Camph. Comp., dr. j.; Aquæ, oz. vj. M. Sumat coch. ij. magna. ter die. Mild diet.

18th. From this time W. R. soon recovered. I kept him a close prisoner for some days, and applied Argenti Nitras to the uvula, which was ulcerated at its free end.

REMARKS.—This case forcibly illustrates the value of tartar emetic in affections of the larynx. Vomiting always affords relief; and the prostration occasioned by the combined effect of bleeding and tartar emetic subdues inflammation and relaxes spasm. The mercury was of course a precautionary measure, to keep up the anti-inflammatory action, and check effusion, &c., but in these very urgent cases tartar emetic is the sheet-anchor.

CASE OF AMPUTATION OF THE ARM, PERFORMED UNDER THE INFLUENCE OF ÆTHER: ABNORMAL DISTRIBUTION OF THE BRACHIAL ARTERY.

By CHARLES ANDERTON, Esq., Surgeon, Leigh, near Manchester.

September 21, 1847. In company with my very worthy and intelligent friend and professional neighbour, Mr. Manley, and his son, I removed the arm of a poor scrofulous girl, of the name of Margery Meadows, aged 15 years.

She laboured under strumous degeneration of the elbow-joint, of three or four years standing. The joint was enormously enlarged, with a multitude of orifices penetrating its surface, whence flowed pus, mixed with a fluid resembling synovia. The catamenia had not appeared.

We commenced by administering æther per inhalor, which was superintended by Mr. Edmund Manley, a student at the Manchester School of Medicine and Surgery, with considerable tact; but, owing to the strength of the æther, and the somewhat imperfect state of the instrument, (although a new one,) her glottis became exposed to too intense a stimulus, giving rise to repeated convulsive expirations, in the shape of short rapid coughs. Notwithstanding these little embarrassments, the specific properties of the æther became manifest, after respiring for three or four minutes. I then immediately commenced the operation by "circular incision," and the division of the integuments was completed without the least indication of pain on the part of the patient; but immediately the knife was applied for the division of the muscles, the patient began to scream, and obviously to feel intensely, and this she continued through the remainder of the operation.

I ought to observe, that I conceive the effects of the æther did not protect the patient for longer than *one minute*. From the profound cerebro-spinal torpor which the æther appeared subsequently to occasion, in the dilated pupil, laboured and feeble pulse, cold perspirations, suspiratory respirations, collapsed muscular fibre, &c., I should feel a great degree of hesitation, on any future occasion, in administering the æther, more especially in weak and lymphatic subjects, like the one under consideration.

After completing the operation of removal, we discovered, to our surprise and embarrassment, that there was an abnormal distribution of the brachial artery, the only vessel requiring ligature being a small (not larger than a terminal,) branch of the superior profunda, on the *external* side of the bone!! On examination of the face of the stump, there was a forcible pulsation in the normal situation of the brachial, which, on tracing, appeared to take a circumflex course anteriorly.

Under these (to our minds not very safe,) circumstances, we did not feel justified in bringing the edges of the stump together immediately, from a fear of secondary hæmorrhage. We therefore cautiously loosened the tourniquet, until all restraint upon the vessels was removed, and left the stump exposed for two hours, but without the least indication of hæmorrhage, although the whole of the vessels over the face of the stump appeared all in forcible activity.

As it is unnecessary as uninteresting, to give the daily report of the case, permit me to say, that the stump, on this, the 13th of October, is perfectly cicatrized, without the least unfavourable symptom or appearance of hæmorrhage, from first to last!! Is it possible that in this case the brachial artery could have been obliterated by disease?

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.

(Continued from page 503.)

The treatment of puerperal convulsions has unquestionably received the greatest improvement from the more correct opinions which have in recent times been formed of its special pathology. It is now unanimously admitted by all who have had sufficient experience in the affection to entitle their decision to respect, that all means are secondary and inferior to copious general blood-letting; indeed the lancet is our main dependence. The great fatality of former times it is now evident, was on account of the timid and ineffectual manner in which they employed this, when energetically used, potent remedy. A small blood-letting is of no use whatever; we must open the vein by a large orifice so that a full stream be emitted, and when the blood is not freely abstracted from one arm, we should open the veins of both, or bleed from the jugular vein. The last-mentioned method however, is less to be recommended, than the preceding, owing to the dangers necessarily associated with having recourse to that operation, from the restlessness and constant tossing of the patient. It may be requisite to abstract twenty, thirty, and even forty ounces, at one bleeding, and it sometimes happens that fifty or sixty may be drawn in the course of three or four hours. In the case now given, thirty-five ounces were taken at the first bleeding, and twelve more afterwards,

