capillaries of the part. Hyperæmia would thus ensue, and would give rise to the usual mucous exudation, with more or less admixture of blood. This actually occurred here, but not primarily. The first event was paralysis of the organic muscular fibres which constitute the detrusor urinae, and which are essentially similar to those existing in the arterial coats. It cannot be considered unlikely that a tissue closely adjacent, and very similar to that which is commonly affected, should in some instances be first attacked. That catarrh depends on some nerve-paralysing influence, I cannot doubt. Apart from much recorded experience, the following fact is worth mention. My house-cat at present (March 1873) has been acutely ill the last few days with diarrhoea, loss of appetite, frequent sneezing, extreme feebleness, and incomplete paraplegia of the hind legs, so that she could not go up stairs. She is now convalescing. I suppose the cat may be acquitted of hysteria; so, I think, may my patient. Both had catarrh, I believe. That the syphilis which made its appearance a month later could have been concerned in causing the paralysis, can hardly be imagined. The history, both in itself and as a contribution to the history of catarrh, is not without interest.

CASE OF PUERPERAL CONVULSIONS.*

By JOSEPH GRIFFITHS SWAYNE, M.D.,

Physician-Accoucheur to the Bristol General Hospital, and Lecturer on Midwifery at the Bristol Medical School.

WHEN uræmic convulsions occur during pregnancy, and are unaccompanied with any symptoms of labour, and when all other methods of treatment have failed, the propriety of resorting to artificial delivery becomes a question of great importance. The following case has some bearing on this question, and is also worthy of notice on account of its unusual severity.

On August 28th, 1872, Mr. Baretti requested me to see Mrs. S., Gloucester Street, Mall, Clifton, whom he was attending in her first confinement. For some days there had been much oedema of the legs. Violent convulsions came on about 10 A.M. on August 28th, and continued until 9 P.M., when we saw her. She had then had thirty fits of convulsions, with complete insensibility and stertorous breathing in the intervals. The urine had mostly been voided involuntarily, so that we could only obtain a very small quantity by catheterism, but this was found to be highly albuminous. She had just completed the eighth month of pregnancy, but no signs of labour were present. On examining, I found that I could just introduce the tip of the finger into the os uteri and feel the head. Sinapisms had been applied to the nape of the neck and calves of the legs, and a turpentine enema which Mr. Baretti had ordered had been administered. She had another fit very soon after our arrival; and, as soon as it had passed away, we bled her to eighteen ounces. The pulse was softer and less laboured after the bleeding, the breathing was less stertorous, and she seemed on the whole somewhat relieved. Nevertheless, in less than half an hour another fit came on. As the case seemed desperate, we determined, as a last resource, and with a view, if possible, to save the child, to empty the uterus. The bleeding had softened the os uteri somewhat, so that I was enabled to introduce without any great difficulty first one, then two, then three, and then four fingers, and finally to pass the whole hand into the uterus, to seize the feet and deliver. The whole operation did not occupy more than an hour's time. The child, however, was still-born. It was a male, and was a full-sized eight months' fœtus. As the symptoms were not much relieved, we kept her under the influence of chloroform for some time, but without any very apparent effect. As I had arranged to go out of town about this time, I did not see her afterwards; but am indebted to Mr. Baretti for the subsequent history of the case. When he saw her on the next day (August 29th), she had had in all as many as forty fits. He examined the urine, and found it still albuminous, but not nearly so much so as on the previous day. She had no fit after this, and began to improve steadily. The amount of albumen decreased every day, until at last the urine became quite clear. She completely recovered consciousness in a few days, but did not regain the power of speech, and was obliged to express all her wants by writing on a slate. Although she could put out her tongue, she had considerable difficulty in swallowing, the left side of the throat appearing to be partially paralysed. There was, however, no paralysis of the body or extremities, and she could get out of bed very well to use the night-stool. Mr. Baretti saw her last on September 15th, and she was then so much better that he did not think it necessary to call on the next day. On September 17th, before his

next visit, she wrote down that she wished for a mutton-chop. This her friends gave her, and she ate it with great apparent relish, but almost immediately afterwards was seized with a violent convulsion, and died before he could arrive at the house. This was exactly twenty days after the first attack. No *post mortem* examination could be obtained.

