She has gone on favourably in every respect since. I saw her to-day, January 31st, and she is quite comfortable.

Case 2.—Thursday, January 27th, I was sent for to Mrs. Lockley, in labour with her first child. I saw her at a quarter to four, p.m. Pains had commenced at eight the preceding evening, with an interval of half an hour for the first few hours; they then became more frequent, and for some hours previously to my arrival came on every five minutes. Expulsive pains weak; os uteri dilated to a size larger than a crown-piece; great thickness of perineum, and a considerable portion of the anterior lip of the uterus to be obliterated. My impression was, that she would not be delivered till twelve that night. On naming the chloroform, she was anxious to have it administered. I did so with the most satisfactory results, as the particulars subjoined will, I think, amply testify.

Mrs. Lockley is of a florid healthy appearance, rather stout, aged 25. Pulse 110. On examination the vagina evinced great irritability.

Quarter past 4, p.m. Fifteen minims of the chloroform were administered with a sponge; she was under its influence in less than a minute. In three minutes uterine action came on of a more expulsive character than before; the parts were strikingly relaxed; irritability of vagina vanished. After an interval of four minutes another pain came on. She afterwards opened her eyes, and on being asked whether she felt any pain, said "No! But I was conscious of something." She dozed between the pains. She then had six pains in the natural way during the next half hour; they were strong, not at all diminished in power or frequency. She assured me they were much deadened.

Ten minutes to five, 20 minims. In two minutes a very strong pain came on, followed by another in a minute, under the influence of which the membranes gave way. She seemed comfortably asleep at this time.

Five minutes to five. During a strong throes of labour, I pressed firmly on the perineum internally; she seemed however quite unconscious.

Five o'clock. Quite recovered from the effects of the chloroform. For thirteen minutes from this period she had four pains, not at all diminished in power, &c. Sensation of pain much diminished.

13 minutes past 5 .. 20 minims, with like effects.

$\frac{1}{2}$ past 5 30

6 o'clock 30

25 minutes past 6 .. 30

20 minutes to 7 30

5 minutes to 7 30

Three minutes after seven, 60 minims; pains are now very forcing; head begins to press on the perineum. Sixty minims.

20 minutes after 7.. 30

$\frac{1}{2}$ past 7..... 30

25 minutes to 8 30

12 minutes to 8 30

5 minutes to 8 30

For the last half-hour or more has been in a dreamy unconscious state.

Eight o'clock. The child born alive, a fine girl; the placenta followed in about five minutes; uterus well contracted; no hæmorrhage.

Shortly after her delivery she became conscious, but seemed much disposed to doze. She was conscious of the placenta coming away, but did not feel any pain; she screamed out at the last throes but one preceding the passage of the head. On my naming this to her, and fearing that she must have suffered much at the birth of her child, she replied, "Oh! no sir, I knew nothing about it; I was in a dream, and I saw my brother drowning; I called out and tried to catch hold of him, to prevent him from sinking."

Friday, 10 a.m. I was informed that she slept for four hours after I left her last night. She had a good night, and has gone on favourably ever since. The lochia were natural; the milk appeared on Saturday night.

February 1st. I found her sitting up in bed, with the child in her lap, and looking well.

CASES FROM PRIVATE PRACTICE.*

By JOHN RICHARD WARDELL, M.D., Edin.;

Late President of the Royal Physical and Hunterian Medical Societies, Assistant Pathologist in the Royal Infirmary, Edinburgh, &c. &c.

INFANTICIDE.

REMARKS.—When employed at the inquest held on the first of these cases, it was not without a full consciousness of the serious duty which was then to be discharged;—serious, because there was no circumstantial evidence beyond the mere fact of the discovery of the body, to lead to the supposition that the child had been murdered, and upon the *ipse dixit* of the medical evidence, would the nature of the verdict, mainly, if not entirely, be decided, and therefore upon the view about to be taken of the matter, would be based important dependencies, it might be, the life or death of another individual. It is not at once sweepingly to be concluded that because the body of a child is found, as in this case, under suspicious circumstances, it has been feloniously destroyed; the mere discovery of the corpse, although it might highly favour the presumption, could not alone warrant us in arriving at such an inference; other enquiries would have to be made, and certain questions previously decided,—for instance, as to whether the child were at maturity; if it had maintained a separate existence; if its death had resulted from wilful or natural causes; what were the proofs of its having been maliciously destroyed, with like questions, which ought of course to be determined.

