could claim any commission. But like a good business man he did not hear or at least not to understand. His knowledge of English seemed to suffer a temporary lapse. And so I bought a gastroscope. It was at this point, with the prospect of paying customs £40 in sterling, that I resorted to low cunning, the thought of which, now after half a century, begets a sense of guilt. For some time my mind had been occupied with the problem of how to pass through customs financially unscathed. I hit upon the plan of asking Mr Wolf for a receipt for 20 reichsmarks for "repairs to gastroscope." This he provided without demur. So I left him with my gastroscope and a bogus receipt. The next premeditated act was to buy a toy for my 6 year old son.

That evening I spent much time in my hotel bedroom despoiling the brand new container box with the heel of my shoe, in order to lend it the appearance of age. I then carved my name on the box with a pen knife, inking in the grooves; but such was my state of anxiety that I misspelt my name. I left out the "R," and so the box bore the name of Edwards. The gastroscope is now in the library museum of King's College Hospital medical school, still bearing my distorted name.

Confronting the customs

My turn to confront customs at Harwich eventually arrived. Few people are at their best at 5 am, especially after a disturbed night crossing the North Sea. I am not one of them. To say I was nervous would be an understatement. My spirits were indeed at the lowest ebb. Down on the counter went my suitcase and my gastroscope. I remember the conversation between myself and the customs officer as though it was yesterday, as one ever remembers experiences under stress.

Customs: "Anything to declare?"

Myself: "Yes, a German toy." (This I extracted from my suitcase and presented to the inquisitor.)

Customs: "That's OK. Anything else?"

Myself: "No, nothing else."

Customs: "What about this?" pointing to the large gastroscope box.

Myself: "Oh *that*. That is only a surgical instrument."

At this point the young officer became suspicious. He disappeared, to return with a senior colleague with gold rings on his sleeves. He opened the box and examined the gastroscope. I then explained what the instrument was for, and that I was a hospital surgeon returning from a gastroenterological clinic (or did I say conference?) in Leipzig, and that it was part of my essential equipment. "It looks very new," said he. I pointed out that so delicate an instrument had to be maintained in prime condition. He then asked me several searching questions. What was my work? Where did I work? Did I use the instrument regularly? My answers seemed to satisfy him. After some thought, he at last closed the box and, albeit reluctantly, put on the magic white chalk mark. I picked up my belongings with as much nonchalance as I could muster, and made my way to the train. At the barrier I was questioned by a third customs officer, who was interested in the box. But the chalk mark satisfied him. All this delay meant that I nearly missed the train.

I sank into my seat clutching my precious burden. I remember feeling no sense of relief. My adrenals seemed to have stopped working. A minor degree of delayed shock perhaps. But my spirits soon recovered. After all, I had been guilty of no criminal offence; and there had been no need for me to show the bogus receipt from Mr Wolf. I had obtained a gastroscope for about £45 plus expenses, which were minimal in view of the favourable rate of exchange that I had been afforded. But I resolved that never again would I tangle with customs.

Charcot's hysteria renaissance

E M R CRITCHLEY, H E CANTOR

Abstract

The authenticity of Charcot's original descriptions of hysteria has been questioned in the popular media. None the less, it is still possible to encounter florid forms of hysteria in culturally deprived communities, and to answer Charcot's present day critics we present a selection of patients from Kentucky's Appalachian counties with hysterical neurological disease. Their case histories are contrasted with those Charcot himself described and thereby form a modern commentary on such conditions as la grande hystérie, hysterioepilepsy, hysterio-traumatic monoplegia, and hysterical hemianaesthesia.

