Short Notes and Clinical Cases.

A CASE OF CATAPLEXY.

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THE record of this patient's condition is of some interest for various reasons. Episodic complete loss both of tone and of voluntary movement in the entire muscular system occupied the foreground of the clinical picture. Abnormal drowsiness did not occur in 'attacks,' but only (as far as known) periodically in the afternoons. Several of the episodes of loss of muscular power and tone ('cataplectic' attacks) were observed by the writer, who at the time did not know of the occurrence of such attacks as part of the syndrome of so-called idiopathic narcolepsy. No physical signs of organic disease being observed in the intervals, an effort was made to explore possible psychological causes, and to employ psychotherapy. Psychological factors were evident enough, but psychotherapy had no lasting effect.

Male, age 40; married. Admitted to the Cassell Hospital: August 1925; discharged: October 1925.

Complaints: The patient feels weak or falls when asked a question or when meeting people, but does not lose consciousness. In the afternoons, he feels giddy and has difficulty in walking straight. Between attacks he is quite well.

Family history: He is the youngest of three children, the others being healthy. His father died in August 1924 at the age of 85, having been a very healthy man. His mother is alive and suffers from paralysis agitans.

Personal history: As a child he was not considered nervous in any way. He had the usual exanthemata. At school he was more proficient at games than in scholarship. He could sprint 100 yards in 11 seconds at 14 years of age. He left school at 14 and entered an accountant's office, which he left after nine months to enter a stockbroker's. In 1914 he joined the Army immediately on the outbreak of war, reaching France in November. He was wounded twice and suffered from frostbite. Commissioned in 1915, he went out to Mesopotamia, and joined the forces endeavouring to relieve Kut. He was wounded in the thighs in January 1916 and received no treatment for seven weeks, having been diagnosed as a case of gangrene (he said) and left for dead. While lying neglected in hospital, he became afraid of people coming into his room. In March 1916 he was at last operated on, in India. He then volunteered for transport work in Persia and was the only white man in charge of a mixed crowd of Punjabis and Brahmins, who were always quarrelling. His command was continually raided by Afghans and the patient became "nervous." He felt he could not do his job, and that he was "failing." He was weak, slept badly, and dreamt that Afghans were in his tent. His case was diagnosed as "shell-shock." After the armistice he volunteered for an Afghan campaign but was rejected because "the government would get no work out of him" then (he was told), but he "would be all right when he got home." At that time he was depressed, afraid

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of people coming into his room, even of his best friend, although he wanted to see him. He was also tremulous and very easily exhausted. When he returned home, he would jump when spoken to, and did not wish to meet people, preferring to sit alone. His memory for proper names was poor; he found it difficult to recollect even the names of his friends. He was considerably perturbed at the prospect of re-entering civil life and of having to build up his old business connections again. After returning to his work, however, he gradually improved.

In February 1923 he was in a motor-car accident, sustained concussion, and was unconscious for twenty hours. He was treated at St. George's hospital for four weeks, and then had a holiday for ten days. It was said that there was no fracture. He observed no ill-effects, except loss of the sense of smell.

In April 1924 he married a woman 11 years younger than himself. The marriage was happy. In August 1924 his father died. This was a source of some financial concern to the patient, who had to wind up his father's affairs. In November 1924 the patient first heard rumours that the firm of stockbrokers for whom he worked intended to buy him out of a small business of his own, from which he derived most of his income, and with which he did not wish to part. This worried him a great deal, but it was not till February 1, 1925, that he knew definitely that he was to be bought out. His employers paid what he considered a poor price. His income was thereby reduced to about one-half, and his prospects still more so. The patient felt that he had just cause for grievance.

Present illness: In the meantime, at Christmas 1924, at a party at the home of his father-in-law, he had what he described as his first attack. His father-in-law had placed four people in a row to see which was the tallest, and the patient to make fun crouched down, knees bent, holding on to a chair. As he did so, a "funny feeling" passed over him, which worried him slightly, but he dismissed it from his mind. The same evening, while he was passing a cup and making a joke "the strength went out of his arm" and he dropped the cup.

From this time onward there developed the symptom of which he chiefly complained, viz., weakness on excitement. About February 1925 he felt compelled to restrain himself from laughing, as he "lost control of his lower jaw" and it made him feel "very uncomfortable."

In March 1925 there occurred what he called his "first severe attack." He was leaning against a desk in the Stock Exchange, when suddenly he "lost all his strength" and would perhaps have fallen but for the support of the desk. Something had happened on the Exchange which he had predicted would happen, and he was excited and wanted to tell somebody about it.

Soon afterwards he felt weak on directing an important personage to a pillar-box, and attributed this to "excitement" again.