In former times concealment of pregnancy or of birth in this country were held capital offences, and many unjustly suffered under this barbarous law; in later

times, however, this and similar cruel statutes have wisely been repealed, and now none suffer where it has not been satisfactorily proved that murder has been really committed. The law, with a proper humanity, supposes all children to be born dead, the *onus probandi* therefore being thrown upon the prosecution, and not as before upon the accused. When a female belonging to a respectable sphere of life is heartlessly betrayed, and finds herself in a condition which, as soon as known, must inevitably hurl her from her status in society, if such do not bring her to utter ruin; when she droops under the withering consciousness of self-debasement, consequent upon the loss of virtue, and knows not how or where to seek for refuge, or look for sympathy; week after week passes on in this dreadful state of irresolution and disquietude of mind; she dreads to reveal the "big secret of her breast," which must be fatal to her respectability, and the certain destroyer of her peace; perhaps by successful artifice she adroitly manages to hide her shame until very near, or even to the end of pregnancy; the mind has been long lacerated by its torturing reflections, the health has suffered, the spirits are depressed; labour with unexpected suddenness supervenes; in the agonies of mental and corporeal suffering, her anguish is so intense as for sometime to deprive her of consciousness; the child is lost during the process of unaided delivery, or for the want of proper assistance dies after it has been expelled, and for a moment maintained an independent existence. Might she not on calm, deliberate reflection, after having regained her senses, and finding her offspring dead, dispose of the body with little or no compunction of conscience, by which decision she might hope this deviation from the paths of virtue would be veiled from the public eye,—reputation and standing preserved,—the feelings of friends be spared,—the future, instead of presenting a saddening scene of misery, would thus, under repentance for past folly, hold out cheering hopes of future happiness. She conceals it; the body chances to be found; the mother is made out, she is accused, and though innocent, few or none suppose so; she is arraigned for one of the darkest of crimes.* Instances of this kind have occurred. Again, temporary derangement has been known to come on about the time of delivery. From such and other circumstances, might not the mother destroy the new being at a time when she was irresponsible for her actions? Certainly. The child might be suddenly born when the woman was at stool, faintness and insensibility come on, and the infant suffers. To cite a case in point which happened a few months ago, the detail of the autopsy of which is given before. Mr. Ness, the coroner of the district, in a letter, thus speaks of the instance:—"The verdict of the jury was that the child died from suffocation, but by what means produced there was no evidence. The mother's story was that the child

was born while she was attempting to have a motion, but she fell on the floor insensible, and when she came to her senses the child was laid on the floor, dead. She acknowledged placing it in the well a few hours after." The woman was acquitted of the grave crime of infanticide, by receiving the advantage of the possibility of the infant having so suffered, but she was punished by a sentence of two years' imprisonment, for concealment of birth. From the determination of blood which there is induced, by the violent expulsive efforts in the encephalon, as also from the great irritative disturbance which the process of parturition is apt to produce in the cerebro-spinal system, temporary insanity might thus, as it does sometimes, occur. The writer knows of a person who has borne several children, in whom, towards the end of two or three of her pregnancies, mania became manifest, which however vanished soon after delivery.

It is clear, then, that it would be exceedingly wrong to say, that because the body of an infant was under suspicious circumstances discovered, its life had been wilfully taken, and as above observed, certain incontestable facts would in addition be indispensably requisite before we could conscientiously depose a statement so important. On a perusal of several authors on infanticide, it is surprising to see the indefiniteness of their statements, and that there appear to be exceptions to every rule associated with the subject; such indeed, are "these glorious uncertainties in the law," that it is quite obvious an ingenious and well-read pleader might get off parties with whom there was no moral doubt of guilt, nor could they be punished unless confession were made, or there were actual witnesses of the deed. The medical evidence is summoned to give his medical opinion as deducible from what is seen *sub oculis*, and there his duties terminate; his depositions are to be made irrespective of prejudice, and it then remains with the jury to decide as to the nature of the verdict. The medico-legalist ought in all cases to base his inferences upon a general review of *all* the facts, and not upon an isolated consideration, or he may incur the risk of erroneous deduction.

In these observations it will briefly be endeavoured to shew that in the above reports there are some striking resemblances, and by drawing a comparison between the two, it will be seen they are in many respects alike. Dr. Wright's case appears to have been taken with much anatomical exactness, and that gentleman has very properly noticed all those leading features, which the case and circumstances seemed to demand.