Introduction

Hysteria is present when there is a disproportionate relation of symptoms to disability and a discrepancy between the manifestations and the anatomical and physiological arrangements of the body.¹ Caution must be exercised in accepting even the most florid presentations, and hysteria presenting with neurological symptoms may be especially misleading.² Furthermore, the physician has the added duty to understand why the patient has taken to express himself or herself subconsciously in this manner. The unexpectedly high incidence of hysterical disorders among the underprivileged white community of Kentucky's Appalachian counties is a matter of surprise, matched only by the similarities of these disorders to the original descriptions of Charcot in his clinical lectures on diseases of the nervous system.³

Clinical presentations

One of the most startling forms of hysteria that Charcot demonstrated at the Salpêtrière was la grande hystérie, otherwise called hysteria major or hysterioepilepsy with distinctive crises. Freud described la grande hystérie as consisting of four phases⁴: the epileptoid; violent movements; attitudes passionnelles (the hallucinatory phase); and the concluding delirium. According to

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Charcot, the full grande attaque is relatively infrequent. All other forms of hysterical fit are derived from a shortening, lengthening, omission, or isolation of these separate phases.

LA GRANDE HYSTERIE (PHASES 1 AND 2)

Attacks either start spontaneously or may be provoked by stimulation of part of the body. There follows a well defined painful aura rising from the stomach to the throat, producing a feeling of constriction and throbbing pain in the head. Then the patient loses consciousness and the epileptoid stage starts. The limbs stretch out. The wrists flex and become twisted in a position of exaggerated pronation. The arms contort, with extremely violent movements of salutation and disorderly gestures owing to convulsive contractions of the pectoral muscles. The patient breaks and tears everything on which he can lay his hands. From time to time the contortions stop for a moment and give way to the characteristic attitude of an "arc of a circle," with opisthotonus and forward or lateral curvature of the spine. Charcot concluded: "All this part of Gui—'s attack is very characteristic, and all its details are worthy of being recorded by the process of instantaneous photography. I am able to show you the pictures which have been obtained by M Londe."

Parallel example

We were able to witness several attacks in a 33 year old patient: one attack was filmed on the ward and another took place before an audience in a lecture room. She had had seizures from the age of 10, but latterly they had become more severe and for 10 days before admission had been almost continuous without relief from phenytoin 100 mg thrice daily.

Her first seizure had occurred in a school playground and was almost certainly epileptic. She recalls nothing except that she fainted and woke some time later, sleepy and confused with the teacher washing dirt from her face. From the age of 14 her seizures occurred at roughly monthly intervals, a day or two before her menstrual periods. There was an aura of flushing and a feeling of warmth about her face; she then felt that she had to sit down quickly lest she should fall. She never bit her tongue, never foamed at the mouth, never fell hurting herself, and never had a seizure when on her own or after the first month of gestation with any of her four pregnancies.

The dramatic attacks could be produced by talking to her husband and obtaining from him a description of the course of events. She would then complain of a feeling of warmth and flushing about her face; and, as he began to show how she wrung her hands at the start of an attack, she would proceed to do likewise and then fall back in a state of tonic rigidity. After that she became agitated, drawing her hands upward in an apparently purposeful and strong movement and exclaiming in a clear voice, "I will bite, I will bite"—at which her husband would hasten to place a rolled handkerchief in her mouth. The next stage consisted of a series of tonic and usually symmetric posturings accompanied by moaning. She would often raise herself on her head and heels in a state of opisthotonus (arc of a circle). Some tonic posturings would occur for several minutes after the opisthotonus, but at this stage her husband claimed to be able to break the fit by rubbing the sides of her neck.

The results of clinical examination and investigation were normal. The cerebrospinal fluid contained two white cells and a protein concentration 6 g/l. An electroencephalogram, including a sleeping and waking record, was within normal limits.

Comment

The descriptions of the attacks culminating in opisthotonus are remarkably similar. Charcot also commented that stimulation of a hysterogenic zone in the course of an attack may speed recovery, and this appears to have been the case with our patient. Charcot

was well aware that hysterical and epileptic attacks may be seen together in the same patient; Briquet had written that three quarters of hysterical patients had convulsions.⁵ Gastaut postulated that the "hysteroepilepsy" of the previous century was seen in patients with lesions of the perisylvian region, the hippocampal gyrus, or the inferior surface of the temporal lobe.⁶ We are also aware that anticonvulsant toxicity or intolerance may produce attacks identical with those due to hysteria.

