ON A CASE OF PSYCHRO-ÆSTHESIA.

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I. F., bricklayer, aged 52, has been under my care at Regent's Park Hospital for Epilepsy and Paralysis since March, 1894. He complained then, and has constantly complained since, of a sensation of painful coldness chiefly affecting the right lower extremity at first, but more recently involving to a less extent the right arm and left leg.

He gives the following history :—

His general health has always been good, but he has always suffered from cold hands and feet.

In July, 1892, whilst kneeling at work, his right knee became locked, and always did so subsequently whenever he knelt down.

In August, 1893, he fell whilst walking from a similar cause. Effusion took place into the joint, which incapacitated him for work for several weeks. He attended St. Bartholomew's Hospital for this and for coldness in the foot and leg, and was found to have loose cartilage in the right knee. The loose cartilage under treatment soon ceased to give trouble, but the sensation of coldness in the leg has increased until it amounts to positive pain, which he thus describes :

“The coldness in my right leg has gradually got worse, with peculiar pains such as aching, smarting, and numbness, all at once and mixed together. If I put my foot to the ground the cold pain is there with aching and numbness, and it gets worse the longer it is on the ground. If I sit with it on the floor it is the same, and like a cold wind blowing on my thigh. After dressing I have to sit with my foot up in front of the fire, and then the cold wind seems on my thigh the same. I cannot walk for more than a few minutes without wanting to sit down and raise

my leg. When the coldness first came on it seemed as though my foot was placed on ice, in the hollow of the foot, but now it is all over the foot, top and bottom alike, and the coldest pain comes from the roots of my toes. The foot and leg always seems as though there was a lot of insects trying to pass each other and cannot, and so cause the pain such as I have described. I am easiest when I can put my foot and leg in a hot bath, or when lying in bed, but I cannot bear anything to touch me on the leg besides the bedclothes, as it seems to stop all circulation and cause numbness and aching."

Since he has been under my care, this account of his symptoms has not varied, except that he has recently complained of sensations of coldness in the right arm, particularly the shoulder, and in the left leg. The right leg is, however, much the more severely affected. He has been unable to work for two years, and has increasing difficulty in getting about.

Present Condition.—He is a strong-looking but loosely-built man. He complains of no symptoms but those mentioned. His thoracic and abdominal organs are sound. His digestion and appetite are good. There is nothing abnormal to be seen about the upper extremities. The left lower extremity has some varicose veins. The right lower extremity is flabby. The thigh measures an inch less, and the calf three quarters of an inch less, in circumference than the corresponding portions of the opposite limb. There are no varicose veins and no œdema here. There is now no evidence of loose cartilage in the knee joint. The limb is weak in proportion to the wasting. He uses two sticks in walking for fear of falling, but is able to walk unassisted.

Reflexes.—The knee jerks are present and equal on both sides. He can stand steadily with eyes shut and heels together.

Sensation.—Tactile sensation is perfect, also appreciation of heat and cold, but the application of cold to the right leg is distressing, whilst that of heat is agreeable to him. There is no difference in the temperature of the two limbs. Both are warm to the touch, and he admits that this is so, although the sensation of coldness in the right leg obliges him to wear two or three thick stockings.

Pain.—He recognizes a pin's prick readily and winces. He states that he is unable to feel faradism applied to the right leg by means of a wire brush so readily as he used to do when under this treatment two years ago. He certainly tolerates, without showing signs of pain, a much stronger faradic current than I could endure myself. The electrical reactions are quite normal.

His muscular sense is unaffected. He imitates correctly any attitude in which one leg may be placed, with the other, and describes their positions correctly, his eyes being closed. There are no tender points nor patches of anæsthesia in the course of the nerves of the limbs. His sensations of cold are not confined to the area of distribution of any particular nerves.

His family history is unimportant as regards nervous disorders.

REMARKS.

Psychro-æsthesia (derived from the Greek *Ψυχρός* "cold") is the term used by Silvio (*La Riforma Medica*, February 17th and 18th, 1896) to describe symptoms somewhat resembling those of my patient, but differing from his in the limited area of their extent.

Silvio's case was that of a healthy man, aged 62, who for twenty years had suffered at intervals from a sensation of cold affecting the outer surface of the right thigh. The sensation was induced by standing, and relieved by lying down. He never had pain or anomalous heat sensations in the affected part. Ordinary sensibility seemed normal in the right thigh and elsewhere. Silvio contrasts this condition with that of subjective sensations of heat, which he terms "kauma-æsthesia."

