calcaneum. In one instance, fibres were traced from the lower part of its outer border into the plantaris tendon.* The fibres were in each instance superficial to the rest of the deep flexor; and I conceive they were interrupted by the os calcis on their way to the accessorius, just as the plantaris is interrupted by the same process on its way to the flexor sublimis, and just as the tendo Achillis is cut off from the plantar fascia. Moreover, the fibres of the two muscles—the plantaris and the accessorius longus—both interrupted nearly at the same spot and by the same bony process, were found in one specimen blended with each other.

Traced downwards, the remnants of the wide relations of the accessorius are shown by its occasional junction with the flexor hallucis, and by occasional more extensive connection than usual with the flexor perforans digitorum, of which it sometimes supplies the tendon to the fifth toe. It was also found by Wood in two instances to supply the perforated tendon to the fifth toe, and in one that to the third toe; and Turner saw a slip from it which divided to each moiety of the tendon of the flexor sublimis to the fifth toe. It has sometimes been extensively attached to the tendon of the flexor hallucis, as well as to that of the flexor digitorum.†

I may observe that the accessorius longus has sometimes been more or less independent of the accessorius proper, being inserted with it, or independently of it, into the flexor hallucis or the flexor digitorum. Wood describes a fully developed specimen of the flexor longus accessorius arising from the lower third of the hinder surface of the fibula and the adjacent aponeurosis, as a distinct muscle ending in a stout tendon which passed under the annular ligament outside the vessels, and was joined by the muscular fibres of the massa carnea Sylvii, and by the tendons of the perforans in the middle of the sole. The fibres of its tendon passed exclusively to the three outer toes.‡ In another case,§ the flexor accessorius was made up four distinct heads—1, the long head from the fibula; 2, another tapering fleshy belly from the upper part of the os calcis and the insertion of the plantaris tendon in front of the tendo Achillis, and ending in a distinct tendon; 3, the usual massa carnea from the hollow surface of the os calcis; and 4, an outer tendinous slip from the long plantar ligament; these all uniting, joined with a large slip from the tendon of the flexor longus hallucis, to form a distinct or third set of flexor tendons passing to the four outer toes. Each of these joined that of the perforans in the inside of the sheath, about the first joint. These third or intermediate flexors remind us of other instances in which we have intermediate muscles segmented as irregularities from between two similarly disposed muscles—for example, the intermediate extensor carpi radialis; and we shall find the same thing in connexion with the extensors of the toes.

The lumbricales in the foot show less frequent irregularities than do those in the hand. The irregularities occur in the case of the fourth lumbricalis more often than in either of the others; whereas in the hand the third muscle is the one most often affected. Either of them may be absent; and they in various ways show evidence of the primitive oneness of the several parts of the flexor mass. Thus one of them is sometimes derived from the flexor sublimis, or the flexor hallucis, or the accessorius; or they may be continuous with the latter, or may derive accessory slips from either of these muscles. There may be also other varieties similar to those mentioned as occurring in the hand, and, like them, indicating a disposition to maintain their position upon the two sides of each digit; though such varieties are comparatively rare in the foot. Either of the lumbricales may be derived from adjacent sides of two tendons, or may be connected by slips with the sides of the adjacent tendons; or there may be two in one space, one passing to the fibular, as well as one to the tibial, side of the toe. I have not, however, seen the mention of their being joined by any long slip from the leg similar to those which are occasionally derived from the forearm by the lumbricales in the upper limb. Such irregular slips in the leg appear, as we have just seen, to attach themselves to the accessorius rather than to the lumbricales; though it is true that they may connect themselves with the latter muscles through the medium of the former. Indeed, we may regard the accessorius as a structure intermediate between the lumbricales and the supernumerary flexor elements in the middle division of the limb, which we have just been considering.

In the ball of the great toe, either the adductor or the flexor brevis may send a slip beneath, deeper than, the transversus, to the first phalanx of the second toe. Wood found this slip from the adductor in

several instances, and remarks that a similar slip is said by Meckel to be found in the foot of the White Bear.

