months, when she was attacked by profuse hæmorrhage, and died asthenic.

On examining the body the uterus was found rising nearly midway between the pubes and umbilicus, and extending across the cavity of the pelvis, attached to the brim on each side. On making an incision into the organ, it was found to consist of a solid fibrous mass, occupying the whole structure of the womb, with a nodule of a softer consistence on the fundus. On the left side was a small cavity filled with blood. The natural cavity of the uterus seemed almost obliterated, the probe passing a very little way above the os tinæ. The ovaries were converted into large conglomerated masses of the size of an orange, presenting a number of nodules, some of a dark colour on the surface. To the left ovary were attached two large cystic tumours, filled with from two to three ounces of transparent fluid.

Dr. Woodhouse, in remarking on the existence of so large a transformation of the uterus without pain or much derangement of the health, mentioned the case of a lady, who had suddenly discovered that she had a tumour of the uterus, the size of a child's head, and whose general health was not affected.

Mr. F. Bulley stated that he had met with several cases, where patients had died of other diseases, and where, after death, fibrous tumours were discovered, the existence of which had not been suspected.

Dr. Cowan said that in his experience, such patients do not suffer usually much pain or inconvenience.

(To be continued.)

ON PARALYSIS FROM THE EFFECTS OF MERCURY AS A MEDICINE.

By ROBERT STORRS, Esq., Surgeon, Doncaster.
(Read before the Sheffield Medical Society.)

Mercury has been long known to be an active and frequent cause of paralysis in its various employments in arts and manufactures, or in the working of mines from which it is obtained; but its power of producing remotely paralytic diseases has been seldom alluded to. As this is, however, a circumstance of great importance, I think it well deserves especial notice, and I therefore propose to make this effect of the mineral the subject of my paper for this evening. I do not think I need make much apology for so doing when we consider the awful consequences involved. The life of the patient may probably be cut short, or at least his future comfort and happiness so affected that life may become a wearisome burthen, instead of an enjoyment and a blessing. And when we consider also how often this risk is run in the manifold diseases in which mercury has been given, in one form or other, for many years past, it should inculcate in us a serious lesson of carefulness and watchfulness, and should cause us to endeavour to guard against its effects, either on peculiar idiosyncrasy, or during its rapid or prolonged use. We often flatter ourselves with the supposition of

having been able to shorten the course of this or that disease, by the promptitude of our treatment, frequently including in that treatment the exhibition of this drug; but we might moderate our exultation were we able to look back upon the ruined constitutions, the disabled limbs, or the shortened lives, which a rash, prolonged, or sometimes even uncalled-for use of this active mineral has produced. The shortened lives may be forgotten, and the ruined constitutions unheeded, but the disabled limbs often remain as lasting monuments of the carelessness, the wilfulness, or the ignorance of the practitioner. These are painful reflections, but they must have occurred to almost every conscientious practitioner, in the solitude of the closet, or in the silence of the night, when we are but too apt to magnify our own errors, or to exalt the successes of others. We will, however, dismiss this unwelcome train of thought, satisfied that such reflections are often productive of beneficial warnings.

I shall not dwell at this time upon that most numerous class of diseases, the complications of inflammation with loss of power,—with ulceration, absorption, phagedæna, or gangrene, which often result from the use of this drug, nor on the even still more immediate effects of it as connected with pyalism, but shall proceed in the first place to consider the wholesale paralytic effects of this agent as observed in mines, or in manufactures in which its use is extensively required. These general, and afterwards the more special, paralytic consequences of its effects, such as the “*tremblement mercuriale*,” differ considerably from the more special paralytic disorders, as hemiplegia and paraplegia, which follow occasionally its undue exhibition as a remedial means. In treating the subject, however, I do not mean to advance any theory which shall altogether militate against its legitimate use, as there are, I conceive, diseases in which its careful administration is, and always will be, of service, but merely to convey a lesson of carefulness and of foresight, even in the most moderate and necessary use of it. I would, however, especially condemn that headlong system of treatment which pushes (in almost all inflammatory diseases,) this active and dangerous drug rapidly to the point of producing pyalism, or to an approach to it.

Dr. Copland, in his valuable Dictionary, says, in digesting the accounts of several French authors, “that the mineral molecules of mercury, which, either in form of vapour, or of minute disintegration, come in contact directly, indirectly, or immediately, with various parts of the body, are extremely frequent causes of disease in artisans; and of mineral substances thus applied, mercury is one of the most common causes of disease of artificers, particularly workmen in quicksilver mines, glass-platers, &c. Amongst the most important affection produced by the fumes or oxides of mercury in artisans, is the mercurial

palsy, the 'tremblement mercuriale' of the French pathologists. It is almost, but not altogether, peculiar to these people. Its approach is generally gradual, but occasionally sudden; it usually commences with slight convulsive snatches, followed by agitations and tremors of the affected muscles, particularly those of the arms, which it first attacks, occurring, as it commonly does, in the workers of mercury." If the person continues his employment, the affection extends to the lower extremities and the whole body. He becomes incapable of muscular exertion, or even of the avocations requiring the least precision of muscular action. Restlessness, falling out of the teeth, constipation or disorder of the bowels, a dry brownish state of skin, slight atonic convulsions, cephalalgia, delirium, great depression of the nervous power, and of the general health, take place, in which state the patient may continue to live for many years.—*Merat and Colson*.

