on October 26th—i.e., when it was six days old—the skin had become so red and thin over the upper part of the swelling, that I saw it would burst if left a day longer: hence I decided to operate at that early period.

Mr. Wm. Hall kindly gave chloroform, and, when the infant was fully anaesthetised, I made a vertical incision on each side of the tumour, about half an inch from its base, through the skin, and then very carefully dissected the integuments from the meninges, until I reached the laminae of the vertebrae; this required very careful dissection, as the membranes left were so thin as to be perfectly translucent; the fluid was now let out by puncturing with fine scissors, which were also used to cut away the redundant membranes. The cauda equina was fully exposed, lying on the floor of the spinal canal. I now had two folds on each side, each fold being of a different width, the two inner meningeal folds three-fourths and half an inch respectively, and the two skin-flaps of the same width; but whilst the wider meningeal flap was on the right, the wider skin-flap was on the left. Thus, when sutures were applied, the lines of union were not opposite.

Acting on the same principle as is carried out in uniting the peritoneum, I brought together the serous surfaces of the arachnoid by several sutures, so as to completely shut off the spinal canal.

Mr. Mayo had, in the meantime, been kindly dissecting (under the antiseptic spray) the periosteum from the femur and frontal bone of a rabbit, which he had just killed. This periosteum I now placed, with its osteogenic layer underneath, over the closed meninges, and carefully sutured it to the periosteum of the laminae on each side, and to the bony margins above and below. After this the skin was sutured, a layer of protective applied, and a pad of salicylic wool placed over the wound.

The whole operation, which occupied more than an hour, was performed under the eucalyptus air. Catgut ligatures were employed, and the instruments and sponges were well carbolicised. On the second day, the nurse, in applying the napkins, displaced the dressing; but although the skin-wound slightly opened, there was no formation of pus, and no slough came away; in fact, through the small opening, I could see that granulations had sprung up from the superficial surface of the interposed periosteum.

The child has thriven, and has not had a single bad symptom.

As yet I cannot feel any bony crackling, but the skin is level with the surface, and the case is practically cured; if bone form, however, the covering will be all the firmer, and the spinal canal will be physiologically perfect.

I had mentioned my intention to Mr. Jessop, a short time before I performed the operation, and he kindly offered to let me have some periosteum from an amputated leg; but, unfortunately, the inflamed condition of the sac gave me no chance of choosing my time. The capability of grafting living tissues, and seeing them still live, has been proved in the case of cuticle on the surface of ulcers and skin in cases of ectropion; the special instance which suggested the grafting of periosteum to my mind, was the witnessing of the continued vitality of two flaps of skin which I detached from the forearm and transplanted to the nose, in a case of nasal deformity.

The points of interest to which I would draw attention are:

1. The performance of the operation with strict antiseptic precautions, the eucalyptus air being used instead of carbolic spray.
2. The principle of closing the meninges, by bringing together the serous surfaces, as in peritoneal surgery.
3. The possibility of transplanting periosteum, and its continuing to live.
4. The entire absence of adverse symptoms.
5. The illness of the mother during early period of pregnancy, and its questionable bearing on the condition of the child.

The following description of the specimen, which is preserved in the Leeds Medical School Museum, has been furnished by the curator, Mr. F. H. Mayo.

The sac, somewhat contracted from being in spirit, is about the size and shape of half a swan's egg, being 2½ inches in length, from above downwards; 1½ inches in breadth, from side to side; 1½ inches in depth, from base to apex. The sac-wall consists of true skin and subcutaneous tissue, lined by serous membrane, and is about the thickness of ordinary skin, except at one point, about the size of a sixpence, situated just to the right of the apex, where it is so thin as to be quite transparent, appearing to consist only of the serous membrane and a very thin layer of epidermis, and where fresh minute blood-vessels could be distinctly seen ramifying over it.

February 10th, 1883.—It is now four months since the operation,

and two months since the child was shown to the Leeds and West Riding Medico-Chirurgical Society.

It has thriven well, and is now strong and healthy. The skin over the lumbar region is quite flat with the rest of the back, and the site of the tumour is only marked by the line of incision.

Apparently no new bone has formed, since the structures covering the spinal hiatus feel soft. They seem to be thicker than the skin and meninges employed to cover in the gap; therefore, it is just possible that the transplanted periosteum has survived, and now renders the covering more firm than it otherwise would be.

Although one cannot help feeling disappointed that new bone has not formed, I shall hope to have better success when I can transplant periosteum from a recently amputated limb, and not from one of the lower animals.

With or without the transplantation of a bone-forming membrane, this method seems to me to be worthy of further trial; as in the above recorded case, the cure is as good as can be desired.

INJURIES OF THE HEAD IN RELATION TO CRIMES OF VIOLENCE.

By CLIFFORD L. DREW, M.B., M.R.C.S. Eng., etc.,
Late Resident Surgeon, Millbank Convict Prison.