In connexion with the fifth toe, a muscle has been noted by Wood as frequently passing from the outer tubercle of the os calcis to the base of the metatarsal bone, and has been named by him “abductor ossis metatarsi quinti”. It may be regarded as a prolongation backwards of the abductor minimi digiti derived from the mass which forms that muscle in the Cryptobranch, and which is a part of the supinato-extensor mass. It is found in Quadrumana and many animals. An opponens minimi digiti is sometimes well developed, and it is common in many of the lower animals. Wood found it largely developed in the Orang, but not present in the Bonnet Monkey. He remarks that Cuvier and Laurillard represent it as very large in the Lion and the Panther. In one instance, the same anatomist found the abductor minimi digiti provided with two tendons.

The transversalis pedis has in several instances been found deficient or absent.

[To be continued.]

ON CASES OF SIMPLE VERTIGO.*

By T. CLIFFORD ALLBUTT, M.A., M.D.,

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I WISH to consult rather than to try to instruct my brethren in my remarks of to-day, for I propose to read you the short notes of a few cases selected from a much larger number, and to ask what is the meaning of their symptoms, and how they are to be cured. When I speak of their symptoms, indeed, I speak with almost unnecessary comprehension, for the one symptom—vertigo—is the only one that can be called constant; and we find a singular absence of any such concomitant morbid phenomena as might help us to the understanding of the disease or disorder. This vertigo occurs generally in males. Of my cases, I find that all are males. It is often so severe as to be extremely distressing; it may continue for months or years, and it is very rebellious to treatment. Ultimately, however, it disappears without the necessary development of any further evidence of nervous or other mischief. The average of age in my cases, which number twenty-seven, is rather high, being 44.7, or thereabouts; but I do not find that the patients, as a rule, have manifested any definite arterial or other tissue degenerations.

As I have said that the vertigo to which I refer generally exists alone, I thereby implied, and now would state explicitly, that from my class of cases I have excluded all those instances of vertigo in which was found any evidence of disease or disorder of the encephalon or arterial system, or any evident dyspepsia or external injuries. In women, I should also exclude menstrual disorders. I have also excluded all cases of vertigo in which the symptom has been but a transient one, and dependent upon some chance and passing derangement. Few of us, perhaps, have not experienced some vertigo at times. The vertigo in the cases from which I extract a few examples is not transient, or, if transient, is continually recurring, or ebbing and flowing. The patients complain of a dizziness so severe as to cause a great sense of uncertainty in gait, to cause actual reeling in the gait; or, again, even to hurl them about the room, or to throw them down. In the cases which I describe, consciousness is always retained, however bewildered the patient may be; nor is there ever any *petit mal* or other epileptical condition. The connection of it with other neuroses, if neurosis it be, is not very evident, though there is some argument in favour of such a connection. One patient suffered from *migraine*, which ceased about the time of the onset of the vertigo; another belonged to a neurotic family. Many of them were men of anxious or irritable temperaments, or placed in positions of anxiety and heavy responsibility. In another patient, also a male, there was some hysteria, evidenced by temper, and by discharge of large quantities of limpid urine. I am satisfied that the complaint depends primarily upon the nervous system, either directly or through the mediation of vascular changes. Whether in any of my cases disease of the internal ear exists or has existed, I cannot tell; I have not overlooked the chances of such a thing, but cannot say anything more than this: perhaps no means exist of detecting such a thing. I do not think that the attacks depend upon any changes, negative or positive, in the quantity of blood in the brain, for I have had these patients closely watched by their friends, in order to ascertain whether pallor or flush preceded or accompanied the attacks. All have agreed in saying that the complexion does not change in these respects. The state of dizziness described is not attended with sinking or nausea, except in any severe cases where sickness may follow; indeed, in this its identity with common dizziness is further shown, for

* Read before the Yorkshire Branch.

* *Proceedings of the Royal Society*, 1867, p. 541. Similar varieties are given in *Guy's Hospital Reports*, xiv.

† Curnow (*Journal of Anatomy*, vii, 308) found a tendon from the accessorius perforating the flexor brevis, which was inserted into the proximal phalanx, and running on to the second phalanx, into which it was inserted, being in its turn perforated by the tendon of the long flexor.