In this case the fatal termination was no doubt due to some cerebral lesion, probably a rupture of one of the cerebral vessels and effusion of a clot into the substance of the brain. The woman had probably partially recovered from the injury, which was no doubt occasioned in the first instance by the extreme cerebral congestion arising from the violent convulsive attacks. A full meal, however, was sufficient to cause a recurrence of the same symptoms, which terminated in death. An interesting case of aphasia which terminated in a similar way was published by Dr. Fox in the *Lancet* for August 11th, 1866. A girl was suddenly attacked with aphasia and hemiplegia of the right side, and was in a fair way for recovery, when, about three weeks after the original attack, she was seized with convulsions after taking some improper articles of food, and died very rapidly. In this case an old clot was found in the left cerebral hemisphere, involving the lower portion of the corpus striatum, and some recent effusion of coagulated blood in the left lateral ventricle. Dr. Fox considered that the *post mortem* examination in this case tended to confirm Broca's views that the seat of the faculty of articulate speech is located in the posterior portion of the third left frontal convolution. Other cases, however, especially some published by Dr. Hughlings Jackson, would tend to show that the chief lesion in aphasia is seated in the gyri of the island of Reil. It is very unfortunate that in the case I have just described we had no opportunity of verifying this point in pathology by a *post mortem* examination. One peculiarity observed in this case in which it differed from most others of aphasia was that there was no hemiplegia of the right side, nor, indeed, any paralysis, except to a very partial extent, of the muscles of the throat.

With respect to the treatment of the case just related, it has been stated that delivery was effected by turning, although no symptoms of commencing labour were present. This, I am aware, is contrary to the generally received rules of obstetric practice. Dr. Churchill, in his *Theory and Practice of Midwifery*, says: "I believe there is no dispute, that until labour sets in naturally interference would be injurious; so that, in convulsions during gestation, we have nothing to do with the uterus, but must confine ourselves to the treatment of the convulsive disease." Dr. Murphy, in his *Lectures on Parturition*, brings forward statistics to prove that those cases of puerperal convulsions in which labour took place naturally showed the smallest proportion of deaths, and those in which delivery was effected by turning the largest. Hence these statistics would tend to prove that it is not desirable to expedite delivery in any way; an opinion, however, which Dr. Murphy does not hold.

Statistics, however, are apt to be a very fallacious guide in settling disputed points of this kind. There is no doubt, I think, that those cases in which delivery was allowed to take place naturally were the most favourable ones, the labour being so far advanced and going on so favourably that the accoucheur in attendance did not think it necessary to resort to artificial aid; whereas those in which turning was adopted were labours which were so little advanced that no other method of delivery appeared feasible. My own experience of puerperal convulsions (I mean those of an epileptiform character) would lead me to conclude that by far the worst and most fatal cases are those which occur during pregnancy, and are accompanied with no symptoms of labour. I have had five fatal cases of puerperal convulsions out of a total of nineteen, and three of these were of the kind just mentioned. In two, no attempt was made to deliver, because there was no sign of labour. The third was the one I have just related; and in this also there were no signs of labour, yet the case seemed so desperate, that we were unwilling to leave any remedy untried, and preferred to act in opposition to established rules rather than to abandon the woman to her fate. The result proved, I think, that but for the cerebral lesions caused by the convulsion, she might have recovered; for the albuminuria and convulsions had entirely disappeared for more than a fortnight. My own experience with regard to the treatment of such cases would lead me to the conclusion that after other remedies, such as bleeding, chloroform, chloral, purgatives, etc., have been tried without success, delivery by turning should be resorted to, provided that the os uteri is in a condition to admit of this without using much force; and it is one of the advantages of venesection that, besides (as I have shown before) relieving the albuminuria, it renders the os uteri soft and dilatable. If there be time, it would, of course, be better to dilate the os uteri gradually by caoutchouc bags, as recommended by Dr. Barnes; but generally there is no time for this, and then the process of dilatation must be effected by the hand, which, as Krause has pointed out, may be done when the os uteri is so far opened as at least

