Clinical Cases.

TWO CASES OF SPINAL DISEASE ASSOCIATED WITH INSANITY: I. TABES DORSALIS; AND II. CHRONIC ATROPHIC SPINAL PARALYSIS.

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I.

A. B. æt. 54, single, surgeon, came under treatment in the West Riding Asylum, in March 1885.

Patient, who is an M.R.C.S. and L.S.A., entered the Army Medical Service, served in the Crimean War, and subsequently was a ship-surgeon for some months, visiting Australia. He again entered the army, and was in active duty on the West Coast of Africa for about three years.

Whilst there he had a sunstroke; he suffered also from "Gold Coast," or "bilious remittent fever," and contracted syphilis from a black woman. At this time he drank heavily.

He returned to England sixteen or seventeen years ago, but had not completely recovered from the effects of sunstroke, and was chiefly dependent on his sister for a livelihood. For a short time he carried on a low-class dispensing practice, until disabled by a paralytic seizure.

Patient has had three paralytic seizures. The first occurred seven years ago. "Whilst walking along the street he felt as if his left leg had been shot from under him. He gradually recovered the use of the limb. In another seizure the onset was sudden, and attended by loss of consciousness. He was dispensing medicine at the time. His sister coming into the Dispensary found him unconscious on the floor. Gradual recovery followed this attack."

He has become depressed and unmanageable, and keeps his bed for days together. Latterly he has become excited, deluded, and rambling in speech, disorderly, throwing anything which displeases him on the fire. He now suffers from incontinence of urine and fæces.

Family History.—His father and mother both died at an

advanced age. There is no history of any neurosis, phthisis or apoplexy. His father was intemperate.

Mental condition on Admission.—Patient is slightly excited, garrulous, affable; constantly calling for champagne and cigars. He answers questions readily and to the point; but his answers are given for the most part with little thought, and are unreliable. His memory is especially defective in regard to dates. Asked the date of to-day, he replies without hesitation, "25th Jan. 1885." He does not understand the nature of this place, although he has been told. He thinks it is a public-house, the "Bull and Mouth," and that he came here a week ago. When told again that it is a lunatic asylum, he endeavours to account for being here, by saying that he "went to Burnley a month ago on the 17th of March, with some friends; got drunk, and was sent here for safety." He declares that he had £550 in his pocket at the time, but that the money was taken from him.

He talks much in a very deluded, optimistic strain, *e.g.*, "I am a duke, and I will get the Queen to make you a duke to-morrow. She will do anything for me. She gives me £10,000 a year. I am going to Madeira on Monday in the Queen's yacht; will you come? I am going to buy an estate for £1000. I am going to be married to a duke's daughter. I will give you £10,000 when you marry my sister," &c. He takes up readily almost any grandiose suggestion that is made and adds to it. Thus when asked if he is still practising his profession, and if he has many patients, he replies that he is consulting physician to various European monarchs, enumerating half-a-dozen, and is in receipt of immense salaries from each. He offers £50 or £1000 indifferently to any one who will bring him a box of cigars. He is ready to scribble something perfectly illegible on any scrap of paper, and to give it as a cheque on his banker for any sum that any one desires. These "cheques" are filled up with the greatest expedition; the writing is merely a few wavy lines; he is in too great a hurry to write; it is such an unimportant matter to him. "Here, use my name, and they will give you the money."

He talks freely about the events of his earlier life, his memory for recent occurrences is more defective. With regard to the question of syphilis, he cannot state whether he had a true chancre or chancroid; at the same time, or at some other, he had a bubo, which has left a scar in the groin. He treated the sore and bubo with nitric acid and lotio nigra, and took calomel, and iodide of potassium internally. When asked the dose of calomel, he replied, "a drachm twice or three times a day, that is the ordinary dose." He says he has had lightning pains in his legs, but not for many years past.

Physical Condition.—Height, 5 ft. 4 in. Weight, 124 lbs. Cranium broad; of good frontal development. Hair and beard white; crown of head bald. Limbs equally nourished.

Patellar reflexes are entirely absent. Plantar, cremasteric, abdominal, and epigastric are present. Sensibility of skin of lower extremities appears somewhat blunted. Contact sensations are fairly well localised. There are no areas of anæsthesia or of hyperæsthesia. When blindfolded, he is unable to distinguish whether he is standing upon a boarded floor, a rug, or a pillow. The floor, he says, feels soft like a carpet.

His gait is very distinctly ataxic. He walks slowly, with his legs widely separated, and the feet spreading; the steps are short; the legs are thrown clumsily forward; the feet are raised too high, and are brought down rather heavily. He uses his arms largely to balance himself during progression, and is unwilling to walk without assistance, or some object to grasp to steady himself. He keeps his eyes fixed on the ground about a yard in front of him, and if asked to walk while looking up, his difficulty is increased, and he frequently glances downwards, involuntarily, as it were. When asked to stop and turn round, he does so slowly and with difficulty. He can stand with much swaying to and fro for a short time while his feet are close together, but not at all with feet together and eyes closed. He is quite unable to stand upon one foot. He can move his limbs with a considerable degree of force in all directions. He has little control over his bladder and rectum. His writing, when he takes care, is quite legible, and not very shaky. His grasp is tolerably good; that of the left hand is decidedly weaker than that of the right. The tongue is large and flabby, *its right half is much smaller than the left*. It is protruded somewhat jerkily. It is almost free from tremor, and can be moved freely to either side, or curled up. He swallows without any difficulty. Facial expression is somewhat vacant; the facial muscles are usually flaccid, but they can be made to contract voluntarily.