There also appeared what he described alternatively as an exaggerated "after-lunch sleepiness" or as "giddiness." If this occurred while writing, his writing and spelling were, he noticed, very bad. If he omitted lunch he felt worse than ever. He ceased to take his customary glass of beer at lunch, in the hope of improving his condition, but without effect. Usually the "giddiness" lasted about an hour and a half. He felt if he sat down he would fall asleep—and he sometimes sat down and did so. There was no history of such experiences at any other time of the day.

The attacks of weakness (in which he sometimes fell) continued to recur on the stimulus of the slightest excitement, so that his employers removed him from duty on the floor of the Stock Exchange and gave him only office work to do. His condition improved very little, and he entered hospital for treatment, with the mental reservation that his employers should pay for it, since he considered that their action in depriving him of his private business had much to do with his condition.

Physical condition on admission: He was a tall, powerfully built man, well nourished and well developed. Apart from loss of his olfactory sense, and a slight tremor of the extended fingers, no neurological abnormality was found at the time of admission. The other systems were entirely healthy.

Mental condition: There was no apparent abnormality of behaviour except that he gave the impression of always restraining himself, speaking and moving in a somewhat deliberate way. His facies showed a lack of mobility (animation) in ordinary conversation, but no defect of movement on testing. This comparative immobility was evidently the result of voluntary restraint, as he declared that smiling, or even any great movement of his circumoral muscles from any cause, might precipitate one of his attacks. His voice also was somewhat measured and monotonous; and here again a voluntary factor entered, for the same reason.

He complained of impairment of memory, but there was no objective evidence on formal testing. There was no disorder of mood, or of thought-content. He bore a mild grudge against his employers for the reason already stated.

Course in hospital: On August 14 he undertook to imitate an attack of weakness and while attempting to do so in the standing position in my room he actually had one. First his gaze became fixed but not staring (he seemed to be looking at nothing, but attending only to what was going on in himself). Then his head fell gradually forwards on his chest, jerkily (as if he were falling by its own weight and he were attempting to keep it erect). All his limbs sagged and jerked in similar fashion. He did not speak the while. The whole attack lasted about thirty seconds. He did not fall on this occasion. He must have been conscious all the time because he not only asserted that it was so, but gave practically a verbatim report of some remarks I had made to him during his attack.

During the following week he felt well and had no recurrences. On one occasion he appeared successfully on the platform as a vocalist in a hospital concert, without tremor or weakness; but during the week ending August 29 he felt unwell for the greater part of the time, and had three attacks of "weakness," in which he fell—once when another patient persisted in trying to persuade him to sing; again while playing tennis after feeling "nervous" all the time of the game (he felt better after this attack); and again when he was suddenly asked by another patient in an excited way to bring blotting paper.

At this time he made the observation that he had an attack not only when he felt surprised but also when he satisfied, e.g. when he made an unusually good stroke at tennis.

On August 31 he "felt much better" and had done so continuously since his last interview with the physician. He played singles at tennis successfully for the first time. During his interview on this day it was noted there was marked bilateral fine tremor of the facial muscles, especially in the orbicularis oculi and in the muscles of the upper half of the face.

On September 1 he played tennis in the morning and defeated a good player; but playing again in the afternoon he felt "nervous" and annoyed with himself to start with, and was very feeble in his strokes. Afterwards he felt so tired that he could hardly take his tea and he went upstairs to his bedroom and slept for two hours "like a rock."

On September 7 he had an attack in the billiard-room after making a good shot, which was applauded. During the attack another patient pinched his arm but he could not speak to tell him so. In the forenoon he played two sets of tennis. During the first set he was comfortable; but in the second he felt nervous and had a mild attack. At an interview in the afternoon I noted that he was very drowsy, that his left upper lid appeared slightly closed and his left pupil reacted sluggishly to light.

On September 8 he felt nervous and had several attacks while playing tennis. In the afternoon I made him lie down on a couch in the consulting-room, and told him to go to sleep. He soon fell into what appeared to be a light natural sleep, during which he

answered questions relating to his attacks. No new information was obtained. Just before being roused, he described a "feeling of uncertainty," similar to that which preceded his attacks. I found it difficult to rouse him and when he was roused (as far as I could at the moment succeed in doing so) he looked drowsy, and seemed to gaze at nothing, his eyelids being closed. On being further stimulated and urged to get up, he rose and walked towards the door of the consulting-room. But while doing so, having walked about a yard, he became suddenly limp and fell with two little cries. He subsided on the floor in a genupectoral position, his chin resting on the floor. He remained completely immobile and limp for about thirty seconds. When he recovered he denied having lost consciousness. He described his conversation with me during his sleep. He said that he seemed to be with me in another and much larger room, and he felt as if he were going through a series of attacks all the while. His memory for the gist of our conversation was accurate.

On September 20, after a period of ten days' freedom from attacks, the longest since the beginning of his illness, he had another attack, in which he dropped a coffee-cup. This attack was preceded by a feeling of anger at a nurse, who nagged him to take another patient about with him.