* Read before the Bath and Bristol Branch.

completely to admit one finger. I must, however, join with Professor Braun, of Vienna, in his condemnation of forcible delivery when the os is in a rigid undilatable condition. On this subject, he remarks:—"When artificial delivery (*accouchement forcé*) is attempted by introducing the hand in a conical form through a narrow os uteri, and when the cervix is narrow or very little dilated, it is generally found to be altogether impossible, or it sometimes leads to uterine ruptures dangerous to life; and thus the mother is subjected to greater dangers from the operation than from the eclampsia itself, of which no one can say whether any more paroxysms may come on and cause death" (Braun on *Puerperal Convulsions*, translated by Dr. Matthews Duncan).

EMBOLISM OF RIGHT MIDDLE CEREBRAL ARTERY: WARTY GROWTHS IN THE LEFT AURICLE AND ON THE MITRAL VALVE.*

By HENRY E. ARMSTRONG, M.R.C.S., Newcastle-on-Tyne.

As the *post mortem* examination of this case revealed the conditions which form the text of the following paper, the symptoms may be divided into three sets; viz., those previous to the detachment of the fibrinous growth; those which accompanied its passage and marked a temporary impediment to its course along the vessels of the brain, as the pulsations drove it slowly onward; and, finally, those which supervened after the total arrest of its progress when the balance of the circulation was in some degree restored, and which continued till death.

M. D., a slender girl, aged 14, with none of the signs of puberty, had been ill four years. Her complaint was said to have begun with slight swelling of the feet and legs, followed by numbness of the right side. These symptoms, however, after a time disappeared entirely. She had been under treatment for palpitation, dyspnoea, etc., at various public institutions here and in Edinburgh, and understood that she had disease of the heart.

I was called to the case on February 15th, 1872, when I found the patient comatose after a succession of epileptiform convulsions, which had come on during the morning, from the exertion of ascending several pairs of stairs to the tenement occupied by her family. A loud cooing systolic *bruit* was audible over the entire chest, and (less distinctly) down the abdominal aorta; by its continuance it seemed to drown the second sound of the heart. The pulse was 112, regular, and of equal volume at the two wrists.

Early next day the patient roused up, and soon began to chatter incessantly. She complained of her head, especially near the right temple, which she said was fit to "open." She had left hemiplegia—sensation and motion being completely lost in the upper limb; motion entirely, sensation in great measure in the lower. The pulse was 120. The patient was occasionally sick. She had a chloral draught, and slumbered at times; but, so long as she was awake, she continued to talk volubly. On my visit in the evening of the same day, the mother volunteered statements that the patient had that day used words "such as she never used before." She had called her relatives strange names, made unusual demands, and frequently struck out and kicked with the right hand and foot. Although at all times previously to the present seizure, the patient was, to my knowledge, of a retiring and modest disposition, she had now become bold and slightly erotic in her remarks, even to myself. In the intervals of her chattering she would lapse into unconsciousness, which lasted a few minutes.

I was told that during some of the comatose periods her face had been distorted as though by pain; but all such appearances had passed off at the time in question, and her general aspect was placid, and her pupils normal. She had vomited all food.

Next day she was more rational, but at times semicomatose. She then vomited matters of a grass green colour. On the day following consciousness seemed completely restored, and the expression, though languid, was more natural. The heart beat with more force; and the second sound was once more audible.

A day or two after this (on February 22nd), the sound side began to jerk spasmodically. The vomiting continued urgent for about a week, the stomach rejecting all food, though the patient had become almost ravenous. To relieve the insomnia from which she suffered, thirty grains of hydrate of chloral in solution were injected *per rectum*, but were not retained. Sleep was afterwards procured by solution of morphia taken into the stomach.

On March 1st, the paralysis was unaltered, but the patient had re-

gained her usual mental condition, and was once more the quiet shy girl whom I had known before the attack.

