctuation. The membrana tympani was dry and the vessels accompanying the handle of the malleus were congested; there was no marked bulging. The temperature was 102° , the pulse 116, and the respiration 44. The case was otherwise normal.

In view of the persistent and imperative character of the symptoms it was decided (1) to chisel into the mastoid antrum; (2) if necessary to open up the mastoid cells, and (3) if nothing deemed sufficient to account for the symptoms could then be found, to chisel backward and open up the mastoid sinus. After suitable antiseptic precautions, a curved incision two inches long was made a quarter of an inch behind the pinna of the left ear, the periosteum detached and the mastoid antrum opened by means of the chisel and mallet. On the first introduction of the chisel into the antrum gas bubbled out with the blood. The opening thus made was enlarged, during

which process a few streaks of thick pus came away, but there was no distinct evacuation of any collection; scraping with a sharp spoon only removed old cheesy degeneration, without offensive odor, and it was thought that so far the cause of the severe symptoms had not been revealed. An incision was accordingly made backward from and at right angles to the preliminary cut; the opening in the skull was enlarged upward, backward and downward. More cheesy matter was scraped away; the dura mater covering the temporo-sphenoidal lobe bulged considerably into the upper part of the aperture, but exploration of the lobe was negative. The lateral sinus was then completely exposed, and the needle of a hypodermic syringe brought from it no blood or pus, and was found to have a very offensive odor on withdrawal. The outer wall of the sinus was next thoroughly opened by a longitudinal incision, and on scraping out the contents fetid gas bubbled up. A probe was then thrust upward toward the torcular Herophili and downward toward the internal jugular vein, but no blood could be made to flow, and on withdrawal the probe had a most offensive odor. The internal jugular vein was then ligatured in two places and divided between them. The lateral sinus was scraped with a sharp spoon and syringed out with a sublimate solution in the hope of removing the original source of infection.

The temperature fell temporarily, and the symptoms were alleviated, but they rose again, and three days later the opening in the skull was enlarged, particularly in a backward and downward direction, where the dura mater had become separated from the skull and where a dependent position for drainage could best be obtained and the burrowing of inflammatory material toward the cerebellum prevented. The lateral sinus thus further exposed was laid open, the clotted offensive contents scraped out with a sharp spoon and the outer wall entirely removed, practically obliterating the sinus, the upper end of which was allowed to bleed for a few seconds in order to clear away as much as possible the remaining offensive clots; the hæmorrhage was easily controlled by light pressure. The wound in the neck was then reopened and the internal jugular vein dissected

out as far as possible in the direction of the skull. After syringing a sublimate solution from the remains of the sinus through the remnant of the internal jugular vein into the wound in the neck, driving out much offensive clot, the wounds were closed and dressed antiseptically and the patient made a good recovery.—London *Lancet*, March 4, 1893.

VI. Treatment of Aural Pyæmia by Operation. By ALFRED PARKIN, F. R. C. S. (Hull, England). The author submits two cases as examples of the value of ligating the internal jugular vein and removing septic matter from the lateral sinus in patients far advanced in pyæmia, whose recovery without interference is doubtful.

(1) A boy, aged nine years, with history of headaches for six years following scarlet fever, complained of right earache, and during the succeeding night is said to have been unconscious, and later had attacks of shivering. The patient seemed dull and stupid, and complained of pain all over the right side of the head; there was a foul discharge from the ear with a tenderness over the mastoid and the deep vessels of the neck; the tongue was dry and brown; the eyes were jaundiced, and the liver was an inch below the ribs and very tender; there were numerous râles at the base of the right lung, with tubular breathing at one spot; both optic discs were swollen, the right nerve then the left; and the evening temperature was 104.4° F. Under chloroform a curved incision was made behind the right ear, and a small collection of pus around the aperture of exit of mastoid vein confirmed the diagnosis. The antrum, first opened by gouging away half an inch of hard bone, was found to be full of foul pus, which was cleared away with the contents of the middle ear, and the whole cavity disinfected. The bone bounding the lateral sinus was then gouged out and a quantity of extra-dural pus extending along the lateral sinus groove was removed; the sinus was obviously thrombosed. Consequently the internal jugular vein was exposed low down in the neck; the vein walls were so thickened by periphlebitis that it resembled rather an empty carotid artery; it was tied down as low as possible in two places, and the piece excised showed numerous