Pupils are circular; very small; right slightly the larger; there are no iritic adhesions. There is complete irido-plegia both in response to light, and also with accommodation; nor is there any dilatation upon cutaneous irritation.

All ocular movements are well performed. There is no diplopia or nystagmus. Sight is good, except that he is somewhat presbyopic. There appears to be no contraction of the field of vision, and colours are distinguished perfectly. The pupils dilate fully under the influence of atropine, and the disc is quite healthy.

Hearing is slightly and equally dull in both ears. Taste is perfect. The sense of smell is blunted, or certainly not acute.

Heart sounds feeble; no murmur. Superficial arteries are free from evident atheroma. There is very slight arcus senilis.

Lungs are slightly emphysematous.

Tongue fairly clean, flabby. Teeth very deficient in number and quality. Appetite defective; bowels rather costive. Liver dulness normal.

Urine normal.

April.—He is now much less excited, and his answers are more reliable. His delusions are less prominent and less variable. He thinks now that he has been appointed Clinical Assistant here, with a salary of £200 a year, rising to £700; he is ready to commence duty as soon as his keys are given him. He says he is going to enter the Army Medical Service again at a salary of £500 a year. He can obtain a post as a matter of course, and thinks himself quite fit for active service. He is going to see the Director-General, the Queen, &c., with regard to it.

Since admission, there has been but little change in the patient's physical condition. He can walk a little better, and has much more control over his bladder and rectum. His pupils are not quite so small, still immovable; the left is a little the larger. Plantar reflex is well marked in the left foot, almost absent in the right.

He has given no indication of any subjective sensory impressions, nor has there been any gastric or other crisis. He takes food well, and his general health and condition have improved.

II.

R. P., æt. 61, married, formerly a labourer in a mill, was admitted into the West Riding Asylum on the 7th of March, 1885. The history obtained with him was imperfect and unreliable, but it was stated that he had been more or less insane for about two years prior to his admission; that his bodily health had been gradually failing for several years, and that for at least a year before admission he had been entirely confined to the house and had been supported by his children. It was also said that he had for many years been very intemperate, and that his wife and daughter were suffering from venereal disease contracted from him.

Family History.—He has four children, all of whom are said to be healthy. No history of insanity in the family, but his mother is said to have been paralytic for several years before her death.

Mental State.—On admission he was somewhat depressed and emotional, but manifested no dementia whatever; was perfectly

rational, and gave a coherent and detailed history of his past life. He stated that about nine years ago, while working in a flour mill, he one day accidentally put his left leg through a trap-opening, the door of which had been carelessly left open, and that his body fell across and struck the edge of the trap. He did not feel much hurt at the time, and was able to go about his work as usual for about a week after the occurrence of the accident. At the end of that time, however, owing to gradual loss of power in the left leg, he was led to seek medical advice, and went into the Leeds Infirmary. After he had been there three days he became completely paralysed in both lower limbs; but after a course of galvanism, lasting for three months, he was able to walk with the aid of sticks. He stated that he never recovered half his former power in the affected limbs, but that about nine months after the accident he had recovered sufficiently to be able to go back to his work at the mill, at which he continued for about two years and three months, when he met with another accident. While doing something in connection with the working of the machinery, a weight of about nine stones fell upon his left hand, and he lay for several hours in that situation before he was discovered and released. On account of loss of power in the arm, he was taken next day to the Infirmary; but, in spite of treatment, the arm gradually wasted. He noticed that the right arm began to lose power about nine or twelve months ago, and it has gradually got worse.

Visual acuity has gradually diminished during the past three or four years, and his voice has altered in character during the past twelve months or so.

Physical Condition. — Height, 5 ft. 1 in.; weight, 94 lbs. Cranium rather small, dolichocephalic. There is an old scar about 1 inch in length running antero-posteriorly, situated at the superior angle of the occipital bone. Beneath this scar is a distinct depression as if from fracture. Hair is grey and thin, and the greater part of the vertex is bald. Irides greyish brown. Pupils, circular; diameter of right, $5\frac{1}{2}$ mm.; of left, $4\frac{1}{2}$ mm.; do not react to diffused light, nor to a concentrated beam, nor consensually: contract very slightly with accommodation: do not react to cutaneous stimulation. No reflexes can be obtained in the lower extremities.

Tongue is protruded straight. It is free from tremor, and its movements are fairly well co-ordinated. The lips and facial muscles are steady.