On the morning of March 7th, she spat up a little blood and complained of frontal headache. At night, she was for over three hours violently convulsed on the right side, after which she became semicomatose for a time. On the return of consciousness, vocal articulation, which had hitherto been intact, was observed to be somewhat impaired. The patient was rational. She complained of a choking sensation, and occasionally spat up blood or bloody mucus. At this stage I noted that the first sound of the heart had become rougher, and that the second sound seemed more distinct, from which I at the time inferred a further detachment of the valvular vegetations.

After this, the patient slowly improved, and in about three weeks had regained some power over her limbs—the upper first, so that when raised in bed she could move the elbow of the palsied arm away from the side, and by jerking the shoulder could bring it forward. The forearm and hand were still paralysed. When lying supine, she could raise the lower limb from the bed and flex the leg.

Speech and reason had now become normal, the vomiting and hæmoptysis had entirely ceased, and the scapular, humeral, and pectoral muscles were gradually reacquiring force. By the latter end of April the patient was able to use the forearm a little, and could even walk without assistance. Tarsal ophthalmia of the right side was now observed, but there was no ptosis.

By the beginning of June she was not quite so well; and on the 11th she had become dropsical, with symptoms of uræmia, from which she died on the 13th, about four months after the first appearance of signs of embolism.

Secio cadaveris, thirty hours after death. The body was small for age, anasarous, and discoloured on the surface. The dura mater was tense; the meningeal vessels and cerebral sinuses were full. The cerebral substance was of a dark greenish grey colour on the surface. The convolutions were flattened. The brain was somewhat soft and not easily removed entire. The medullary substance was slightly yellow in hue, with "moist lustre of cut surface," indicating oedema; there were few or no *puncta vasculosa*. The vessels at the base were loaded. On tracing the right middle cerebral artery along the Sylvian fissure and following up one of its divisions to the back of the anterior lobe, a white plug, about the size of two or three large pins' heads, was distinctly visible through the thin transparent wall of the (up to this point) distended vessel. The plug felt hard between the finger and thumb. No other abnormal appearance was noted in connexion with the brain. The heart weighed above eight ounces and a half, a rather heavy weight for the size of the girl. The lower and left walls of the left auricle were closely studded with short, easily detached fibrinous prolongations, forming a well-defined rough surface down to the free margin of the posterior segment of the mitral valve. Wartlike growths hung down into the ventricle from the margins of the valve, the largest (which was afterwards accidentally detached) being of the size of a split pea. The left ventricle was dilated; and its walls were hypertrophied. The right ventricle was small in comparison with the left, otherwise normal.

REMARKS.—During the progress of this case, certain of the symptoms led to the supposition that the detachment of fibrin from the heart was repeated. These were the clonic spasm of the right limbs, followed by semicomatose, and afterwards impairment of articulation, on the 7th of March. At that time the actual roughness of the endocardium or the quantity of warts was not even guessed at; and, when auscultation after a recurrence of the more acute symptoms of embolism revealed an alteration in the mitral systolic sound, the diagnosis of further detachment of warts from those valves was not altogether without foundation. The *post mortem* examination, however, showed the probable fallacy of this diagnosis, since there was found but one morsel of fibrin found in the vessels of the brain, and several remained adherent to the mitral valve; had there been others in the brain, the thinness and transparency of the vascular coats at the seat of plugging, and the distension elsewhere, would readily have shown any but the minutest solid foreign body within the vessels. The inference, therefore, is that the first attack of convulsion was caused by the passage of the wart as it was slowly carried through perhaps the first portion of the middle cerebral artery by the more rapidly travelling stream of blood which, from the presence of the foreign body, found its way with difficulty to the parts supplied by the branches of the vessel; that, reaching a bifurcation, the embolon for a time obstructed the current through one or both branches, causing anæmia of the brain beyond and coma, which passed off as the circulation became re-established collaterally by the circle of Willis; and that, as the heart's action began to increase in vigour (*i.e.*, about a fortnight after the coma) the obstructed vessel (which, from previous want of blood, etc., had suffered in tone more than those of other parts of the body) yielded, and allowed

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