Respecting the body of the female, from its general aspect the most cursory observations rendered it manifest that but little time had elapsed since its birth, there being no indications of decomposition, nor indeed anything much dissimilar to what is perceived

* See Dr. Hunter's Eloquent Tract.

shortly after death. From the particulars which are given, it must needs be deemed incontestably clear, that both were at maturity, nor are there any feasible grounds for the supposition that they could not have supported a separate existence. Their lengths, the abundance of hair, their weights, the well-formed nails, &c., exemplified that they had not been born long, if at all, before the full period of gestation. The length of the body of a matured infant at birth, has on an average been stated at eighteen inches. One of these we see measured nineteen inches and three quarters, and the other twenty inches, which was thus about a tenth more than ordinary. The hair and nails do not become perfectly developed until the last month of utero-gestation, but in each they reached beyond the tips of the fingers. Some have asserted that at the ninth month the umbilicus will be found inserted at the point corresponding with the exact centre of the body, which was the statement of Chaussier; but M. Moreau has more recently demonstrated this to be incorrect, for sometimes the insertion is an inch or an inch and a half nearer the pubis. The saponaceous matter which is usually noticed at birth, and that by certain writers is deemed indicative of maturity, was abundantly present in the female, but on the male none was to be observed, which suggests the question,—had it been washed before, or subsequent to death? "At the ninth month the sebaceous secretion is copiously found on the skin," says Dr. Cummin, when alluding to this point. When children are still-born, the thorax, owing to the yet collapsed condition of the lungs, and the influence of external atmospheric pressure, has not that full and rounded appearance presented when respiration has been thoroughly performed. When free breathing has taken place, the intercostal spaces are completely obliterated, and the surface feels even to the touch. In the former illustration the plumpness of the chest rendered it highly presumptive, before any dissection had been made, that the lungs on being exposed would be found to have attained their normal magnitude of expansion, and this undoubtedly by the respiratory function having been properly in action.

On giving evidence at the examination on the inquest, I specially directed the attention of the jurors to the state of the funis, which was soft, shining, flexible, and pearly-looking; at its umbilical insertion there was not the least appearance of decay; of itself there was no wrinkled contraction, its colour was unaltered, and indeed in all its characteristics it was little, if at all, dissimilar to what it is at birth. The extent of the cord that remained was not less than three times the length that is left when it is divided in the usual manner by a midwife; and two additional points of considerable importance were indisputably evident:—first, that it had been torn in two; secondly, there were no traces of any ligature having been applied. In Dr. Wright's case the cord had also been

torn, and the extremity was ragged, nor were there indications of a ligature. Being thus rudely rent asunder, and no string having been tied around, attested that the ordinary precautions had not been observed in order to guard against the supervention of hæmorrhage—(that is, supposing the children to have been born alive, of which there was no doubt whatever,)—a consideration which from custom alone is in common cases never omitted by those in attendance, and nurses and women-attendants are ever very solicitous respecting the tying of the navel-string, and always ascribe to this duty more importance than is really of consequence. Any woman in attendance, where the ordinary care and preservation of the child were considered, would never think of forcibly breaking the cord; and in those instances where the child is precipitately expelled, when the mother is in an erect position, the laceration, as confirmed by experiment, by far most frequently takes place at one or other of its insertions, generally at the umbilical end;* and supposing it to have been still-born, if no criminal intentions had been entertained by the mother, or party or parties present, it is fair to presume that some cutting instrument would have been employed. It is true, granting the presumption of still-birth, that they might be careless of the manner in which it was severed, yet such does not do away with the very high probability of the less grave offence—concealment of birth—but rather confirms the supposition. The manner in which the cord had been divided in No. V., added to the suspicion of its being feloniously destroyed; and in No. VI., by its being lacerated towards the umbilical extremity, we are led in this particular to give the accused the benefit of the probability that it had been broken during precipitate expulsion. When the cord is kept insecure, the infant may die from the loss of blood, which is termed *infanticide by omission*; yet if the circulation has undergone its proper change, but few (if the ligature were not applied,) would die from hæmorrhage; nevertheless, such is the law of the country, and where it can be indubitably proved that such precaution is willingly and maliciously omitted, the accused becomes liable to the penalty of the crime. When a child has thus suffered, the body looks white and bloodless, the large vessels are found drained of their contents, and little attention is required to correctly decide upon the cause of death.

In neither of these examples was there any evidence of the kind; in the female the viscera were normally supplied with blood, and from Dr. Wright's report the same remarks are equally applicable relative to the male infant.

In both instances it is mentioned that they were smeared with meconium. The escape of this matter has been deemed confirmative of the supposition that independent life had been carried on;—in other words,

* Klein.

that the child had been born alive. This is merely mentioned amongst other facts, yet it is, perhaps, not much to be relied upon, because in breech cases, where the infant is still-born, the posterior parts are often covered with meconium matter.

