But what are the signs which attend and point out these muscular luxations? Tearing of cellular surroundings, perhaps straining of nerve-filaments, rupture of small vessels, and pain and discomfort in trying to put in action the displaced muscle; these are signs enough to point to the nature of the hurt. In a word, the inability to use the muscle without pain (such pain as is often so severe as to prevent absolutely the action of the muscle affected) is a sign of this hurt as surely as is the inability to use a joint a symptom which, after a recent accident, raises the suspicion of a straining or rending, with consequent displacement, of some one or more of the structures which perfect the joint movements.

The relation of a case in point will probably help to a better understanding of these dislocations, and will conveniently introduce the question of treatment.

A man, twenty-seven years of age, was going downstairs with a heavy box supported on his back. He slipped on one of the steps, but recovered himself with an effort, in making which he swung half round, having his right hand on the baluster; the weight of the box as he swung requiring a sudden effort for its support owing to the momentum given it by the swing. He at once felt a severe pain in the right lower dorsal region of the spine; and when I saw him, he placed his hand by the side of the spinous processes and indicated the site of the trouble. Here there was tenderness over a circumscribed area; and on rotating the body as far as possible on the pelvis, there was a certain movement which caused great pain; and with the hand over the painful spot, one could feel a slight swelling, or perhaps one should say I thought I could detect an irregularity in this situation.

In treating this case, the first point to see to was the placing of the patient in a position in which he was most free from pain. Then, placing the hand, or rather the hand armed with a pad of lint, firmly over the painful part, the patient was made to repeat the movement productive of pain. No second trial was needed, but under the pressure the muscle slipped into place, and the patient was at once relieved of the pain and could move without difficulty. The parts were protected with a pad and bandage, and for a time he was well. He suffered, however, from further dislocations; but, having noticed the treatment, he found he could always relieve himself by repeating the simple manoeuvre which has been described. And this is the worst of these cases—easy to relieve, there remains the risk of a recurrence of the displacement.

A man aged forty-six was playing at lawn tennis, when he felt a sudden movement with intense pain in the right forearm. He rested the arm, had advice for the trouble, but the pain persisted. Two months after the injury, I had the opportunity of seeing him. When the accident happened, the forearm was suddenly thrown into the extreme of pronation whilst he was making a back-stroke. On examining the arm, there was tenderness along the course of the pronator radii teres, and the pain in the forearm was severe when the hand was moved in pronation. The hand was brought into pronation, and, with a pad fitted to and applied over the course of the pronator, firm pressure was made upon the muscle whilst the hand was carried to the extreme of supination. The pressure, the patient said, gave relief, and on removing it the pain had ceased; the forearm could now be freely moved. The parts were rested in a sling, and he was told to keep the arm quiet. In two days' time, he again tried the muscle at lawn tennis, and again the pain recurred. The muscle was again returned to its place, and this time the arm was so fixed that the muscle was secured against a further dislocation; and, as no movements have since been made which could cause its displacement, the patient has remained well.

It was this case—its simplicity, and yet the impossibility of righting the trouble without recognition of its cause—which led me to look into this subject, and my search brought under my notice M. Pouteau's essay. I need not give you in full the case, which is charmingly related by the French surgeon, and which led him to give careful consideration to the question of muscular dislocations; but briefly it was this. A girl fourteen years of age was looking out of a window, and twisted her head quickly, as much as she could, from left to right, to see and to speak to a person on the floor above, immediately over her head. She felt an acute pain, with the sense of a sudden shock or jerk, in the upper and right side of the neck. The head was immediately drawn towards the right shoulder, and could not be moved from this position; every attempt at so moving it being followed by intense pain, which was even severe continuously. M. Pouteau gives his reasons for supposing that the displacement had occurred in some one or more of the digitations of the splenius. The first thing he did was to relax the affected muscle; he then made pressure with the thumbs on the central line of pain, then stronger, rubbing with the hand, and at last with a pad of lint. This treatment effected the reduction of the

dislocation. The patient recognised a slight jerk, the pain was allayed, and free movement was regained. Some years before M. Pouteau wrote, I should mention that another surgeon, M. Lieutaud,* had described certain lumbar pains as due to muscular dislocation, and had stated that they could be cured on the spot by reducing the dislocation; and his treatment, which is similar to that of Pouteau, was followed by successful results. But he has not gone thoroughly into the subject, and certainly makes no mention of the signs by which these dislocations may be recognised, or their existence be suspected. The symptoms, it is true, which indicate the possibility of a dislocation of a muscle may result from the contraction of a muscle after tearing of its fibres from some of their attachments, or from the contraction of a muscle which has been suddenly strained or jarred; but, as has been said, it is well in a case of doubt to try the simple remedy for the treatment of a dislocation; for if this fail through the hurt proving to be a strain or a rupture of fibres, no harm can result to the patient from the ordinary treatment, which it would have been wrong not to have tried whilst a possibility existed that a muscle-dislocation required reduction. A displacement, too, which is not likely to be righted without treatment, and which not unfrequently falls at last into the hands of charlatans, who, in their active treatment by manipulation, are apt to secure a remarkable success; or failing this, remains as a stiffness and aching in a particular region, which will always be complained of by the patient and will continue to be associated in his mind with the accident, which he is likely to think may have had more done for it in its earliest treatment.

