A CASE IN WHICH PARALYSIS OF THE SPHINCTERS
AND INCONTINENCE OF URINE WERE, TO-
GETHER WITH TORPID INTELLECT, THE CHIEF
SYMPTOMS OF SYMMETRICAL DISEASE OF THE
CORPORA STRIATA.

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MR. S., the manager of a bank, aged 54, but looking younger, consulted me, at my own house, on account of incontinence of urine, on January 30th, 1885. The incontinence had occurred almost solely in the daytime. He said that when the desire came he could not wait, and that the urine escaped before he could get to the utensil. Yet there was no urgency of desire. Sometimes the escape would be almost without warning. This trouble had begun six weeks before, and his accidents now happened two or three times every day. I thought, of course, of enlarged prostate, but on passing a catheter found only a small quantity in the bladder, and on using the finger per anum the prostate was felt to be but slightly enlarged. In making the latter examination I realised that the sphincter ani was quite relaxed. It allowed the finger to slip in and out without gripping it in the least. The lower bowel was loaded. He denied that he had experienced incontinence of *fæces*, but for this the very solid condition of the *fæces* probably accounted. I now thought of the spine; but on enquiring, he denied that he had any weakness or alteration of sensation in his legs. He had had no headache, and asserted that his incontinence of urine was his only symptom. On looking at his pupils, I found that their margins were extensively adherent in both eyes. This much interfered with examination of their activity. He said that he had usually been a bad sleeper, but was now sleeping better. He looked well, seemed inclined to make light of his ailments, and on this occasion I saw no reason to suspect that he had any cerebral disease. I thought that he was about to become the subject of some form of spinal paralysis. On the following day I received a letter from his brother-in-

law, which showed me another phase of the case. From it I make the following extracts :—

“After our interview with you yesterday I went to Beckenham and saw my sister, and found her in great trouble about the condition into which Mr. S. seems to be rapidly falling. It appears that he *has* occasionally—certainly three times—had involuntary motions of the bowels. But her chief anxiety arises from the utter mental prostration, and physical inertia which seem to be overtaking him. This inertia is so great that he seems to be incapable of making the slightest effort. For instance, he not only cannot exert himself to get in time for his daily train, but with plenty of time to spare to catch the next, he will lose that also. And it does not seem to trouble him that this should happen frequently. Then when he comes home he will stand in an aimless way with coat and gloves on for a long time, not seeming to know or to care what he is going to do next. Mrs. S. had the greatest difficulty to get him off in time for his appointment with you. For nearly two hours, while he was dressing and getting his breakfast, she hardly dared to leave him, and it was only by having a cab waiting at the door—although the station is only five minutes’ walk—that he was got off in time. Another little thing she notices is that he will sometimes grasp her hand or arm sharply enough to cause pain, or will ‘flick’ one of the boys with anything he is carrying, acting apparently without thought, and from some momentary impulse. In short, he is not himself at all.”

A few days later, one of his colleagues in his place of business called on me and gave a similar report. He said that Mr. S., from having been an austere and precise man, had become the reverse, that he was now effusive and jocular in a manner which was quite contrary to his wont. Above all, that he was constantly passing his water as he sat in his office-chair without seeming materially annoyed about it.

On Feb. 7, a week later, I saw Mr. S. again, and ascertained the following points: that his knee-jump was good, that his pupils acted well, and that he could stand well either on his heels or on tip-toe. He told me that he had not lost sexual power, but had always been very moderate. He admitted, on being pressed, that he had occasionally a peculiar feeling in his head, which he could not explain. It was akin to giddiness, but he was not giddy. His memory and intelligence appeared to me after a long interview to be perfect, but he seemed rather too cheerful and smiled too much. It should be said that there had been no stage of elation such as occurs in most cases of the general paralysis of the insane. His sight was good, and he had no morbid changes in the fundus. He said that for ten or twelve years past the soles

of his feet had been a little numb, but they had not become more so of late. By another examination I confirmed the observation that his sphincter ani was quite lax. He repeated that he was sleeping better than he had ever done, and alleged that his head and mind were all right.

It was now arranged that he should leave town, and he went to Scotland with his wife. Here he became rapidly worse in all respects, and after three weeks they returned.

In the middle of March I saw him at his own house. He had lost flesh and strength, and looked more pale, though not markedly ill. He walked into his drawing-room to meet me, and greeted me cheerfully; but he did not seem to know what to do, and I had to ask him to sit down. He conversed about his journey, but in a vague and uninterested manner. I found that he did not know the day of the week, but after I had told him, he corrected me as to the day of the month. All other symptoms were as before. His wife said that she was obliged to make him get out of bed three or four times in the night, or he would certainly pass water without caring to rise. Once when on a visit to a friend, he had passed water in the room, and seemed quite careless about it. I made him whistle, and ascertained that he had no paralysis of the seventh nerve, though it was perhaps feeble. Within a week of this visit Mr. S. died. I had not seen him again, but I obtained the following facts from his surgeon and his wife. During the week he got a little worse, but he had seemed decidedly better on the day preceding his death. He had been up every day, and about the house as usual. At length, one morning after a night of unusually heavy sleep, he had been difficult to wake, and when roused and asked if he would get up, had replied distinctly, "No." His wife kissed him, and he kissed her back, but then immediately sank into sleep again. The sleep became more profound, and they could not rouse him. His left arm and his right leg were engaged in twitching convulsive movements. The sleep passed into coma, which was attended by stertor. Then the respirations became intermittent, and finally they ceased. He died six hours after he fell asleep.