The lineal mark on the anterior part of the neck of No. V., from the excoriation, the distinct ecchymosis and the bruise-like patch spoken of above the clavicle, rendered it highly presumptive that such had not resulted from the wrapping round of the funis, nor yet from the only manner besides in which it could naturally have been done during parturition, viz., by the firm embrace of the edges of the os uteri after the head had passed out of the womb. Now, if it had been contended that the umbilical cord had strangled it, respiration would not then, of course, have taken place, the lungs would have been uninflated, and thus the functions so necessary and indispensably requisite to life, would have been prevented from ever having commenced, instead of having begun and been then suspended; but here the pulmonary organs gave undoubted evidence of respiration having been fully and perfectly carried on. But for the sake of argument we will suppose that the child was born alive, and that after its expulsion, the cord from the altered position of the mother, or the movement of the child, became tighter, and thus prevented the ingress and egress of air, the lungs would not then by such imperfect respiration have been so entirely dilated, because the state of expansion in which they were found, unavoidably pre-supposed these organs having for a shorter or longer duration performed their functions normally. If it had been strangled by the cord the marks left would have been far less distinct, and very different from those ensuing from violence. The eminent German writer Klein, thus expresses himself on this point:—"I have never met," says he, "with an instance of marks of injury of the kind supposed, ecchymoses or sugillations, produced by the orifice of the uterus, or the umbilical cord, although I have known a great number of cases in which the neck of the infant had been strongly girded by the funis once or twice twisted round it, strangulation having thus been actually produced or rendered most palpably imminent." The glairy lubrication of the cord would prevent such friction as would be required to abrade the cuticle; and besides, if the stipe had been produced in this manner it must needs have been broader and less clearly defined. On carefully dissecting down to the subcutaneous cellular tissue corresponding both with the line and bruise, extravasated blood, as mentioned, was at once apparent, and the substance of the sterno-cleido-mastoideus muscle showed that rupture and effusion of the minute vessels proper to its texture had ensued, which it is exceedingly probable had taken place during life. It is true, that, according to the statements of certain experimental writers, an

ecchymosis *may* possibly be produced after death (properly so called,) has taken place, owing to the capillaries retaining in some degree their action after the heart has ceased to beat; at least, such are the affirmations of Le Gallois, Wilson Philip, and other philosophical investigators.

It is said that capillary action is the last of all the corporeal functions, in ceasing their operations after the more manifest evidences of life, strictly so termed, are permanently suspended—the fibrillæ of nerves it thus appearing conveying the stimulus to vascular action, though in an impaired and imperfect manner, subsequent to the central organs having terminated their functions. Granting such doctrine to be to some extent true, we may, as said, conclude that the functions of the capillaries would then be but imperfectly performed—that their contents would pass along their course more tardily from the non-aeration of the blood and its consequent inspissation; hence it would not be so readily effused and an ecchymosis thus produced would be far less perfectly formed than during life, and therefore to ascribe the distinct, well-marked, and unequivocal extravasation in this instance, to injury after death, would be highly improbable.

It is undeniable that the accused has a right to the advantage of the most distant chances, and the common spirit of humanity alone would always dictate every leniency towards any one arraigned for so dire an offence; yet there is a converse duty indispensable for the maintenance of justice and the security of society, which renders it proper, and is imposed on all conscious individuals concerned in these investigations, that any far off possibility should not be made the loop-hole for the escape of crime, and the bearer away of guilt beyond the pale of the law. In evidence, it was given as an opinion, that these marks had been caused during life. "When the mark is deep," observes Mr. Taylor, "and much ecchymosed, with extravasating blood beneath, and ruffling and laceration of the skin, it is impossible to attribute this to the umbilical cord."* Orfila, respecting the signs of strangulation, delivers himself as follows:—"1. That a circular mark round the neck, with a corresponding effusion into the subjacent cellular tissue, indicates strangulation during life. 2. That though it be impossible to deny that this mark was produced by the orifice of the uterus or the umbilical cord, yet, since no well-authenticated case warrants us in admitting it, it is a natural supposition that the mark in question is the result of criminal violence. 3. That if this mark be combined with appearances denoting that respiration had been previously completely established, our inferences must be so much the stronger; for stricture by the neck of the uterus, or by the funis, cannot be supposed to have proved fatal with such appearances.

* Taylor's "Medical Jurisprudence," page 488.