On the afternoon of the next day he was again placed in favourable condition for sleeping in my consulting-room, and soon was asleep. While he slept I several times assured him that he would get well. He then tried to wake up but could not, and only woke (he said afterwards) in response to my statement "You can wake up now." He answered "Thank you, doctor" and opened his eyes. While asleep he had dreamt, he said, that some other patients were "watching the experiment" and laughing at him in his sleep.

On October 5 he left the hospital at his own request, having had no attacks for two weeks. He remained free from attacks for two months after he went home, and then relapsed. For several weeks during his hospital residence, luminal and bromides were given but without apparent effect on the symptoms.

COMMENT.

The earliest attacks had apparently a *local incidence* (arm and jaw). The early attack of weakness in his arm might, of course, have been part of a more general attack, the whole effects of which were not observed, because the patient was in the sitting position at the time; but evidently it did not involve his neck muscles, for he did not observe that his head sagged at the time. The local relation of laughter to his loss of control of his jaw muscles was, however, a strong subjective impression with him, and suggests that a local form of 'cataplexy' exists.*

The *types of emotional disturbance* which precipitated an attack were anger, "satisfaction," surprise, and "excitement" of any kind. It is probable also that some attacks occurred *spontaneously* following on a feeling of "nervousness," although here anxiety may have entered. Some attacks seemed to be *initiated simply by particular muscular movements*, both voluntary and involuntary: on voluntary movement of imitation there followed one of the attacks he had in the physician's presence; and some of the local cataplexies of the jaw muscles seemed to follow the involuntary movements of laughter, when no special emotion accompanied the latter.

*"Local" varieties of cataplexy have been recorded by several previous observers.—Ed. J.N.P.

The jerking of the head and limbs as they sagged is of some interest, especially in view of Adie's¹ statement that it has been observed but rarely. It was quite evident, I thought, that the patient was attempting to overcome by voluntary effort (with momentary success) the loss of postural tone in the muscles of the neck and limbs.

The attacks did not occur in every emotional situation. While in hospital he played in several cricket matches, and appeared once in a concert, without an attack. Also, on a week-end leave towards the end of his stay, when he met many of his friends, he had no attacks.

The few and fleeting *neurological signs* observed in the intervals of attacks are suggestive—ptosis of the left upper lid, sluggishness of the left pupil to light, and tremor of the facial muscles. In the attacks unfortunately only his pupillary reflexes were observed; the pupils were then normally active to light. He could not move a muscle even to speak. That his claim that consciousness was clearly preserved was well founded, was shown by his repeating verbatim what I had said to him during an attack. The occurrence of a cry at the beginning of an attack is of interest in view of the possible relation to epilepsy.

The relation of his cataplectic attacks to his afternoon drowsiness is of considerable interest, especially in view of the contention of Adie,¹ and others before him, that cataplexy and narcolepsy are due essentially to the same process in these cases. There are certain contrasts in this patient. The cataplexy was episodic and occasional: the narcolepsy (if it be called so) was periodic and never occurred in response to an environmental stimulus. Consciousness was apparently clearer in the cataplectic attacks, but comparatively obscure and dream-like in the sleep-states. In the sleep-states the patient's orientation was changed, and in one instance there were dreamy hallucinations. Nevertheless in the latter as in the former the gist of a conversation could be remembered but not at all with the same exact detail. Moreover, while he was completely unable to utter a word while in the cataplectic state, he readily carried on a conversation with the physician both in the drowsy 'pre-narcoleptic' condition, and in the state of 'sleep' itself. On the other hand, on one occasion he retrospectively described his experiences during his sleep as "a continuous series of attacks" (cataplectic). (This was only on the occasion when the physician was talking to him about these attacks). Also he had a cataplectic attack on one occasion immediately after waking.

It may be held that the sleepy condition in which he was observed was not identical with the afternoon drowsiness and sleep which he described. But the conditions were the same. The early afternoon was chosen for the observations, because it was at that time of the day that he habitually experienced unusual drowsiness. All that was done was to allow him to give way to his inclinations and fall asleep.

It may also be argued that in those sleep-states in which he was observed, he was really hypnotised, and not spontaneously sleeping. The reply is that the observer believed at the time that the patient was not in a state of hypnosis,

but in apparently normal sleep. He did not go to sleep on command : but took some time to do so, the phenomena resembling in all respects the normal process of going to sleep. There were hypnagogic experiences (people laughing at him) and he passed into a state of dreamy disorientation. No special suggestibility was observed.

Regarding the etiology of the condition, a good deal that was of probable importance was revealed in the history. Both physical and mental strain had been considerable, over a period of years. Actual brain-injury had occurred nearly two years before the onset. Much cause for worry was present at the time the first symptoms appeared.

As far as the pathogenesis of the attacks themselves is concerned, the hypothesis of fatigue does not seem probable, in view of the rapidity of the recovery from the individual attacks.

REFERENCE.

- ¹ADIE, W. J., *Brain*, 1926, xlix, 257.