As an instance of the latter, he relates the case of a man, aged 44, who for three years had complained of a burning sensation in the right thigh, at first confined to a limited area, but later involving almost the whole of the thigh, and accompanied by a feeling of deadness in the skin. It occurred intermittently, chiefly in the winter, was relieved by friction or by resting the body on the other leg, or by sitting down. Sensibility to pain and heat was normal, tactile sensibility was slightly weakened. Twenty years previously he had suffered for about a year from a sensation as of drops of water trickling down the inner surface of the right thigh.

Under the title "Meralgia Paræsthetica," cases similar to this last one have been described by W. K. Roth, of Moscow (Berlin, 1895). The painful sensations affected

chiefly the outer side of the thigh, with subjective or objective anæsthesia. The pain was mostly burning in character, and was rendered worse by standing or walking. The paræsthesia and anæsthesia were generally limited to the distribution of the external cutaneous nerve of the thigh, but the sensation of burning sometimes extended beyond this area. Roth regarded the symptoms as due to an affection of the above-named nerve, as their duration (in one case fourteen years) seemed to preclude the idea that they were dependent on an early lesion of the spinal cord.

Cases of paræsthetic meralgia have also been collected by Bernard, of Berlin (*Révue Neurologique de Paris*, Nos. 20 and 23, 1895), and by Escat.

More recently the subject has been discussed in the *New York Journal of Mental and Nervous Disease* (March and April, 1896) by Osler, Hirsch, and Weir Mitchell. Weir Mitchell mentioned patients in whom paræsthesia and pain in the thigh have turned out to be due to unsuspected periosteal disease.

Hirsch had met with a sailor, aged 50, who, after being shipwrecked and suffering from long exposure, as well as having to bear considerable weight on one leg for over an hour, was attacked by a peculiar sensation which he described as "burning cold," over a region the size of the palm of the hand, four inches above the knee, on the outer side of the thigh. He had suffered from syphilis eighteen years previously, and had been addicted to alcohol. Hirsch regards these as the predisposing, and the exposure as the exciting cause of the complaint.

The general opinion on these cases, to which my own bears a certain resemblance, appears to be that they are indications of local mischief. As such, they seem to be akin to those originally described by Weir Mitchell under the name of causalgia ("Injuries of Nerves," p. 159). But in Weir Mitchell's causalgia there is a history of direct injury, usually by gunshot, to the nerves themselves. The peculiar pain was associated with redness or glossiness of the skin, and with thickening of the nerves' trunks above the site of pain.

Similar trophic changes are found in the nerves when causalgia is dependent on central lesions of the brain or cord. In my own case, however, and also apparently in recorded cases of meralgia, there is no evidence of such trophic degeneration of nerves. Causalgia again expresses the type of suffering in Morton's disease (metatarsalgia), and in the similar affection which I have described as "painful toe" (*Lancet*, March 19th, 1892). But in both these complaints a definite local cause exists in the shape of tight boots, which produce displacement of some of the metatarsal or phalangeal bones, which, accordingly, press painfully on the subjacent nerves. In my own case of psychro-æsthesia, and apparently in Silvio's, no such local cause can be discovered. The sensations in my case are not relieved by removal of the boot. Moreover, such an explanation would not account for the extension of the symptoms to the right arm and left leg.

There is no evidence of peripheral neuritis. As to other local causes, I at first thought that the vasor-motor apparatus might be at fault, as in the minor forms of Raynaud's disease; but in Raynaud's disease the numbness, tingling, and coldness complained of, are associated with actual loss of temperature and pallor of the parts affected; whereas my patient has no loss of temperature, local or general, no blanching, and no œdema of the limb. The only physical signs present are slight wasting and slight weakening of the right lower limb. It might be thought that these conditions are dependent upon the loose cartilage from which he has suffered. Yet neither this nor any other local cause can account for the involvement of the right arm and left leg.

It is, therefore, probable that the wasting and weakness, and, perhaps, the loose cartilage also, are indications of general dystrophy resulting from some central nervous conditions, which also affects the right arm and left leg similarly, but to a less extent than the right lower limb. If central, the lesion may be either cerebral or spinal. If cerebral, one must first ask whether the symptoms are due to a mere psychosis. It must be admitted that his symptoms are mainly subjective. The only objective evi-

dence of hindered sensation is his remarkable tolerance of strong faradic currents, the significance of which is obscure. The pathology of subjective sensations must always be elusive. One is apt to assume that it is non-existent in the absence of physical signs, and to attribute complaints, for which there is little to show, to malingering, hypochondriasis, or hysteria. The patient has nothing to gain by malingering, as he has enough money to live upon, at all events, for the present. His symptoms are not such as would be hit upon by a malingerer. He seems as much troubled by his presumably enforced idleness as by the sensations of which he complains. Hypochondriacs often discover strange symptoms, but they soon appear to tire of them, and invent new sets as the novelty of the old wears off. But this patient's account of himself has never varied during the two years I have known him. He is not, moreover, gloomy or depressed, but takes a semi-humorous view of his condition; being cheerfully apologetic when remedies fail, and also appearing grateful for any attempts to relieve him. This is unlike the ordinary hypochondriac.