‡ *Proceedings of the Royal Society*, 1867, p. 527. § *Ibid.*, 1866, p. 240.

I believe that there is such identity. The precise symptoms described so graphically by my patients may be brought on readily by turning round. The best plan is to place the poker upright upon the floor, and rest the forehead upon its upper end, and then to move in a circle about the poker as an axis. If the movement be rapid and the radius short, the performer will not only find himself unable to walk across the room without staggering, but may find himself hurled by an invisible force against the wall or on to the floor. In my patients, the vertigo seems to come on at any time, but is generally worse in the forenoon. Assuming the erect posture in the morning often produces it, so that the sufferer has again and again to return to his pillow. The noise and whirl of the streets is a common exciting cause, and patients have told me that the sight of a carriage will compel them to clutch a rail or a post for support, so strong is the effect produced. The vertigo, however, often recurs during quiet, or even in the dark. But I must not detain you longer, and my first case shall be:

CASE I.—Mr. P., who, when he first consulted me in April 1871, had suffered from vertigo, as above described, for fifteen years. The attacks often lasted half-an-hour. They might disappear for months, and return again. He had had attacks even of great severity when in bed, as though he were rolling out of bed and across the room. The worst attacks are followed by nausea and sickness. He could not accuse overwork or anxiety as their causes. He was very largely concerned in business, but was very wealthy and successful, and had a manly cheerful temper. His home was very happy. Two children were nervous and neuralgic, but might have derived this from the mother. He was himself in every respect a picture of health.

CASE II.—Mr. F., a few years younger than the preceding, was of a hesitating and somewhat anxious and despondent habit, but was a very successful professional man, of large independent means, and very happy home. For ten years he suffered distressingly from vertigo, often so severe as to cause him to lay hold of anything at hand to support himself. Like other patients, carriages in the street affected him excessively. It was in this patient that I observed hysterical phenomena. He has now been cured of his malady for two or three years.

CASE III.—Mr. B. is engaged in a large business, and is also a very keen sportsman. He will work all day, then go by night to the moors, and walk or shoot from 5 a.m. till noon, and then return to work in town, or *vice versa*. He has had very much anxiety and distress in home matters. Like all others whose cases I read to-day, he is of temperate habits. For the last two years he has had the vertigo very commonly. He seems as if drunk in the street, and fears to run or jostle against people. If it be very severe, he may vomit after the attack. He is generally easy when lying down. The heart and kidneys are normal as in the other cases: in fact, save for the vertigo, he has good health.

CASE IV.—Mr. S. W., aged 65, overlooker, has had vertigo six months, in extreme forms commonly, and in less degrees constantly. He has often to catch hold of furniture, lest he should fall. The other details are as in the previous cases. He consulted me this spring, but is as yet without relief.

CASE V.—Mr. W., engineer, aged 47, about three years ago was seized with intense occipital headache of unusual duration and severity. It was accompanied by dizziness, and in a few days the headache ceased, the dizziness remaining. He has fallen down three or four times, and often staggers or walks as if intoxicated. There is nothing important to be made out in his personal or family history. His general health is excellent. He consulted me some weeks ago, as yet without any benefit.

CASE VI.—Mr. F. D., a country gentleman, of large means and good health, and of spare and active frame, consulted me about two years ago for a dizziness which had made him miserable for some months. He had never fallen, but often reeled. On rising from his knees at morning prayers, he felt so insecure that he had to give up the office to others. He had been almost obliged to give up hunting and riding altogether; nor dare he drive in a dog-cart. He lost a very dear daughter a short time before, whom I had seen many times in consultation, and I had occasion to see that he was very deeply affected by the trial. Medicine did but little for him, I fear. In about twelve months the affection became less, and now has passed away under the good effects of care and change of scene.

CASE VII.—The Rev. T. A. suffered very much as the preceding—so much so that he was in much difficulty about rising from his knees after prayer, unless he had railings at hand to offer him ample support. This gentleman had suffered in previous life from sick headaches, and was a man much worn by overwork. He gained but little from medicine; but in the course of two years the affection wore away, under the influence of foreign travel and relief from all duty.