making the total loss of blood in three hours, forty-seven ounces, exclusive of what was soon after taken by the leeches. There is no disease in which we can with advantage bleed more heroically than in this. Her pulse was not particularly accelerated, but it felt strong and forcible beneath the fingers; and it is in such cases that we can well nigh always bleed freely with benefit. From the quick succession of her fits, the entire insensibility during the short intermissions, the violent manner in which she was convulsed, the swollen livid turgidity of the features, the loud and difficult stertorous breathing, and the great prostration which succeeded each paroxysm, it is highly probable, that unless the vascular pressure on the great nervous centres, had been speedily relieved by a full emission of blood, such disorganization would ere long have ensued as to usher in a mortal issue. Cupping behind the neck has by some been recommended, and if used in conjunction with the lancet, there can be no question as to its utility, but at the time when depletion is most required, it would be folly to temporize with cupping—besides, where convulsive paroxysms might return at any moment, there would be much danger of the glasses being broken. Afterwards this method is much to be commended. Leeches are too tardy in their operation for much reliance to be placed upon their employment, but may subsequently with propriety be used to the temples. A dozen were applied in the case of this woman, and it is probable they were of service, because, by whatever means we lessen the volume of blood in circulation we are acting according to correct principles.

Respecting the use of opium, there is and has been a good deal of discrepancy of opinion; by some it has been much extolled, by others highly condemned. From its employment in this case, there are reasons for believing that when properly administered, that is, AFTER the copious abstraction of blood, it is of great utility. It would be as improper to give a large dose of this drug before bleeding, as it would be in a case of sero-enteric inflammation,—the one should precede the other. When we reflect upon the nature of the disease, review the most rational notions entertained respecting its pathology, and remember that whatever other conditions enter into its causation, that peculiar state, which for the want of a more precise and definite phraseology, we term irritation in the great nervous centres, either primarily existing in themselves, or transmitted by the incident spinal nerves, is the great and acknowledged cause from which the other phenomena proceed, such agents as lessen the morbid sensibility of the nervous system will, it is fair to presume, be of service. In delirium tremens, unquestionably allowed to be the result of morbid excitation, sedatives are of essential service, indeed on opiates we place our chief reliance. In certain forms of mania, and where the nervous system is morbidly susceptible of

impressions, the same class of remedies are decidedly beneficial. It may be urged that very large doses of opium are apt to produce visceral congestion, but this is less the case when the cerebro-spinal system is labouring under preternatural excitation, and when depletive measures have been efficiently premised, and it is only after such that it is now recommended. The cases in which opium subsequent to bleeding, is most serviceable, is in thin and hysterically-inclined females, with whom has previously existed a preternatural mobility of the nervous system; but even in these it must not for a moment be inferred that it is recommended to supply the place of the lancet, but as an assistant remedy, because under all forms blood-letting is our sheet anchor. A few grains of calomel may advantageously be administered at the same time, because the biliary apparatus is often disordered, and it is desirable to emulge the liver and correct the secretions.

The next question that naturally arises,—are we to deliver, and how? It is the great efforts of the uterus, those powerful actions which are induced in its expulsive essays, which develop the affection, whatever may be its prime origin, and as the fits return with the regularity of the pains, it is obvious that such pains act as excitants, and if the uterine contents were expelled, and the efforts of the organ to cease, the cessation of the pains would tend to avert or defer the convulsive paroxysms. A pain comes on, the expiratory muscles for some time remain in a continuous fixity, the glottidal fissure becomes closed, the blood imperfectly aerated is sent with increased force and quantity to the brain, the vessels proper to that organ become distended, and pressure and the convulsive paroxysms in consecutive order succeed. But when the uterus is emptied of its contents, and thus its expulsive efforts almost or entirely abated, it seems quite conclusive that the convulsions will not be so likely to return in such quick succession. The delivery I am aware frequently does not cut short the paroxysms, nor prevent their return, and in the instance now presented there were fits after the child and secundines were born; but what is now contended for is, that during their continuance they may be less severe, and their succession not so frequent. Again, the child is, in the majority of instances, dead, another reason in favour of emptying the womb. The manner in which the delivery should be accomplished, entirely depends upon existent circumstances. If the head should be so far descended as to be within the reach of the short forceps, this is our best and most expeditious mode of procedure; if it should be above the brim, the long forceps may be tried, and if these modes are unavailable, we must turn and deliver according to the ordinary method. Malformations of the pelvis might of course demand the operation of craniotomy. In the instance of Ann W— the membranes were entire, and the os so far dilated, that with care the hand could be readily admitted. Placing the

patient on her left side, the hand was introduced, and the feet easily brought down. Sometimes it happens that the os is not sufficiently dilated; we may in such cases artificially distend. Although this woman was delivered as quickly as possible, the child was dead.