It is evident from this description, that mercury has, on an extensive scale, a decided effect upon the whole of the nervous system; but thus received into the system, either by the skin or the breath, in a state of fine dust or vapour, its effects are rather of a general than of a particular nature, as far as regards the brain, the spinal cord, or the nerves. Still it is possible,—I think even highly probable, that effects of a more local nature may be produced on the nervous system, when the mercurial is introduced into the frame by the more ordinary courses of medicinal action, of a severe or protracted kind; and that hemiplegia, paraplegia, softening or hardening of the brain, or of the spinal cord, may be then the consequence.

This I shall endeavour to point attention to by the following cases, which have passed under my own observation. They are not numerous, but the relation of them may possibly lead to the elucidation of the subject, by those who have a more extensive field for observation than I have. As such consequences are more or less remote, and unlike the more immediate effects of mercury, such as pytalism, which are but too evident, I would not here be so bold as to advance an opinion, because such an effect as paralysis is *post hoc*, that consequently it must be *propter hoc*; but when many instances of a similar nature have happened under similar circumstances, we have a right to pause and consider if such an opinion as I now advance may not have some truth in it. I submit, however, the opinion with diffidence, as I am aware it requires much farther corroboration, and observations to be made on a much more extensive scale, followed by severe critical examination, before the truth of it can be fairly tested. My hearers will, however, have the opportunity of giving it the examination required; for as far as I have had means of judging from the accounts of cases of various kinds published from time

to time in the *Provincial Journal*, there is no lack of the exhibition of this mineral in question, either in quantity or extent amongst the contributors to that Journal; and as it is also I believe much used in the manufactures of this town, the practitioners here will have peculiar opportunities of testing and of comparing the effects above stated, and about to be described, with the results of their own personal experience. The cases I shall bring forward are eight in number,—a considerable amount when the magnitude of the disorder, and the short period in which they have occurred, are taken into account, as they have all taken place within these two years. There are four of paraplegia, and four of hemiplegia, more or less mixed.

CASE I.—PARAPLEGIA.

Two years ago, a woman of depraved habits, tall and thin, about 46 years of age, underwent a course of mercury of a prolonged duration, for a syphilitic disorder, but was still not entirely cured of the disease, having many of those disorders of the throat and skin, &c., which are the combined result of mercury and syphilis. About six weeks after this course of mercury she began gradually to lose the use of her lower extremities, and in some degree the sensation in them also. The functions of the bladder and rectum were considerably impaired; large sores of the cellular structure of the legs also took place. All these symptoms became gradually aggravated in spite of blisters to the spine, the exhibition of strychnine, &c., and after some months confinement to bed, the cellular structure of the nates sloughed, beginning over the end of the sacrum, and she died a lingering and miserable death.

CASE II.—PARAPLEGIA.

A poor man, previously healthy, whilst in a state of mercurial action for gonorrhoea only, under the directions of some quack, was exposed to wet during the whole of one night; a few days afterwards he was taken with shivering, followed by great pain in the lower extremities, which presently became numb and useless; the power of evacuating his urine was lost, and all control over the rectum. The urine was drawn off by the catheter for some time, but the operation became more and more difficult from the previous state of inflammation in the urethra. The whole of the lower extremities at length became as if dead, cold, discoloured, and threatening mortification. Sloughings took place extensively from the sacrum and nates, and he was soon released from his sufferings. The mind, and the physical functions of the upper part of the body, remained entire until the last.

CASE III.—PARAPLEGIA.

A married man, nearly 60 years of age, became the subject of chancre of the penis, and gave the disorder to his wife also. It was a deep-seated and spreading sore, and after he had for some time undergone preliminary treatment to arrest the spreading of the sore, he was put under a course of mercury, which was carried on very carefully until the sore healed, that is, for five or six weeks. Some weeks afterwards he began to experience considerable pains in the lower extremities, and in the loins, and felt himself obliged to obey

the calls of nature the instant they were made, besides feeling considerable weakness in his legs; his gait became awkward; retention of urine came on, and suddenly he found himself entirely deprived of the use of his legs. In this state he remained several months, being constantly threatened with sloughing of the nates, and being obliged to have the bladder emptied by the catheter. Superficial abscesses and extensive ulcerations broke out in both legs, and were very troublesome. Blisters to the sacrum, strychnine, &c., were tried, but without any good effect, and he still remains a perfect cripple, unable to make the least use of the lower extremities, though in other respects in excellent health.