CASE VIII.—Mr. W. H., a patient of Mr. Rayner of Birstal, is a man

of some little property, and no regular occupation; but he busies himself most anxiously in local politics, and is thus a nervous, irritable, overworked man. His vertigo, as in many others of my cases, began suddenly one morning on assuming the erect posture. He reels in walking, and dare not turn his head. Sometimes he has vomited. In all other respects he is well, but a nervous subject. He improved in a few months, but doubted whether medicine did much for him.

CASE IX.—Mr. J. B., aged 46, a healthy farmer of temperate habits and comfortable circumstances, was sent to me by Mr. Bramley of Halifax. This was a very bad case. The dizziness had commenced suddenly as in the preceding case, but continued, and often attacked him most severely. He often had to take a cab in the streets and go home. Like many others of these patients, he suffered from the great mental depression caused by the unfounded suspicion of drunkenness to which his gait gave rise. At one time the dizziness was so bad that he had to stay altogether in bed. He had some headache and lifting pains at the vertex. His general health and physical state were good. I did him no good, and Mr. Bramley told me some months later that he was no better, and had left him for other advisers.

CASE X.—Mr. R. P., a tradesman in very large business in Wakefield, has suffered from vertigo for eighteen months, which agrees in all its phenomena and conditions with that above described. He is a spare nervous man, and belongs to a highly neurotic family, in which are both epilepsy and insanity. He has himself had severe *migraine* in past years. His age is now 35.

I could add the notes of fifteen more cases at least to the above, but I should occupy your time to no further good purpose. The affection, whatever it be, is very constant in its characters: it is not flushing, like the head-swimming of women, who have disordered or suppressed menstruation; and it does not seem to depend upon vascular changes. I have questioned all my patients very closely as to the kind of dizziness—whether they themselves seem to spin round, or external objects to spin round them, etc. The same person, however, will give different replies, and the description of the vertigo seems to vary with its degree. When very bad, patients will say that the ground seems to rise up under their feet. I fancy the sensation closely resembles that of alcoholic intoxication. My own impression is, that the affection is one of the cerebellum, or of the great basal ganglia near it. I cannot find any evidence of its belonging to dyspepsia, as was supposed by Trousseau, who has given the only good account of the malady which I have seen; nor is it generally relieved by antidyseptic remedies. Like *migraine*, it offers very great resistance to treatment. Trousseau's plan of giving alkaline powders after meals, and bitters between meals, has answered in a few of my cases; but I have not been led to any great faith in it. The most potent remedies are two—first, complete change of scene and removal of all causes of nervous depression; and, secondly, Turkish baths. The first remedy is the best. A continental tour, a moor in Scotland, a fishing-hut on the Tweed, are the means for the wealthy, and will probably succeed well. Turkish baths I have also found of very great value in every case for which I have been able to try them. Of drugs, strychnine is the only one which has helped me much, and it rarely fails to be of some use. Galvanism I have not tried; but I intend to test the value of the continuous current applied to the occipital and cervical regions. Happily, the affection does not seem to point to any approaching cerebral disease, which these patients often dread; and it tends to wear itself out in times which vary from a few weeks to two or three years. It not unfrequently, however, reappears after a time. Nearly all the patients who have consulted me have had leeches, blisters, etc., and brisk purges at the commencement of their illness; but all have assured me that such measures did them more harm than good.

GASTROTOMY IN A CASE OF EXTRAUTERINE GESTATION.

By F. H. MABERLY, M.R.C.S., etc.,

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MR. BAILEY, surgeon of this town, requested me, on June 21st, to see Mrs. —, a young woman aged 27, mother of two children, the youngest being two years old. I found her suffering from excruciating pains in the abdomen, and constant sickness. Her face was pinched, and expressive of great anxiety; the pulse rapid and feeble. On examining the abdomen, I found its walls exquisitely sensitive, so that no pressure could be borne; yet, on the right side, could be seen and felt a solid substance, springing evidently from within the pelvis, rising to a level with the umbilicus, and slightly crossing the median line to the left. The history showed that this substance had been forming for