CASE III. *Popliteal Aneurism; Failure of Treatment by Compression; Ligature of Artery; Cure; Abscess in the Ham two years afterwards.* William Stewart, aged 30, militiaman, admitted into the Leeds Infirmary Aug. 19th, for popliteal aneurism. Compression treatment of the femoral artery was adopted by Mr. Teale for a considerable time, and produced a marked diminution in the size of the tumour; but severe symptoms of gastric disturbance, attended with fever, set in; and the patient became quite intolerant of the pressure. Mr. Teale therefore tied the superficial femoral artery on the 6th of September. On the 7th of October, Stewart was made out-patient; and on the 21st of October, 1852, he was discharged cured. He continued well for upwards of two years, and worked hard as a labourer, but at length felt pain and swelling in the ham, and stiffness of the knee. He was admitted in this condition into the Infirmary, and was evidently suffering from deep-seated abscess in the popliteal space, which had made its way to the surface at one point, and had discharged a little sanious matter. August 6th. The abscess was freely opened, as well as numerous sinuses burrowing upwards towards the thigh and downwards to the calf. At the bottom of the sinuses numerous large white sloughs were seen. 13th. The sloughs have nearly separated. An abscess at the upper part of the calf opened, which contained a small portion of lamellated fibrin. Oct. 5th. He has steadily improved since the last date, with the exception of a slight check from a fresh abscess, which was opened. The wounds are now nearly filled with healthy granulations, and are rapidly closing. He is made out-patient.

It is quite evident, in this case, that the remnants of the aneurism had lost their vitality, and had sloughed, and thereby had set up the deep-seated suppuration in the ham.

ORIGINAL COMMUNICATIONS.

REMARKS ON ACCIDENTS OCCURRING TO COLLIERIES.

By G. MALLETT, Esq.

MEDICAL men, residing in localities surrounded on every side by coal mines, must have many opportunities of witnessing severe accidents. I have been called upon to attend professionally many very severe cases, and have been much struck with the fortitude—or, perhaps I should most properly denominate it, the stoical indifference or apathy—with which the pain arising from great bodily injury is endured by the colliers or miners. I am also convinced that recovery takes place from such an amount of injury as would in all human probability have proved fatal if it had occurred to individuals occupying a higher social position.

I published a paper in the seventh volume of the *Transactions of the Provincial Medical and Surgical Association*, in which is described several cases of compound fractures of the skull, attended with great loss of cerebral substance, and from which condition recovery ensued. As they have been there already detailed, I do not think it necessary to allude more particularly to them. I will therefore at once proceed to relate a few instances of severe injury to other parts of the body.

CASE I. John Isherwood was injured by a railway coal carriage passing over his legs. His right leg was so shattered that it was only attached to the body by a few fragments of the gastrocnemii muscles, and the left foot was crushed to such an extent as to render its removal necessary.

The right leg was amputated a few inches below the knee; he bore the operation without any expression of pain; and when finished, I told him that the other foot must be removed, and asked if he could then bear it. His answer was given with the greatest coolness, "that I had better make a complete job of it at once". I then separ-

ated the foot at the ankle joint. The recovery was rapid. His employers kindly found him another occupation, which he followed many years.

CASE II. John Higson was injured by the fall of some tons of earth from the roof of the mine in which he was working. I was called upon to see him, and certainly never before had I beheld the human frame to be so much shattered, and to recover.

His scalp was extensively torn, and the skull laid bare; the left ramus of the lower jaw was broken, and the bones protruded; the right humerus was broken in two places, one fracture high up, the other just above the condyles. The first was comminuted, and one small portion of the outer lamina of the bone so far separated from the shaft, that it was found sticking into the biceps muscle, and accompanying it in all its contractions. The femur on the same side was broken near the lower third. Some of the ribs on the left side were also broken; but the examination gave so much pain, that I could not ascertain how many. At first, I thought the man must die—there being three simple and one compound fractures, besides injuries to the ribs and scalp; but finding the nervous system had not received so severe a shock, as from the extent of the injury might have been expected, the limbs were placed in as good a position as circumstances would admit of, and in about four months recovery was perfect.