CASE IV.—PARAPLEGIA AND PARALYSIS.

A man, 45 years of age, by trade a printer, some weeks after having undergone a course of mercury, for a complaint, (not syphilitic,) was seized with gradual loss of power in the lower extremities, and partial loss of speech. He underwent a great variety of treatment, but when I last saw him had not recovered either his speech or the power of his limbs, though the disorder had been of some years' duration.

CASE V.—PARTIAL PARAPLEGIA AND HEMIPLEGIA.

A stout young woman, in a farmer's service, suffered from a syphilitic disorder, for which she took mercury without much care or precaution for some time. She fell ill, and ceased to menstruate. After this she was frequently subject to epileptic seizures, which at length were so frequent that she became quite childish. During a succession of these attacks she first became hemiplegic and subsequently paraplegic, so that the use of the left side and of the lower extremities was almost entirely lost. From want of power of retention, the urine produced a large slough from the nates, from which she slowly recovered, but during the recovery of the sore the paralysis got nearly well, so that at this time, though there is still a large and deep sore in the nates, she has nearly recovered of the paralysis, and has not had an epileptic seizure since.

CASE VI.—PARALYSIS.

A young man of dissipated habits underwent a severe and protracted course of mercury for a syphilitic disease, which enfeebled him very much. Immediately after it he was seized with a severe attack of typhus fever, from which he recovered with great difficulty. He remained convalescent for some time, and was then seized with paralysis, hemiplegia of the right side, partial loss of speech, &c.; his mind became enfeebled, and after two or three more attacks of paralysis he gradually sank.

CASE VII.—PARALYSIS.

A young man, by trade a compositor, underwent a tedious course of mercury for a chancre of the penis. After some weeks he began to perceive a difficulty of speaking and in walking. He communicated his words like a drunken man, and began to stagger in his walk, so much so that if any one touched him he fell. He remained in this state about a year, the disorder being partly attributed to the absorption of metallic matters in his trade. He gradually got worse in spite of all

that was done for him,—as cupping, blisters, tonics, sea air, &c., and was at length obliged to give up business, the difficulty of speaking and loss of power in walking having increased to such a degree that he could not make himself understood. His mind also had become greatly enfeebled. One day after a hearty meal, he was seized with severe hemiplegia, from which, after a few days, he recovered in a great degree. Another similar attack has since occurred from which he has also recovered; but he now remains a complete wreck both in body and mind.

CASE VIII.—HEMIPLEGIA.

A woman, of depraved habits, about 55 years of age, who had undergone many courses of mercury during her lifetime, was seized sometime after having undergone one, with severe paralysis, (hemiplegia,) and after two or three repetitions of the seizure she gradually sank.

It must be confessed that the number of cases adduced is not great, but as it is only within the short period of two years that my attention has been directed to the subject, it is probable that a future opportunity will afford me a larger number.

I shall offer no explanation of the *modus operandi* of mercury in producing paralysis; observation and experience have long ago proved it to have the power of causing one kind of paralysis, (the "tremblement" before mentioned,) which may be accounted for in some degree by the continued state of irritability and excitement, and subsequent depression, or diminution of tone, into which the nervous system is thrown. At the same time that the vascular system is exhausted by the great increase of its secretions, the blood itself is also known to be considerably deteriorated, both as regards the quantity of red particles, and of coagulable lymph contained in it. These effects we also know to be extensively the case when mercury is exhibited as a medicine; the nervous irritability of the patient is vastly increased, his muscular strength reduced, his pulse increased in rapidity, but diminished in strength; his secretions are depraved, excited, altered, diminished, or increased; the skin, the salivary glands, and the mucous membranes, especially those of the bowels, are all unduly stimulated, their capillaries relaxed, and the blood itself altered and depraved; ulcerations and serous effusions are produced, and the effects of a general want of adhesive power are observed throughout the whole system. I can say nothing on the pathology of the disease, as I do not consider a knowledge of it essential to the subject of my paper, which is merely to point out the probability of certain effects resulting from certain causes. I would, however, state, that whatever morbid changes may be observed in diseases thus produced, or supposed to be so, may be altogether similar to those generated by other and more common causes. The action of mercury would be, to induce a strong predisposition to the deposition of serum,—to the process of

ulceration,—to local inflammatory action,—to congestion,—and would differ little, but in strength or rapidity, from any other cause, such as dissipation, intemperance, or depraved habits, which also exhaust the system, and give rise to effects similar, but generally less in degree, than does this powerful medicine.

