sterno-mastoid. As a rule, the conductors have to be moved along the side of the neck before they are successfully placed over the course of the nerve. When the phrenics are fairly galvanised, the epigastrium and hypochondria are seen to bulge; while, on applying the hand over the epigastrium, a distinct stroke may be felt, imparted to it by the descent of the contracting diaphragm. The patient makes at the same time a characteristic gasping inspiration.

PUERPERAL CONVULSIONS BEFORE DELIVERY: DEATH: REMARKS.

By C. J. EVANS, Esq., Northampton.

MRS. C., a stout, florid, healthy-looking woman, 24 years of age, and within a month of her first confinement, being as well as usual in the afternoon of March 11th, 1867, with the exception of a little pain in the stomach, which she attributed to having eaten some beef, was suddenly seized at twelve o'clock at night with convulsions. Mr. Cotton kindly saw her for me in my absence, and ordered leeches to be applied to the temples, a sinapism to the back of the neck, cold to the head, and a dose of calomel to be taken immediately.

I visited her at two o'clock in the morning (March 12th), and found her quite insensible, the convulsions occurring about every half-hour; the respiration was stertorous; the pupils were rather contracted than not; the remains of the calomel to be seen on her tongue. I directed the same treatment to be continued.

9 A.M. The convulsions had continued at intervals during the night, and the stupor was now profound. Only three of the leeches had taken hold. The pulse being as high as 120, full and bounding, I at once bled her to nearly two pints. Its force and rapidity were thereby considerably lessened, and she became more conscious than she had previously been, opening her eyes when loudly spoken to.

Two drops of croton-oil were placed on the tongue, and a saline draught, with a powder composed of a grain of calomel, was ordered to be taken every two hours. The hair was cut close to the head, and cold directed to be constantly applied. No urine having been passed, I introduced the catheter and drew off about half a pint, which was dark and muddy (but not smoky), and was so loaded with albumen as to become perfectly solid on applying the usual tests. The os uteri was at this time just capable of admitting the point of the finger, which detected a head-presentation. The os showed a slight tendency to dilate.

No improvement in the symptoms occurred during the morning.

2 P.M. Mr. Cotton saw the patient with me in consultation. The convulsions were still occurring at intervals. The os uteri was now dilated sufficiently to admit the ends of three fingers; and we agreed that delivery should not be delayed a moment longer. I accordingly gradually introduced my hand, turned the child, and delivered; the child (a female) being still-born. The placenta came away almost immediately, without hæmorrhage. The woman was quite unconscious during the whole time of delivery, and remained in that state afterwards, for the convulsions occurred as before, and she died a short time subsequently.

This case suggests one or two points worthy of consideration, especially as regards the treatment.

On the morning after the commencement of the attack, finding that the previous treatment had been of no avail, and the pulse being full, rapid, and

bounding; considering also the stout, plethoric condition of the patient—I did not hesitate to abstract blood freely from the arm, not, however, without having first ascertained that I could not at that time have the benefit of Mr. Cotton's opinion and advice; and the immediate effect of the bleeding, though only temporary, appeared to my mind at the time to justify me in the step I had taken.

In the *Medical Times and Gazette* for February 23rd, 1867, p. 191, is a very interesting communication on this subject by Dr. Arthur S. Donkin, in which he details three cases, proving, in his opinion, the value of blood-letting (venesection), but which seem hardly to bear out his faith in this particular mode of treatment. Two out of the three cases related ended fatally, and the third recovered. In the favourable case, the convulsions were preceded for some time by premonitory symptoms; whereas, in the fatal cases, the convulsions themselves were the first symptoms; and the value of blood-letting may have been great or little, according as the disease manifested itself gradually or suddenly.

In a case under the care of Dr. Graily Hewitt, related at page 353 of the *BRITISH MEDICAL JOURNAL* for March 30th, 1867, a totally opposite plan of treatment was adopted—viz., stimulation; Dr. Hewitt being of opinion that the convulsions were due to the loss of blood itself which had occurred before delivery. Bleeding in this case was, of course, out of the question; and the result of the case would appear to militate against such practice. On the other hand, Churchill, Denman, Blundell, and others, recommend bleeding, and that largely.

It is only right to state that Mr. Cotton, who kindly assisted me in the case, afterwards informed me that he denounces venesection, and places his reliance on local bleeding.

M. Trousseau, in his *Clinical Lectures*, translated and edited by Dr. Bazire, states that he does "not include in the treatment of eclampsia *general* or *local* bleeding," on the principle that the cerebral congestion is the effect, and not the cause, of the convulsions. On the contrary, he recommends antispasmodics, and especially the inhalation of chloroform. The convulsions do not necessarily in every case occur with congestion of the brain, but may be accompanied with, if not caused by, effusion of serum into the ventricles; and in such cases, bleeding, either general or local, is neither necessary nor advisable. The case under the care of Dr. Hewitt would appear to have been of this nature.

There seems to be considerable difference of opinion as to the propriety of delivering the patient artificially, and also as to the mode by which delivery shall be effected; but the forceps would appear to be most in vogue. It is certain, however, that they could not safely be used so early in the case as the process of turning; which latter is also attended with less danger to the mother under the circumstances.

It appears to be pretty generally allowed that albuminous urine coexists with this form of convulsions (it was present to an extreme degree in the above case); and further, that it may exist to a greater or less extent for some time previously during pregnancy. Such being the case, it is somewhat remarkable that the general health does not more frequently suffer beforehand; for I suppose it will be admitted that the symptoms of convulsions do not present themselves, in the greater majority of cases, until at or near the setting in of parturition. At that time, however, the uterus commences to descend into the pelvis, and so its pressure on the renal system of vessels would be less than it had been previously.