We got permission to make a post-mortem. It was done, under considerable difficulties, about thirty-six hours after death. In the inner side of the left corpus striatum was a soft pink semi-gelatinous growth. This growth bulged into the ventricle, and was quite smooth on its inner surface. On its outer side it merged without any boundary line into the substance of the corpus. The thickness of the new growth was about half an inch. A little to its outer side, in the white substance of the hemisphere, were two small islands of

similar structure, as large as cherry-stones, but quite ill-defined. Neither these nor the larger growth had any softening or congestion around them. At this level the opposite hemisphere appeared healthy, but on slicing it more superficially, there was found just above the corpus, or in its upper part, a large softened area broken down by blood clot, but having, at one part, an indistinct lining membrane. A clot the size of a walnut, soft and jelly-like, extended from this patch of disease into the ventricle.

There was not a trace of disease at the base of the brain, nor in the pons or medulla. The arachnoid over the surface of the hemispheres on both sides was adherent, but there was nothing very unusual or which appeared to be recent.

The examination of the brain was not quite so precise as could have been wished, but it was done by candle-light, and under disadvantages. It may be taken as established that there was destructive disease of the anterior and inner parts of the corpus striatum on both sides, and that no inflammatory mischief had been set up. The hæmorrhage was on the right side only. No doubt this bleeding afforded the explanation of the suddenly fatal event.

My eldest son made a careful microscopic examination of the tumour, and has preserved sections. I append his report.

"After hardening with the usual reagents, some satisfactory sections were obtained, fully bearing out the diagnosis of sarcoma made at the post-mortem examination. Those parts free from blood-infiltration showed spindle and round cells closely massed together, and tending to be arranged somewhat in lines. From the size and shape of the cells, the tumour should perhaps be regarded rather as a mixed round and spindle-celled sarcoma, than as a typical glioma, though presumably its origin was from the neuroglia.

"Especially in the neighbourhood of the hæmorrhage some vessels of fair size were seen, with a considerable number of capillaries, probably of new formation, in which the thick cellular wall almost concealed the lumen. Even in some parts which to the naked eye, looked like blood-clot, tumour elements could here and there be made out."

It is certainly remarkable that a lesion in this position should have been attended by so much mental disorder and by no limb paralysis. Sphincter-paralysis had been the most conspicuous symptom throughout, but his limbs, so far as he would admit, had never failed. He could always grasp firmly with his hands, and could walk. His walking power had, however, certainly diminished. It is very possible that the symmetry of the disease had been productive of bilateral weakness, and that thus the defect had been less easy of discovery.

After his death, his wife told me that she had sometimes thought that his right limbs were weak, but one of his sons who had been much with him had formed the same impression as to his left. It was certain, they said, that in walking he sometimes reeled a little to one or the other side.

Dr. Bright, in the second volume of his "Medical Reports," has given a portrait, which shows a closely similar condition of the corpus striatum. The chief differences indeed, between his case and mine consists in the fact, that in his the lesion was on one side only, whilst in mine it was symmetrical. If we keep this fact in mind, we shall find that the symptoms in the two cases were nearly parallel. In Dr. Bright's case, as in mine, incontinence of urine was an early symptom, and throughout one of the most conspicuous. His patient was a man of 40, who had been a soldier. The earliest symptoms observed had been that he would occasionally fall in the street, and lose consciousness for a moment or two. He complained of pain in the forehead, and had occasional absence of mind with slight weakness of the left side. Next he began to constantly pass urine in bed, and occasionally faeces also. After this there was general muscular and mental debility, with strabismus and diplopia. "His manner was peculiar, and his conversation incoherent; he stood for some minutes together in one position as if lost in abstraction; when spoken to, he answered a question with some consideration apparently, but then at once ran on to something else, without, however, saying much, but making some statement perfectly without foundation." The symptoms, including the premonitory group, had lasted a year when Dr. Bright first saw him, and he lived, afterwards, in Guy's Hospital, for six months longer. He had no facial paralysis, nor, so far as the notes inform us, any defect of sight or hearing. A few days before death it is noted: "His general manner and aspect quite unchanged. He stands about musing, and if you ask him how he finds himself, answers after a few seconds of consideration, 'I am not quite dead.'" He had gradually become more dull and heavy. It was only during the last week that his imbecility and debility were such that he could not leave his bed. He had on the last day great difficulty in swallowing.

Dr. Bright does not describe the condition of the corpus striatum as implying new growth, but from the appearances delineated, it probably did so. He says that two-thirds of corpus were "involved in softening, and presented a filamentary and watery-brown appearance." The rest of the brain-substance was healthy, but over a space two inches square on the right hemisphere all the membranes adhered firmly. There was some general serous effusion. In commenting on the case,

Dr. Bright states: "The appearances after death were confined to softening of the corpus striatum on one side . . . but it had not the precise appearance of an apoplectic clot."

In Auvert's magnificent collection of pathological plates there is one (Pl. 68, Fig. I.) which shows the section of a brain in which appearances are represented somewhat similar to those I have described. The tumour involved both thalamus opticus and corpus striatum. The patient, a man of 56, had died after a week's illness, following a sudden seizure during anger. He had been liable to hemicrania. The disease is described as red softening, and not as new growth.