THE subject of crimes of violence in connection with cranial injuries is, I believe, as far as the Convict Service is concerned, an uninvestigated field. All scars, or other cranial injuries, are entered in the description of the prisoner on his medical history sheet, but I am not aware of any possible connection of these with the prisoner's position being considered in the light of cause and effect. My attention was called to this subject by several very interesting cases, which were sufficiently well marked to at least make one wish the subject could receive more attention. A very shrewd observer told me that, after nearly thirty years' experience among prisoners of the most violent and dangerous type, he was fully convinced that the cranial injuries received by prisoners did, in some way, influence their careers. One thing is certain; that, among convicts, a great number of epileptics is found; and when one considers that it is quite exceptional to find a prisoner of the lower class without the remains of a scalp wound, the question naturally occurs—what effect has the injury had? Out of one hundred cases, taken indiscriminately, I found only 8.8 per cent. without some cranial injury or other. As many prisoners have led exceedingly vicious lives, and many, probably, have inherited tendencies, it would very likely be impossible to ever draw any reliable conclusion on the subject of simple scalp wounds.

The subject which these few remarks is intended to open up, is that of depressed fractures in relationship to murderous assault and crimes of that order. The following are good examples of different types of cases referred to.

CASE I.—The prisoner, a mate of a vessel, well educated, and with an exceedingly retentive memory for dates and names, was sentenced to penal servitude for attempting to shoot one of the crew. As a rule, his certificates showed that his conduct had been excellent, but one or two told a different tale. On several occasions he had broken out in paroxysms of frenzy, and had attempted violence, for which he was placed under restraint. This man was put under medical observation, as he showed signs of mental derangement. His one great complaint was "an undue quantity of blood to his head," and, indeed, this remark first drew my attention to his condition. A lengthened observation confirmed the suspicion of his mental state, and he was eventually removed on this account. He always objected to answering questions, as he said he became confused, and could not correctly state what he wanted to say. During a conversation one day, he told me that, at the former prison, he had received corporal punishment for insolence to an official. I can hardly believe this, as that sort of punishment is now only resorted to in extreme cases. I should fancy that no director would undertake the responsibility of according such a punishment for an offence of that nature. If his statement were true, it would be conclusive proof that his mental condition had not been suspected. This man had a depressed fracture of the frontal bone, caused many years ago by falling on a nail.

CASE II was that of a different type of criminal from the last. This convict, during work, made a murderous attack with a shovel on a warder. In his case, there was also a deeply depressed fracture of the skull. His intellect was of a low order, but he showed no evidence, during many months of observation, of passion.

CASE III occurred in a soldier—a most insubordinate man, with uncontrollable temper. In this case, there was a depressed fracture of the frontal bone. This fracture prevented his being certified fit for corporal punishment.

Roderick McLean, who attempted to shoot Her Majesty, I believe had received an injury to his head; and another instance occurred in the case of a man who, on being checked or contradicted in a public-house, made a murderous attack on a policeman. In both these cases, we have no evidence of the nature of the injuries. These cases are examples of classes of criminals deserving great attention. We know how men who have received sunstroke or other injuries to the head are often irritable, and easily affected by a small quantity of alcohol. How much more would a depressed fracture be likely to cause these results? Whether the fracture cause a protrusion of the inner plate of the skull, thickening of the membranes, or inflammatory deposit, the morbid condition is a latent one, and only requires an exciting cause to produce results. This exciting cause may be alcohol, any irritating remark or contradiction; and either of these appears sufficient to develop paroxysms of uncontrollable passion.

The important question to which this subject gives rise is, Does such injury, and consequent local affection of the brain, weaken the moral control of the individual? The inquiry is a most difficult one, and thorough investigation is probably impossible, as far as convicts are concerned, for the following reasons: 1. The statements of the convict cannot be relied upon; 2. In most cases, no family history can be obtained.

One object is gained by investigating this subject; and that is, to consider all criminals with depressed fractures of the skull as dangerous, and requiring specially careful and judicious management. If it can be proved that such men are easily excited, and rendered unaccountable for their actions, surely they should not be treated as ordinary criminals, subjected to rigid discipline, and surrounded by associations that would naturally tend to excite the paroxysms of maniacal passion. It may be said that these were cases of homicidal mania; if so, the question still remains, What had the fracture to do with the condition?

These few, and, for the foregoing reasons, necessarily incomplete remarks, are made simply as a hint for the further investigation of a subject of no slight importance to both the criminal and the public at large. I no longer have any opportunity for continuing the inquiry; but, should any light on the subject be forthcoming, my object will be effected.

GUNSHOT-WOUND OF ABDOMEN: ABDOMINAL SECTION: WOUNDED INTESTINE SUTURED TO SURFACE: DEATH FROM SHOCK.

By JORDAN LLOYD, F.R.C.S.ENG.,
Casualty Surgeon to Queen's Hospital, Birmingham.

THE following case is of interest, being the first, so far as I am aware, in which this procedure has been adopted. It is the outcome of remarks upon this subject published in the *BRITISH MEDICAL JOURNAL* of December 10th and 17th, 1881, by Dr. Marion Sims.