All the limbs are much wasted, the atrophy being more marked in the upper than in the lower extremities, and the left arm and leg are distinctly smaller than the right.

MEASUREMENTS.

Right leg ..	5 in. below knee, $9\frac{1}{2}$ in.—Left, $8\frac{1}{2}$ in.
Right thigh ..	6 in. above knee, $13\frac{3}{4}$ in.—Left, $13\frac{1}{4}$ in.
Right forearm ..	5 in. below elbow, $5\frac{1}{2}$ in.—Left, $5\frac{1}{2}$ in.
Right arm ..	4 in. above elbow, $7\frac{1}{2}$ in.—Left, $6\frac{1}{2}$ in.

There are no contractures of the limbs, except in the fingers to a slight degree. The muscles generally are very flabby and extremely wasted. Idio-muscular contraction is scarcely perceptible in any limb. The left leg has a notably incurved aspect, apparently due to wasting of the peronæi muscles. This appearance is absent on the right side.

The upper extremities are extremely wasted. The forearms and hands are literally almost nothing but skin and bone. Many of the muscles appear to have disappeared entirely. The forearms are flattened upon the dorsal and palmar aspects. The thenar and hypothenar eminences have disappeared, and there are deep depressions between the metacarpal bones. Both wrists are dropped. The ungual phalanges are incurved so as to give the hand a clawed appearance, and this is more marked in the right than in the left. The upper arm and shoulder-muscles, especially of the left side, are also extremely wasted, as are likewise, but to a less degree, those of the back.

The lower extremities are more wasted proportionally below the knee than above; and the anterior and external muscles of the leg have suffered more than those of the calf.

The patient is unable to approximate the thumb and fingers. He completely fails to grasp with the left hand, and with great effort succeeds only in doing so very feebly with the right. He can neither pronate nor supinate the hands, nor can he flex or extend the wrists. He can perform very limited and feeble movements at the elbow and shoulder, and somewhat better on the right than on the left side.

As regards the electric reactions of upper limbs, serial alterations present themselves in both rhomboidei and left pectoralis major: the anodic closing contraction had nearly overtaken the cathodic closing contraction in the right brachialis anticus and left triceps: whilst no faradic or galvanic reaction could be obtained with the supinators of the forearm, the extensors or flexors of the hand and wrist, the intrinsic muscles of the hand and the right pectoralis major.

The reactions may be tabulated thus:—

FARADISM.		GALVANISM.
Deltoid	(right) Minimum at 9.	KSz > ASz.
	(left) 0	KSz > ASz.
Rhomboid	(right) 0	ASz > KSz.
	(left) 0	ASz > KSz.

FARADISM.			GALVANISM.	
Biceps	(right)	0	KSZ >	ASz + AOZ.
	(left)	0	KSZ >	ASz + AOZ.
Brachialis A.	(right)	0	KSZ >	ASz.
	(left)	0	KSZ >	ASz.
Supinator longus	(right)	fair with weakest current	KS-AS.	
	(left)	0 with strongest	KS-AS.	
Extensors of Hand	(right)	} 0	KS-AS.	
(extrinsic)	(left)			
Flexors of do.	(right)	0	KSz >	ASz.
	(left)	0	KS-AS-	
Serratus Magnus	(both)	0	KS-AS-	
Pectoralis Major	(right)	0	KS-AS-	
	(left)	0	ASz-KS-	
Triceps	(right)	minimum at 7	KSZ >	ASz.
	(left)	do. at 6	KSG >	ASz.
Intrinsics of Hand		0	KS-AS-	

He is quite unable to stand. When asked to do so he struggles wildly. If assisted into a standing position, he throws his arms and legs about in a disorderly fashion. His lower limbs double at the knees as soon as any weight is allowed upon them. When lying on the bed, with the legs extended, he can succeed in partially drawing them up, but can exert very little force if resisted. He can cross his legs, but cannot place the heel of one foot upon the toes of the other.

There appears to be a great deal of muscular starting, accompanied by distressing pain. He states that he has been subject for some time to excruciating pains in the limbs and body, and which he describes as like flashes of lightning.

Sensibility to pain is retained in the skin of the face and scalp, and to some extent in the neck, although in the latter situation it appears to be blunted.

At tip of right forefinger, he distinguishes two points, 1 centimetre apart.

At tip of left forefinger, at 2 centimetres apart.

In centre of right palm, at 3 centimetres.

In centre of left palm, at 4 centimetres.

On front of forearms he cannot distinguish two points 10 centimetres apart.

Sensibility to tactile impressions and to pain is considerably diminished in the lower extremities, and sensation is much delayed.

The integument in several regions is dry and scaly. On the front and outer aspects of the legs this condition is sufficiently marked to merit the term "ichthyosis."

Thoracic and abdominal viscera appear fairly healthy.

The patient has little control over his bladder and rectum.

At all times he has but little sensation during the passage of evacuations, and is frequently quite unconscious of the fact.

The senses of taste and of hearing are fairly acute, that of smell is abolished.

June 13th.—Since admission there has been no change in the patient's condition worthy of record.