The hysterical fit.

LA GRANDE HYSTERIE (THE HALLUCINATORY PHASE)

"Then comes the third stage, called the period of passionate attitudes, during which he utters and cries in keeping with his gloomy delirium, and the terrifying visions which persecute him. At length he regains consciousness, recognises and names people around him, but the delirium and hallucinations persist yet awhile; he seeks around him and under the bed for the dark beasts which threaten him; he examines his arms, expecting to find the bites of animals which he thinks he felt. Then he comes to himself, the attack is finished, but very often only to begin again a few seconds later, until, after 3 or 4 successive attacks, the patient regains his normal condition."

Parallel example

A 30 year old man was admitted for investigation of epilepsy. One afternoon he disappeared from the ward and was not found for several minutes. He was located in a washroom lying against the wall with his eyes closed. When aroused he was com-

municative, explaining that we were in the woods hunting snakes with our hands. He was placed in a wheelchair and taken back to his room, where he slid out of the chair, grasping the side rail of the bed with a powerful, unrelenting grip and asked for pliers to remove the snake's teeth. All the while he stared straight ahead. When asked he would explain what he was doing, but if touched he became belligerent. He remained on the floor for another 10 minutes, then got up quite unaware of where he was or how he got there.

Comment

There was a left temporal delta focus on the electroencephalogram, and a skull x ray film showed a patch of calcification at the left temporal tip. Bilateral carotid angiograms and pneumoencephalograms were normal. The patient undoubtedly had temporal lobe epilepsy, and this might have been accompanied by either a schizoaffective state or ocular hallucinations. Most certainly there was a severe personality disorder accompanying the focal disturbance, thus making hysteroepilepsy the most probable diagnosis.

HYSTERICAL HEMIANAESTHESIA

This condition may accompany any form of hysteria including hysteria major. "This young girl B1 . . . presents the hemianaesthesia of hysteria in a form that is altogether characteristic. On the left side there is insensitivity to pricking, cold, and all forms of stimuli. This loss of general sensibility is found in the upper extremity, the lower extremity, half of the trunk, and the head. This girl bears the most intense faradization without suffering the slightest inconvenience, and the anaesthesia occupies not only the skin, but even the deeper parts, the muscles, and nerve trunks. In most cases, when there is insensibility of one side of the body and of the face, a more or less pronounced disturbance of vision is also manifest in the corresponding eye, a sort of amblyopia which rarely amounts to amaurosis."

Parallel example: I

A 53 year old man had had two prolonged periods of unconsciousness in the previous eight months. When he recovered from the second episode he noted a numbness over the right side of his face and complained of a headache over the right half of his head. He had several episodes of sudden and generalised right sided paresis occurring about every three days and lasting two days. These were not accompanied by any alteration of his level of consciousness. On further examination he showed bilateral tunnel vision and was deaf in the right ear. Stereognosis was intact in both hands. In other respects his sensory loss was total over the right half of the body and face. Sensation to light touch, pin prick, joint position testing, vibration, and temperature was absent up to the midline. There was no difference in the reflexes or in corneal responses from each side. We were able to proceed as far as skull and chest x ray investigations, serological examination, glucose determinations, electroencephalography, and cardiography, all of which were normal, before he took his own discharge.

Comment

We cannot say for certain that organic disease was excluded in this patient. Several possibilities remained open. Even so the conversion, or hysterical, features remain striking. The patient was exceptional in that stereognostic sense was preserved. More commonly, retention of the corneal blink response, Janet's Chinese illusion (finger sensation in interlocked hands), and a difference of vibration sense across the sternum will indicate the non-organic nature of the sensory imperception. Charcot wrote that the sensory loss may exempt the parts immediately around the

organs of sense, or include loss of taste, smell, sight, and hearing on the same side.