The duration and unchanging nature of the symptoms, and the absence of special signs of hysteria, and of the hysterical temperament generally, are against the diagnosis of this affection. It is difficult, therefore, to dismiss the symptoms as imaginary, functional, or feigned.

As regards gross cerebral lesions; only multiple and bilateral affections could involve the sensory tracts of both legs and one arm; and it is extremely improbable that the face, the special sense tract, and also the motor tract, would escape were this the case. There is, moreover, no evidence, as far as I am aware, that the peculiar sensations, of which this patient complains, are ever associated with cerebral disease, either situated in the cortex, or elsewhere. On the other hand, there is abundant evidence that parallel, if not absolutely identical, sensations may be associated with disease of the spinal cord or of its nerve roots. This was well brought out in the discussion on "Dissociated Sensations as a Means of Diagnosis," reported in

the *Journal of Nervous and Mental Disease*, New York, for April, 1896.

Perversion of sensations of heat, cold, pain, and of tactile sensibility, as well as of the muscular sense, may occur in spinal meningitis, whether due to curvature, fracture, or syphilis, and depends on involvement of the spinal nerve roots. Similar perversions of sensations may be due to disease of the spinal cord itself.

Dana, in the above-named discussion, summarised the effects of lesions in various parts in producing differentiation of cutaneous sensations, as follows:—These effects were least, he said, in peripheral nerve lesions, increased in spinal root lesions, and again in central spinal lesions, most striking and complete in ponto-bulbar lesions. They became very slight again in cortical lesions.

In the present case, we may exclude lesions of the spinal roots, because they could not produce the wide-spread sensation of cold alone without giving rise to other palpable defects. We have excluded peripheral nerve lesions, and also cerebral affections. There only remains to be considered a lesion of the spinal cord.

His symptoms are not distinctive of disease of the lateral or posterior columns, but it may be that the anterior horns are implicated because of the slight wasting and weakness of the right lower extremity which prevail. The course of thermal sensations in the cord, and also the course of sensations of cold, are unknown. The frequency, however, with which such sensations are altered or annulled, together with those of pain, suggests that the paths of heat, cold and pain may be contiguous.

There is evidence that painful sensations pass through the posterior commissure on their way to the antero-lateral tract on the opposite side.

The disease in which all these sensations are frequently perverted or absent is syringomyelia; and it is possible that involvement of the posterior commissure in this disease may account for the symptoms.

According to Gowers, subjective sensations of heat and cold not unfrequently precede the characteristic symptoms

of syringomyelia. The duration of the symptoms here does not exclude the possibility that they are caused by this disease; for symptoms may be absent altogether, although the conditions of syringomyelia must have existed for many years.

It is usual in cases of syringomyelia for the upper extremities to be affected earlier and more seriously than the lower, doubtless because the site of the disease is usually in the upper part of the cord. But cases have been reported in which the converse order of symptoms prevailed. This may be a case in point; and, accordingly, we may have to deal with syringomyelia, in which the function of the posterior commissure is perverted though not destroyed. If so, the lesion must have commenced low down in the cord and spread upwards; whilst in order to account for the weakness and wasting of the right leg it must be assumed that the anterior horn is involved.

Treatment.—Silvio found that massage and thermo-mineral baths appeared to give relief in his case, but did not cure. In my own case, rest and the actual application of heat give temporary relief. Stimulating embrocations, ointments containing capsicum, and flying blisters applied to the thigh, have been beneficial for a time; electricity, in the form of galvanism and faradism, has been useless. All kinds of nerve sedatives and tonics have been tried in vain.

If the pathology of the case is, as has been suggested, any form of treatment can only be palliative.

NOTE.—The patient, who provides the subject of this paper, was shown at a meeting of the Harveian Society of London, on May 21, 1896. Of the speakers who discussed the case, Dr. T. Savill was inclined to agree that the symptoms were due to syringomyelia. Dr. Cagney suggested that some obscure lesion of the cerebral cortex might be the cause.