It is a point much contested by physiologists as to the manner in which the death of the fœtus takes place, whether it be by the iniquated state of the maternal blood, the venoid and impure condition of which is evinced by the facial lividity during and subsequent to the paroxysms, or whether it be destroyed by the operation of similar radical causes to those which obtain in the mother. It is highly probable that the shock which must necessarily be given to the fœtal nervous system, would exert upon it a most powerful, if not mortal, impression, whilst a degree of obstruction given to the circulation and a vitiated state of the blood, seem at once sufficient to account for its destruction. The child of this person, on being born, was extremely livid, presenting evident marks of obstructed circulation.

To properly unload the bowels is of essential importance, and this can best and most readily be done, as regards the colon, by means of a large injection. In this case an ounce of turpentine was added to a quart of starch gruel; and from experience in similar affections, the addition of the former is a valuable adjunct, often being followed by very good effects. The bowels were reported to have been pretty well moved but a few hours before, yet it seemed desirable to administer the enema in order to thoroughly clear out the larger bowels; and on reference it is said that a considerable quantity of fœculent matter was discharged. A pretty large dose of calomel was given to act upon the liver, and superior portions of the canal. We may give with advantage five or six grains of calomel, and afterwards one or two table-spoonfuls of castor oil, or a dose of senna and salts, every two hours, until free evacuation is produced. When the bowels are obstinately constipated, one or two drops of the croton oil, in a drachm or two of castor oil, will be found very efficient, and fully to answer the purpose intended. Some writers have, perhaps, laid more stress upon the employment of cathartics than appears desirable, because when considerable irritation is thus induced along the digestive mucous surface, might not such, according to the theory previously maintained, be liable to act as an excitant to the paroxysms? Cold applications to the head should sedulously be used; bladders of ice or spring water are, perhaps, the best. There being a fall of snow on the ground when this case occurred, it was ordered that a quantity should be constantly applied to the head, and there is little doubt, that as an auxiliary, it was of much utility. In those instances where there is considerable cerebral vascularity, in connection with hot skin, and quick pulse, pouring a stream of cold

water over the scalp is followed by very beneficial effects, and it is beyond a doubt that this mode of treatment, which the French and other continental physicians so justly extol, might with advantage in this country be more frequently had recourse to; in fever I have known the practice often succeeded by the best results.*

Counter-irritation along the course of the spine and to the extremities was adopted, and with apparent success. There is no plan more suitable or efficacious to produce this than the common mustard plasters; they may be made entirely of mustard and hot vinegar, when they act readily and efficiently. The strong liquor of ammonia is available for the same purpose, but perhaps on the whole, the former are preferable. These may be followed by blisters to keep up the action should the case be persistent. Medicines to act on the skin and kidneys were prescribed; these were the solution of acetate of ammonia and the spirit of nitrous æther. During convalescence a weak infusion of columba was taken as a tonic.

It may be observed, that in the report of the 14th February, her sleep is said to be much broken. She would awake from her short slumbers with a sudden start and for a time be alarmed and agitated, whilst there would be much palpitation of the heart. These symptoms are of course dependent upon the sudden and copious loss of blood, which we know to be generally sequelæ to large losses of blood, as in uterine hæmorrhage, etc. Dr. Marshall Hall has proved from certain experiments on the lower animals, that considerable and sudden loss of blood gives rise to great nervous excitability, that the action of the heart on the least cause of agitation, immediately becomes preternaturally excited, and there is generally a distinct bruit. In this case the murmur was anticipated, but on applying the stethoscope, nothing more was audible than the second sound being unusually quick, smart, and clear, giving evidence of a certain degree of morbid excitation. The digitalis and morphia in conjunction with an improved diet, fully answered the purpose intended, and as the patient gained strength these symptoms readily vanished.

In conclusion to the foregoing remarks it may be said:—1st. That puerperal convulsions are dependent upon irritation in the great nervous centres, and such may primarily exist in these themselves, or be communicated by the afferent nervous filaments, the latter being far more frequently the case than the former, and that such morbid impressions are intimately connected with the pregnant condition of the uterus, and that the expulsive efforts of the organ develop the morbid actions of the brain and spinal marrow. 2ndly. That a disordered state of the bowels, together with mental depression and morbid excitability of the

* See No. XI. of a series of papers on fever, by the writer of this article, now publishing in the *Medical Gazette*.

nervous system powerfully predisposes to the affection. 3rdly. That the means of treatment most rational, and in accordance with physiological and pathological deductions, is first to relieve vascular turgescence, which gives rise to pressure in the brain and spinal marrow, and then, if possible, to remove or mitigate the primary source of irritation, as by emptying the uterus, etc. 4thly. That the copious and energetic general abstraction of blood experience has proved to be the chief measure upon which we rely, and that this mode of treatment has been eminently successful, and considerably mitigated the rate of mortality.