If, then, you come across a case in which sudden or unusual movements of the body have been followed by pain—local in its character—made worse by certain movements, or preventing certain movements, and especially if such pain be referred to the site of muscular digitations about the spine or to that of long comparatively slender muscles, as in the forearm, it is at least worth your while to try the simple measures which we may use for reducing the dislocation of a muscle. First, guided by the pain, decide as to the muscle or digitation of a muscle probably the seat of the trouble. Secondly, relax this muscle so far as you can. Thirdly, by firm manipulation, such as by rubbing with the hand or by kneading with the thumb, endeavour to replace it. Fourthly, if this fail, make pressure over the part whilst you bring the muscle into action or put it on the stretch; and, if the less painful measures have failed, this is almost sure to bring the muscle into position. I fear all this has to be done without the employment of an anæsthetic. We need guidance from the patient; we require action in the muscle. Some amount of pain is inseparable from the treatment of these dislocations.

ORGANIC DEMENTIA; LOSS OF VERTICAL EQUILIBRIUM AND OTHER MOTOR PHENOMENA; TUMOUR OF LEFT TEMPORO-SPHENOIDAL LOBE OF BRAIN.

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THE following notes are intended as a contribution to the further elucidation of the motor, and possibly mental, disturbances depending on organic brain-lesions, and as a sequel to Case I in the interesting series of pathological illustrations reported by Dr. Ringrose Atkins in the JOURNAL of May 4th.

J. P., aged 60, married, bootmaker, was admitted on October 12th, 1877, with his first attack of seven days' duration. He habitually sat rocking himself from side to side; was moody and depressed in manner. He was incapable of sustaining any conversation for more than a few seconds. Two daughters had been patients in this Asylum; both exhibited melancholic symptoms, and both were discharged recovered; but one still became bad at times, was low, excitable, and talked to herself incoherently. The patient was said to have had a child by his own daughter, but was tried and acquitted of this unnatural offence, about eighteen years ago; and this, preying on his mind, was said to be the cause of this attack. He was said to have drank somewhat, but apparently not to excess. He had been in a depressed state for some time, but continued at work as a jobbing labourer till seven days ago, when this depression became worse, and he was, on October 11th, taken to the workhouse. He had had parish relief, but it was doubtful if enough, for some time. He was very stupid, and nothing could be made of what he said. He muttered unintelligibly and incoherently

* *Précis de la Médecine-Pratique*, p. 557. These dislocations are possibly referred to by M. Portal and M. Duvenoy.

to himself when spoken to. The pupils were irregular, the right being slightly the larger; both were active. There was divergent strabismus of the right eye, and the mouth was slightly drawn to the left. There was partial paralysis of the right side. He used the left hand more in feeding himself, but could hold the spoon in the right, clutching the handle in the palm with the whole hand—the fine movements for the fingers being apparently lost—and thus he put the spoon to his mouth. He was weak on his legs, and in walking lifted the left leg with a slight jerk, somewhat after the manner of a stringhalt horse. When left standing up unsupported, he leant or walked backwards, vertical equilibrium being apparently interfered with. The sole of the left foot was sensitive to tickling.

October 15th.—The movements of the limbs varied very much, while equilibrium (vertical) was disturbed; the gait to-day was more like that of a drunken man. He was sweating profusely this morning.

October 23rd.—He could not walk unsupported; when he tried to get out of a chair, he fell backwards; and if walking by support, leant backwards. He dragged the right leg, and put out the left without proper control. He did not use the right hand in feeding himself, but if allowed groped about on the plate with the left, even after he had eaten all off it. He soiled his clothing, and crammed the food ravenously into his mouth, unless fed. His mental condition was that of organic dementia.

October 29th.—He had become much feebler, and had lost almost all power of motion in the lower limbs; apparently, his sight was almost entirely gone. Sensation, as tested by tickling the soles of the feet and calves of the legs, was present, but apparently somewhat stronger on the left side. He was in a stupid, drowsy, and sleepy condition. Continuing in this drowsy and heavy state, he went off rapidly and unexpectedly, dying at 7.30 P.M.