M.L., aged 19, a domestic servant, was admitted into Queen's Hospital late in the evening of February 23rd last. She had been accidentally shot in the abdomen a few hours previously. There was little evidence of shock; she had not vomited. The bullet had entered slightly to the left of the median line, immediately above the pubes. A finger passed readily into the peritoneal cavity. A drainage-tube was inserted into the wound. On the following day, she had some pain in the belly, and was sick. Temperature 99°; pulse 100. On the 25th, her symptoms had increased, but were not urgent. Evening temperature, 99°; pulse 136. On the 26th, she was much worse; vomiting persistent; pain constant and very severe; belly distended; face flushed; anxious expression; temperature 99.4°; pulse thready, 148. In the evening, I opened her abdomen in the usual manner; there was at once a free gush of stinking thick brownish-red fluid. The great omentum was first seen red and thickened in its lower half, and fairly natural above. The intestines in the pelvis and lower zone of the belly were matted together. The wound was traced into the abdomen, and then became lost. A coil of gut was hooked up out of the left iliac region, and in it a ragged wound about three-quarters of an inch in diameter was found, through which yellow faeces escaped. The cavity of the belly was washed with plain lukewarm water; a large glass drainage-tube was inserted into the pelvis; the intestine was stitched to the centre of the wound,

the remainder of which was closed with silk sutures. She never rallied from the operation, and died about half an hour afterwards.

Post mortem examination showed that the bullet had entered half an inch above the pubes, and three-quarters of an inch to the left of the mid-line; it had contused the apex of the bladder; had cut through the free edge of a coil of small intestine; had perforated the mesentery, and lay between this latter and the transverse mesocolon. The upper half of the abdominal cavity and its contents were not inflamed. The peritoneum had been efficiently cleaned, being free from all foreign matter.

When the patient was admitted to hospital, it was considered doubtful, from the situation of the wound and the comparative absence of shock, whether she had an injury to any abdominal viscus. It was thought best, therefore, not to open the belly at once. The onset of peritonitis at a later period, and the clearly threatening fatal issue, called for and justified the treatment subsequently undertaken. I should not hesitate in a similar case to immediately open the abdomen, and ascertain the precise nature of the injury with which I had to deal. The greatest source of danger in these cases is delay. The most precious moments to the surgeon are those immediately subsequent to the injury, when the peritoneum has undergone as yet no pathological change; when it is merely polluted by products of a most irritating but easily removable character. Should no lesion of abdominal contents have occurred, the operation-wound may be closed; the patient's dangers being but little increased by the investigation. When wounded viscera are discovered, they may either be fastened to the surface, or sutured and returned, according to the nature of the lesion. In the majority of instances, I think it will be found desirable to secure them to the surface. Where delay, say of three or four days, has been inevitable, as must of course sometimes happen, I should content myself with merely opening the peritoneum, liberating the pent-up fluids, washing the presenting cavity, being careful in no way to disturb the viscera, and then securing in a large sized Keith's drainage-tube. I think we shall find, if a patient live three or four days after such an injury, that the wounded viscera will be practically closed by adhesions to neighbouring parts, and should not be disturbed. In my case, I am of opinion that the foul discharge which escaped when the abdomen was opened was due, not to faeces which were pouring out at the time of the operation, but to those which immediately followed the accident; the contents of the gut and those of the peritoneal cavity being strikingly dissimilar.

I must thank my colleague, Mr. West, for entrusting the patient to my care; and my friend Mr. Lawson Tait, for his valuable and courteous presence at the operation.

OBSERVATIONS ON THE TREATMENT OF UTERINE CANCER WITH CHIAN TURPENTINE.

By E. HOLLAND, M.D., M.R.C.P., F.R.C.S.,
Senior Assistant Physician Hospital for Women, etc.

It is pretty generally known in the professional and lay society of England, that Chian turpentine was introduced to our notice by Mr. Clay of Birmingham as a specific for cancer of the uterus, and that, from the first, preconceived prejudice almost excluded anything like a fair and patient trial of the vaunted virtues of this old Ægean drug. Chian turpentine, however, became in great demand, scarce, and dear, no two obtainable specimens being alike; and in this chaos of circumstances, it was a reasonable assumption on the part of Mr. Clay that the reported failures of the drug were owing either to its fictitiousness, or to our imperfect method of administration; and, as I had previously treated a series of cases with a variety of specimens, I considered it would be best to repeat my observations with the essence of Chian turpentine of Mr. Clay's pharmacy, and of his own apothecary's preparation. This second series of cases were appropriated as they presented themselves; and, with one exception, were so well advanced that no competent person could entertain the least doubt of their malignant nature. The essence was administered alone, or in association only with its local application as an ointment (one ounce of vaseline to half a drachm of Chian turpentine), and it was pressed from one to three months; no surgical operation being in the meanwhile allowed.

It is a well known fact amongst gynaecologists, that syphilitic disease of the uterus occasionally so closely mimics malignant disease that the diagnosis can be alone effected by a reference to specific treatment; and, consequently, where the history revealed any doubt, the case was at first treated by iodide of potassium, and the Chian