Upon measuring the injured thigh, after his recovery, it was found to be about half an inch shorter than the other, and the small portion of the humerus still remained sticking in the biceps muscle; a slight cicatrix was also visible in the lower jaw: in all other respects he was completely well, and able to resume his dangerous employment.

CASE III. John Lee was injured by a stone of great weight falling upon him from the roof of the pit. His right arm was broken very near to the elbow, and the fracture appeared to extend into the joint. The upper end of the fractured bone protruded through the integuments in front, and the swelling around the injured part was very great, evidently arising from extravasated blood. No pulsations could be distinguished in either the radial or ulnar arteries, and the limb was colder than the corresponding one. It was therefore concluded that the brachial artery was torn, and that the swelling near the seat of the injury was the consequence. The right side of the chest was so much crushed, the ribs being broken and driven inwards, that blood and froth continually issued from the mouth. The respiration was so distressing and laboured, that he was to all appearance moribund.

As death appeared so imminent, I merely placed the bone in its natural position, bent the arm at right angles, applied lint and a bandage, and left it suspended in a sling. I departed without the slightest expectation that he could survive many hours. However, my expectations were erroneous, and at the end of a week his pulmonary symptoms were relieved, and the arm no worse. Believing for some time that the chest affection was too severe to admit of any rational hope of recovery, I took no notice of the arm, until he had so much improved as to hold out some expectation that he might possibly recover.

Upon then examining the arm, I found the broken ends of the bone very nearly in apposition, and the enormous blood swelling in some degree diminished. No pulsations could be felt at either the radial or ulnar arteries, and the arm still remained rather colder than the rest of the body. He ultimately did well, and recovered, with a stiff elbow joint. When I last saw him, two or three years after the accident, the radial and ulnar arteries were still pulseless.

The sufferings arising from this accident, as well as the preceding one, must, we suppose, necessarily have been severe; but they were endured as matters that could not be helped, and without complaint.

I will only mention one other rather curious case, and conclude my paper with a few observations, which have already extended to a greater length than I intended.

CASE IV. A collier, of whose name I have neglected to make a record, was being hoisted up from the bottom of

the pit. Of course, it was the duty of the engineer to stop the engine as soon as he had arrived at the upper regions, the *superius auris*, but the duty was neglected. In consequence of which negligence, the man was carried up and forced between the roller, round which the rope was being wound, and the beam above. The back part of his head came into contact with the beam, and the head was forced down upon the chest. In that position his body was drawn through so narrow a space, that I should be afraid to say how narrow, lest I should seem to state an impossibility, but certainly it was not greater than ten or eleven inches.

When I first saw him, two or three hours after the accident, he was perfectly sensible, but complained of great pain in the neck. He had but little power of motion in the left arm, none in the right, or in either of the legs, but sensibility to touch remained in all. His respiration was quite natural, and excepting the pain in the neck and the paralytic condition of the extremities, he did not appear to be much injured. On the day following, I found him in much the same state, and it was necessary to introduce the catheter. From that time he gradually improved, and required little assistance of any kind. In about a fortnight he was so far recovered as to be able to walk about—weak, certainly, in his legs, but able to walk without assistance.

In this case, the cerebral vertebrae by being bent and doubled upon the chest, caused the spinal cord to be so much stretched and strained as to induce temporary paralysis; but the injury fortunately was not so great as to be irreparable by the *vis medicatrix naturæ*.

These few cases have been selected from many, not because there was anything peculiar either in their nature, their treatment, or that they were likely to prove practically useful and instructive, but because they appear to support the opinions, that miners endure severe injuries with less outward exhibition of suffering than others, and also recover from accidents of so much severity that they would in all probability have been fatal if they had occurred to individuals whose physical frames had been less hardily educated, and whose intellects more highly developed. I have therefore not thought it necessary to enter into minute details with regard to the treatment, or to give more than a slight sketch of the prominent features of each case.