flaky deposits on the intima; the cut ends of the vein were disinfecting and the wound sewed up. The lateral sinus was then opened up, as much of the clot as possible scraped out, and the cavity treated with sublimate solution. A drainage tube was placed in contact with the sinus wall and a second one in the antrum and the wounds duly dressed. Prompt relief was experienced and recovery followed.

(2) A girl, aged eleven months, with history of scarlet fever three months previously and recently recurring fits, was semi-conscious, with blue lips and occasional cries, accompanied with putting the hand to the left side of the head; the pulse was very rapid; the temperature subnormal. There was a small swelling behind the left mastoid, about an inch and a half behind the ear, and a foul discharge from the ear itself; the left side of the face was paralyzed, bronchial breathing and râles were audible at the base of the left lung, but nothing was perceptible in the neck. Under chloroform the small abscess was opened at the back of the mastoid, and found to communicate through the foramen of the mastoid vein with the interior of the skull. The antrum was opened and, with the middle ear, was cleansed of a quantity of foul material. The lateral sinus was exposed and found to be full of broken-down clot, which was all scraped away. The internal jugular vein was then exposed, found empty and tied; there was no periphlebitis at the point of application of the suture. The patient made a rapid recovery.—*London Lancet*, March 11, 1893.

VII. A New Method of Reducing Dislocation of the Lower Jaw. By FELIX ROTH, M.R.C.S. (London). (1) The patient seated in an ordinary chair, the operator stands before him with one foot placed slightly to the right side and the other just in front of the patient and in the middle line. (2) He then flexes himself at the hips and causes the patient to lean forward and to place his forehead at the middle of the operator's sternum—but this position varies with the size of the patient's head. (3) The operator now flexes his head so that his chin grips the patient's head about the upper part of the occipital bone, thus acquiring a firm hold with the

head well under control between his chin and chest. (+) The thumbs, protected in the usual manner, are placed in the patient's mouth and the fingers of both hands grasp his lower jaw. The author considers that his method has the following advantages: (*a*) The operator has the head under perfect control and perfectly fixed; (*b*) the line of force exerted by the operator's hands acts in the same line as the resisting force exerted by the operator's chin; (*c*) the operator's elbows, being well flexed, he can exert a greater power by the force acting through the thumbs close to the shoulders; the terminal phalanges will be found to have greater muscular power; (*d*) the patient's head is in a better position for reducing the dislocation; and (*e*) the operator needs no assistant, and does not inconvenience his patient by excessive pushing and pulling the head about during the reduction.—*London Lancet*, February 25, 1893.

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CHEST AND ABDOMEN.

I. A New Method of Opening the Thoracic Cavity.

By DR. DELORME (Paris). Delorme proposes a new method of opening the thorax in place of Estlander's operation. A flap is formed of the soft parts and the ribs, which is laid over to one side, thus giving greater access to the field of operation. After the operation one has only to replace the flap and suture it in its place. By means of an incision which forms the three borders of a right angle, a flap is made posteriorly with its base above and running from the third to the sixth rib, its upper and lower borders being parallel with the margins of the ribs and extending from the sternal border of the scapula to within two fingers breadth of the outer side of the sternum. At the anterior border of this flap the ribs and intercostal muscles are cut through, while at the posterior the ribs are but slightly cut and the intercostals left intact. After the upper and lower borders are freed the flap is laid over to one side. The writer first used this method in a case where a patient suffered from a tuberculous abscess of the left thoracic cavity which extended far into that cavity. As excision of the external pus cavity and curretting of the internal