Pickering, Yorkshire.

(To be continued.)

Hospital Reports.

WEST NORFOLK AND LYNN HOSPITAL.

COMPLICATED SURGICAL INJURIES UNDER THE CARE OF CHARLES COTTON, ESQ., M.D., F.R.C.S.,

(Continued from page 488.)

FRACTURE OF THE SKULL, UPPER JAW, AND FORE-ARM; COMPRESSION SUPERVENING ON CONCUSSION; DEATH.

Sickling, sailor boy, aged 15 years, is said to have fallen from the fore mast of a vessel upon the deck, a distance of forty feet; was taken up senseless and bleeding at the mouth, but afterwards recovered so as to be enabled to reply to questions, when he was removed to the surgery of a medical gentleman in the neighbourhood, who secured the right fractured forearm in splints, and sent him to the hospital. Admitted 12 noon, September 16th, 1847, and visited immediately by Mr. Cotton. The boy had become insensible and worse on his way to the hospital, and had vomited the contents of the stomach mixed with blood.

Symptoms.—There is very extensive effusion beneath the scalp, over the left fronto-temporal region of the skull, with a quaggy centre, and a feeling of indentation of the bone; the upper jaw in front, is longitudinally fractured, one tooth knocked out, and three others remaining attached to a displaced portion of the alveolar process which is held loosely in the mouth by the gums; pulse weak, 88; surface pale; breathing slow; left eyelid closed and ecchymosed, the pupil widely dilated and fixed; right eye half open, pupil natural and contractile; mouth bleeding freely; lies on his back comatose, occasionally moaning and shuddering, with head inclined to the left side and the left hand directed to the genitals. The slightest handling of the injured parts causes seeming uneasiness and loud screaming. During an examination of the chest and abdomen, he shouted incoherently, turned over on the left side, vomited with great difficulty blood and mucus, became convulsed and appeared for awhile asphyxiated. On his rallying, ordinary styptics failing, it was found necessary to remove the fractured portion of the jaw and the attached teeth, and to apply

the actual cautery to restrain a profuse hæmorrhage, which continued from the mouth. The head was also shaved. During these operations he screamed loudly, and unconsciously offered resistance and again vomited blood and mucus. Catheter introduced and a pint of urine drawn off; cold to the head; lint dipped in a strong infusion of matico to be placed under the upper lip, and repeated so long as any oozing continues.

3 p.m. Pulse weak, upwards of 100; breathing stertorous and intermittent; inspirations prolonged; both pupils widely dilated and insensible; surface pallid and extremities cold. Purgative enema thrown up. Hot bottles to the feet.

7 p.m. Moribund.

September 17th, 12, noon. Involuntary escape of urine and feces once in the night and again in the morning. Pulse weak and frequent, 144; slightly moves when the head is pressed over the seat of the injury; left eye-lid dark and distended, cannot be raised; rigidity of muscles of lower extremities; toes flexed; irritating the soles of the feet excites weak reflex movements and slight general shuddering; powers of life ebbing.

Consultation. The use of the trephine, as a *dernier resort*, was determined upon; a free incision was made, the apex directed backwards; a large quantity of coagulated blood beneath the scalp disclosed and turned out, and three vessels bleeding energetically, secured by ligatures. The bone was found fissured, but no depression existed. The pin of the trephine was fixed in the course of the fissure, and a portion of bone carefully removed, exposing beneath a dark firm coagulum, rising and falling synchronously with the respiratory movements. Another perforation made posterior to the first shewed a part of the dura mater, and the boundary in that direction of the extravasation. No blood escaped through the apertures; the degree of stertor for a moment appeared lessened. The poor boy gradually sank, and died at 4, p.m., having survived the accident twenty-nine hours.

18th. *Post-mortem examination*:—Left parietal bone fissured through the temporal ridge; the left wing and transversespine of the sphenoid bone loose and separable, the surrounding temporal and orbital connections having yielded; a fracture across the orbital plate of the frontal bone was also found, continuous with one extending behind the ethmoid to beyond the right sphenoidal clinoid process; the dura mater was not torn, but extensively detached; considerable effusion of blood down to the spinous foramen, and through the lacerated foramen into the orbit, pushing outwards the lachrymal gland, the coagulum, six ounces or more, firm and dark, forcibly depressing and indenting the anterior and middle cerebral hemispheres; the source of the hæmorrhage was not distinctly ascertained, most probably from the middle meningeal artery and ophthalmic veins from cavernous sinus. No other encephalic or organic lesion detectable.

This case of compression by coagulum, external to the substance of the brain, shewed so mild a degree of concussion in the first instance, that when sent to the hospital a hope existed that the principal injuries