When we consider the mode in which hour after hour of the miner's gloomy and monotonous existence is spent, in darkness, or with light serving but to render "darkness visible", picking out masses of coal from the gloomy stratifications spread around and above them, frequently pursuing their work in silence and solitude, and sometimes in mines so shallow as to compel them to work either sitting on their heels or almost prostrate, according to the height of the roof or thickness of the bed of coal.* A life so spent must exhibit few opportunities of calling out and cultivating the sensibilities of the nervous system; on the contrary, the tendency must be to depress its natural activity, and to render it less sensitive, in short, apathetic. They are indifferent to danger; they face their last enemy, death, and shrink not. Whether it be, because life is indifferent to them, having so few moments of enjoyment; or whether it arise from that apathetic state, before mentioned, I know not; but certain I am, it exists in a greater degree than I find it in those of higher rank and more cultivated intellect. The North American Indian is said to face death in its most terrible shape with calmness, and to endure torments the most horrible with the greatest *sang froid*. I do not consider these powers of endurance in the miner or the Red Indian to be the result of heroic fortitude, or a higher cast of mind, but their nervous systems being less developed, there is, consequently, less pain to bear from the same amount of violence and injury than there would be if inflicted upon others, whose nervous systems have been differently educated. It may be good poetry to exclaim, that the "beetle suffers a pang as great

as when a giant dies", but I feel satisfied that it is not good physiology.

I attribute also the frequent recoveries of miners from injuries, that would probably have been fatal to others, to their comparative insensibility to pain. They feel less; therefore the organic functions go on with less irregularity and disturbance than they would do, were their minds harassed and disturbed with apprehension, and their bodies racked with pain. In the evening, when the day's toil is over, this class of workmen do not appear to exhibit much vivacity and energy. They are frequently seen sitting upon their heels, in the position in which many of them are constrained to work, smoking their pipes or quietly inhaling the summer evening's breeze.

In the above remarks, I do not wish to be understood as intending to assert that all colliers or miners exist in such an unintellectual and apathetic state; there are no doubt many exceptions; but I feel satisfied that the majority are very low in the scale of intellectual culture, and that the nature of their occupation is such that we might almost have predicted that such a mental condition must inevitably be the result of such an occupation.

Bolton-le-Moors, September 20th, 1855.

ON EMBRYOTOMY IN PRESENTATIONS OF THE SUPERIOR EXTREMITIES.

By J. G. SWAYNE, M.D., Physician Accoucheur to the Bristol General Hospital; and Lecturer on Midwifery, etc., at the Bristol Medical School.

[Read at the Quarterly Meeting of the Bath and Bristol Branch, September 1855.]

IN arm-presentations, when turning is impracticable, as in head-presentations which do not yield to the forceps, the last resource of the accoucheur is embryotomy. In either case, the operation consists of two distinct processes, viz., evisceration and extraction; performed somewhat differently, however, in the one case, as compared to the other.

The remarks I am about to offer will refer solely to embryotomy in arm-presentations; and it will be my object to show that the extractive part of this operation ought to be conducted upon precisely the same mechanical principles as those which nature adopts in what is termed "spontaneous evolution" of the fœtus. The three following cases will serve as illustrations; the first is one of spontaneous evolution, and occurred to one of my pupils (Mr. Dymoke), upon whose accuracy of observation I can place implicit reliance. I therefore relate it in his own words.

CASE I. "I was called to see Emma A., about 5 A.M., August 10th, 1852, when I found her in active labour. Upon examination, I discovered that the membranes were ruptured, and the right shoulder presenting, I directly set about attempting to turn the presentation; but, owing to the pains being very strong and continuous, I could not succeed in bringing down the feet, or in altering the position of the child. The labour advanced quickly and easily into the second stage, and the shoulder protruded from the vagina. Shortly afterwards the arm prolapsed. The child remained some time in this position; and, the pain being very strong, the body of the child was forced down lower and lower in the pelvis, until it protruded, the right side being the prominent part, and the arm and shoulder remaining all the time, as at first, outside the vagina. The child remained in this position for some time, gradually descending, and becoming doubled completely backwards. I then assisted as well as I could in furthering the descent of the hips, and by supporting the perinæum; and the child was born about 8 A.M., the hips and knees bent up coming first, and then the feet, without any alteration in the position of the presenting arm and shoulder. The child was dead, the circulation in the cord having been stopped by pressure (it grasped my finger with its hand when that part first appeared). It was a male child, and a fine one. There was no laceration of the soft parts of the mother; no

* Many of the mines worked are not more than twenty inches in thickness.