I have now brought these imperfect observations to a close, and shall make no apology for them beyond this, that it is probable, had it not been for the kind invitation of your Society, and for the favourable reception it was pleased to give me on a former occasion, that they would have remained the inmates of my own thoughts, as I should not have dared to give them to the medical world, unless years of experience had proved the frequency and the truth of the facts.

CASE OF DELIRIUM, SUCCESSFULLY TREATED WITH SEDATIVES.

By E. COPEMAN, M.D., Coltishall.

On the 14th of May I was requested to visit Mr. —, a farmer, between 50 and 60 years of age. This patient is short in stature, rather corpulent, head round and large, neck short and thick, eyes prominent. He has several times in his life been the subject of severe head-affection, for which he has been treated by copious and frequent bleedings, and other antiphlogistic remedies; and once he was also freely salivated. On one occasion he did not regain his mental powers for several weeks after he had quite recovered his bodily health. In December, 1842, I attended him during nearly three months for an inflammatory affection of the kidney, accompanied with severe constitutional disturbance and anomalous symptoms about the head. From this illness he completely recovered, and was bled at the onset of the disease. In July, 1846, on returning from a fair late at night in a state of intoxication, he was thrown out of his gig, and received a severe blow on the head and left shoulder. I saw him next morning; he was a good deal bruised, and suffering from concussion of the brain. During the treatment he was twice bled, and after a severe and threatening illness, he recovered in five or six weeks. He drinks "small beer" rather freely when at home, but is in other respects temperate; when at market, or in company, he is liable to be thrown off his guard, and once excited is almost sure to go on to intoxication. This effect is produced without taking much in quantity, and the kind of stimulus he takes upon such occasions is generally porter, or spirits and water. He is of a quick, irritable temper, and occasionally apt to despond. He is also a great snuff-taker. Two or three days before I was summoned to him he had "taken too much," and afterwards complained of slight confusion of thought and restlessness of temper, for which he had a great desire to be bled; from former experience he placed great reliance upon bleeding, and he particularly requested me to perform the operation. I noticed that he was not so stout as before his accident last

year; but as his pulse was good, his face flushed, and his eyes injected, I yielded to his entreaties, and drew about ten ounces of blood. He complained of a fixed pain in the right temple, extending over the space of half a crown. His tongue was white, his breath offensive, and his bowels confined. Perspiration neither profuse nor deficient. Ordered a dose of blue pill and rhubarb, followed by senna draughts.

Next day, 15th, he said he was no better, and hinted at being bled again, but I saw no indication for it, and declined. Purgative medicines continued.

16th. To-day I found him more hurried and confused in his mind; he was in bed; had had no sleep; very little perspiration; head very hot, and feet generally cold. At one time in the morning he had something of a convulsive fit, his features having been contorted, and his limbs agitated; the pain in the head continued, but still circumscribed to the same spot; his pulse was quicker, about 80, and his countenance was flushed; his bowels had acted twice; the first evacuation was very pale, the second more coloured. Continued the purgatives, gave a fever mixture, and applied hot flannels to the feet, and cold water to the head.

17th. No sleep during the night; delirium increased, but he is not violent unless opposed; still pain in the head, but pulse not so rapid, nor so much fever as yesterday; no tremor; bowels acted once, motion darker coloured; tongue a little cleaner; attempts to answer my questions, but after beginning to do so, and showing that he understands them, he leaves off abruptly, and can no longer collect his thoughts. Empl. Lyttæ nuchæ. Calomel, gr. v.; Pil. Opii, gr. j. hora somni sumend. Contin. Mist. Sennæ.

18th. Again no sleep; face flushed; pulse 70; delirium same as yesterday; tongue less furred; bowels sluggish. Aperient draught, with Tinct. Hyos., dr. ss., every four hours. Calomel and opium again at night.

19th. Bowels relieved, and motions dark; scarcely any sleep; is very restless, talking incessantly in a very incoherent and indecent manner; although there is no tremor, his delirium to-day is characteristic of delirium tremens, and the febrile symptoms have diminished; digestive organs improved, the liver acting well, and the tongue being cleaner. The following mixture to be taken at intervals in the course of twenty-four hours:—

R. Solut. Morph. Acet., dr. ij.; Sp. Lavend. Comp., m. xx.; Mist. Camph., oz. vj. M.

20th. Face less flushed; feet warm; more perspiration; pulse 170; tongue cleaner; but he has had very little sleep; his delirium continues, and he has been occupied with making his bed, and walking round it repeatedly this morning. The mixture to be taken more frequently.

21st. Delirium not so constant; his conversation less immodest; answers questions pretty well, and always knows me. He told me to day that he had fears of poison, and asked me to analyse a piece of cake, some of which he had eaten, although almost directly afterwards he said I might eat it if I liked. He sent his wife out of the room to tell me this by myself, and enjoined me to secrecy. Quantity of solution of morphia increased to dr. iiss. in the mixture; senna