4. That dark spots on the neck, without corresponding subcutaneous effusion, do not warrant the conclusion that the infant was strangled; but,—5. That, on the other hand, neither does the absence of such spots or such effusion, or of both together, strictly authorize us to conclude that strangulation did not take place.”*

The correctness of the latter opinions of this very eminent medical jurist is quite incontrovertible, and they well accord with the conclusions which must be deduced from the facts supplied by the case in question. Referring to the above report of the *post-mortem* examination, the reader will perceive that behind the pharynx, between the soft parts and the cervical portion of the vertebral column, some dark coagulated blood was discovered, and that the brain was in a highly congested condition, rendering it still more manifest that strangulation had been the cause of death. On removing the calvarium, the dark fluid blood that oozed away was very considerable, and manifestly showed that there had been very great determination of the vital fluid to this part, and which had been owing to vascular obstruction. In Dr. Wright's case the encephalic mass, and the vessels proper to its coverings, had been preternaturally distended, yet, judging from his report, the congestion had not been so great as in the instance examined by myself.

London, January, 1848.

* Dr. Cummin's "Proofs of Infanticide," p. 85.

(To be continued.)

Hospital Reports.

NEWCASTLE-ON-TYNE INFIRMARY.

CASES IN SURGERY ADMITTED UNDER THE CARE OF J. M. GREENHOW, ESQ., SENIOR SURGEON TO THE INFIRMARY.

Reported by Mr. S. MILLER, House Pupil.

FRACTURED SKULL.

The following cases are not without interest, as illustrating the less degree of danger resulting from such accidents in the young than in adult patients, in consequence probably of the more yielding and elastic character of the skull in the earlier periods of life.

CASE I.

William Murray, aged 2 years, a stout healthy-looking child, was admitted November 6th, 1847, at 9 a.m. Half an hour previous to his admission he had fallen from a first-floor window, striking his forehead on the stone pavement below. There was a small wound of the scalp over the middle of the os frontis accompanied with fracture of that bone; the left margin of the fracture was depressed completely below the level of the right margin, so that a probe could be passed beneath the latter. The boy was quite sensible when first brought to the Infirmary, and his breathing was natural; pulse quick, and very weak. In about half an hour after

his admission his breathing became stertorous, and there was occasional vomiting.

At ten o'clock Mr. Greenhow arrived, and with a scalpel enlarged the wound, so as to display the extent of the fracture. A small portion of bone was removed with Hey's saw; the depressed bone was then by means of an elevator easily raised to its natural position. The edges of the wound were brought together by a single suture, and adhesive plaster. Orders were given to the nurse to keep cold cloths constantly to the head. Very little blood was lost during the operation, nevertheless, the child was very much depressed, the pulse remaining exceedingly weak, and the insensibility continuing.

To take two grains of calomel every three hours, until the bowels are freely moved. To have weak brandy-and-water occasionally, in small quantities.

10 p.m. He has now become quite sensible, and knew his mother quite well this afternoon. Pulse firmer, but still quick; bowels have not yet acted. The colour has quite returned to the face; he does not notice any one unless he is roused. Continue the calomel, and take a tea-spoonful of castor oil in the morning.

7th. Has passed a very quiet night; speaks when roused; bowels have acted freely, and he has passed his urine; pulse quick. Some swelling and redness of forehead has taken place, so that the eyes cannot be opened. Repeat the calomel at bed-time.

8th. Is quite sensible; bowels act regularly; pulse quick; swelling of forehead increased about the right eye. Repeat the calomel at bed-time.

9th. No bad symptoms. On going to the ward this morning he was sitting up playing with his sister, apparently quite well. Swelling of forehead nearly gone, but a slight abscess has formed in the left lower eyelid, which was opened. The wound is healing favourably. Repeat the calomel, if necessary.

He continued to go on very well until November 3rd, on which day he left the hospital, quite well in health, and the wound as nearly healed as possible.

CASE II.

Wm. Edward Innis, aged 8, a spare and delicate looking lad, admitted Nov. 4th, 1847, at four, p.m.

A few minutes before admission, he had fallen from the top of a high wall, alighting on his head. There was a large jagged wound, two inches in length, above the outer angle of the left orbit; on examining the wound with the finger, the bone was found to be extensively fractured, a piece upwards of an inch square being entirely separated from the surrounding bone, and considerably depressed below its level. The bone was so broken that the inner table was more extensively injured than the outer, the edge of the latter projecting somewhat over the depressed portion of bone. The child was perfectly insensible; his breathing stertorous; pupils contracted, but obedient to light; face pale, and surface of body cold; pulse quick and weak. Mr. Greenhow arrived shortly after his admission, and proceeded to raise the depressed bone; this could not be effected without the use of the trephine; by the application of which, a little above the fracture, an