Post mortem Examination.—The scalp was tough, and highly vascular; the calvarium oblong and fairly symmetrical. On its internal aspect, in the grooves for the meningeal vessels, and on the parts adjacent to these, was seen a blood-stained exudation; this was also seen

a. Tumour. b. Opening into disorganised interior.

on the corresponding aspects of the dura mater. In the removal of the encephalon, very little fluid escaped. The brain weighed sixty ounces (avoirdupois); it was plump, and so completely filled up its cavity that the convolutions were quite smooth and the sulci almost obliterated, or marked by faint lines. There were no large veins ramifying on its surface; nor was there any adhesion of the dura mater along the edges of the longitudinal sinus, or elsewhere. The sinuses at the base of the skull were engorged with blood. There was no opacity of the arachnoid or of the pia mater. On being placed on its under surface, a distinct bulging, with a breach of continuity of the grey matter of the second and part of the third left temporo-sphenoidal convolution, came into view. On examination, this was found to be due to a tumour (or tumours) of oblong form, occupying a large portion of this lobe. The surrounding structure was softened and broken down, the greater part of the interior of the lobe being thus destroyed; while posterior to and below the breach already described, an opening was seen communicating with the disorganised interior. The white substance was unusually pale and doughy; otherwise, the organ, to the naked eye, appeared healthy.

My friend, Dr. Bevan Lewis, of the West Riding Asylum, has kindly sent me the following note as to the nature, measurements, and microscopic appearances of the tumour. "It was purely an encysted hæmorrhage, the whole mass measuring two inches and a quarter in its

greater, by one inch and a quarter in its shorter, diameter. It had a tough fibrinous boundary, and centrally was a mass of blood-corpuscles and fibrine, which broke down readily in attempting to make sections of the hardened preparation, leaving a fine fibrinous reticulum."

FOUR CASES OF CYSTINE CALCULI.

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CYSTINE calculi are of such rare occurrence, when compared with other varieties of urinary concretions, that the following particulars of four cases which occurred in the practice of my father (the late Mr. George Southam) are, I think, worthy of record.

CASE I.—Margaret P., married, aged 33, residing at Ashton, was admitted into the Manchester Royal Infirmary on September 14th, 1868, suffering from well-marked symptoms of stone. On October 16th, the operation of lithotomy was performed, the urethra being rapidly dilated and the calculus removed entire. The operation was, as is usually the case, followed by incontinence of urine; but this soon disappeared, and she was discharged from the hospital on November 9th with perfect command over her bladder.

The calculus was pure cystine; weight 180 grains; shape oval; size an inch and a half by an inch. The surface was slightly tuberculated, glistening, and of a dirty brownish-yellow colour. Some difficulty was experienced in making a section of the calculus, owing to its soft consistency and tendency to crumble down; but it shows a whitish waxy surface. The central portion has a chalky appearance, forming an indistinct nucleus, and is of a whiter colour than the more external portion, which shows a somewhat radiated arrangement.

Having ascertained that the patient was still living at Ashton, I visited her in June 1877, with the view of making some inquiries into her family history and present condition. She is one of a family of nine, who are all alive and healthy. No member of her family, either on her father's or mother's side, has, as far as she is aware, ever suffered from stone or any symptoms referable to the bladder. She was always strong and enjoyed good health until the age of thirty-two, when she began to be troubled with symptoms of stone, which were very severe for some months preceding the operation. She has had four children, all now alive; of these, three were born before the operation; the youngest, a girl, was born four years subsequently to the operation, and is now consequently five years of age. She is an anæmic strumous-looking child, with enlarged cervical glands, and has always had very delicate health. The patient herself is a slightly built woman, of delicate appearance and sallow complexion. She has never been very strong since the operation, though able to get about and attend to a small shop of which she has the charge. She has never noticed any gravel in her urine, or suffered from attacks of renal colic, since the operation. So long as she keeps tolerably quiet, she is able to retain her urine perfectly; but, if she undertakes any hard work or takes much exercise, she is troubled with incontinence.

Being anxious to ascertain whether the condition of cystinuria, which must have been present eight years ago, still existed, I obtained some of her urine for examination, and found that it presented the following characteristics. It was of specific gravity 1017, turbid when voided; had a peculiar aromatic odour and a pale amber colour; was faintly acid. On standing, it very quickly deposited a copious whitish sediment, the supernatant fluid remaining very turbid. Examination of the deposit under the microscope showed very numerous transparent hexagonal crystals of cystine, the field being crowded with them. Mingled with these was a slight quantity of amorphous urates. On the addition of hydrochloric acid or ammonia, the crystals at once disappeared. On boiling a little of the urine with potash and lead-acetate, a dark-coloured precipitate of lead-sulphide appeared. After standing twenty-four hours, the urine became alkaline, with a strong and disagreeable odour. After forty-eight hours, the crystals of cystine had entirely disappeared, numerous crystals of triple phosphate being present.

An examination of the urine of the daughter, aged 5 years, gave the following results: Specific gravity 1010; neutral; very pale straw-colour; quite free from any odour; quite clear; no deposit on standing. Microscopic examination did not show the presence of any crystals, nor was the addition of acetic acid or solution of carbonate of ammonia followed by the precipitation of any crystals of cystine.

CASE II.—Alice W., aged 4, residing at Bury, came under my father's care in 1869, suffering from symptoms of calculus vesicæ. The urethra having been dilated, lithotomy was performed, and the fragments of the calculus subsequently escaped in minute particles, the