Parallel example: II

A 59 year old labourer was admitted with a dense, unselective, sensory neuropathy and normal deep tendon reflexes. A pin could be stuck into his tongue without evoking pain, and he willingly underwent a biopsy of the sural nerve and gastrocnemius muscle without an anaesthetic. He had a good work record until his 56th year, when he became ill with pneumonia and was told that because he had silicosis in both lungs he would never be able to work again. Four to six weeks later he began to feel numb in both feet and in the lower part of his legs. The numbness, accompanied by weight loss, sensory loss, and a feeling of heaviness, gradually spread over the entire body. There was no alteration in his muscle tone or strength. He had no difficulty in swallowing. There were no trophic changes. He could stand erect on one leg with his eyes closed. His gait did not suggest a peripheral neuropathy.

Three months before admission he had entered a tuberculosis sanatorium. An x ray film showed fibrotic calcific disease in both lungs, and despite repeatedly negative bacteriological reports he was treated with isoniazid 300 mg/day, aminosalicylic acid 6-12 g daily, and pyridoxine 100 mg daily. This treatment was continued on admission to this hospital. Muscle and nerve biopsy specimens were normal, and he was transferred to a psychiatric ward for treatment of depression with amitriptyline. His mood improved and he began to gain weight. After two to three weeks he felt tingling sensations in the lateral part of the right foot (in the area of distribution of the biopsied nerve), and these increased until he could feel a light touch over the entire foot and part of his leg. At this time light hypnosis and relaxation were started, and suggestions were made that he would have the same type of recovery in the other foot. Hypnosis was repeated at intervals over the ensuing weeks and finally, one week before his discharge, he dramatically recovered sensation over the whole body. In the past six months he has continued to have symptoms of chronic airway obstruction and has recently begun to complain of pain and burning in his feet.

Comment

This patient's neurological disorder began after he had been told that because of chronic lung disease he would never work again. Possibly his dense, sensory neuropathy was grafted on a mild peripheral neuropathy related to the treatment of his pulmonary disease.

HYSTEROTRAUMATIC MONOPLEGIA

"About 4½ months ago, a 30 year old man was engaged with one of his comrades at the Central Market in unhooking half the carcass of an ox of considerable weight; the hook broke and the patient was knocked over, falling with his left arm underneath the carcass. Not only did he experience no pain in the arm at that moment but he declares that he was unable to feel the limb at all, it was as though it were 'absent from the shoulder to the end of the fingers.' The phenomenon of local shock in his case seems to have been very accentuated. The limb seems to have been affected with complete anaesthesia throughout its entire length; at the same time it was deprived of all voluntary movement.

"During a period of 15 days the forearm was kept in a hollow splint, and covered with carbolised compresses and poultices. Then it was decided to apply a plaster apparatus, which he kept on for 45 days. At the end of this time the splint was taken off, and it was discovered that the upper extremity was contracted. Chloroform was administered, and they were able to recognise that there was no articular lesion, no trace of fibrous retraction, and that it consisted of a true spasmodic contracture."

Parallel example

A man aged 48 had been unloading 50 lb (22.7 kg) of potatoes from a truck when he accidentally hit his right wrist on the end of a sharp metal clamp. He did not realise anything until he tried to pick up another bag, at which time he observed blood over his right wrist and hand. For one month the hand was swollen, discoloured, and immobile. When seen eight months after the accident he complained of pain, weakness, and loss of feeling in the right arm and extending into the right side of his face. His arms appeared to be normal, without wasting or contracture. The reflexes and tone were unimpaired but all voluntary movements on the right side were uniformly weak. The peripheral nerves were not palpable. Stereognosis, skin writing, and joint position sensation were intact in both hands. Pin prick, cotton wool sensation, and vibration sense were reduced in the right arm, over the entire right side of the trunk, and extended over all three divisions of the right 5th cranial nerve. Corneal and nasal tickle responses were preserved, and he could be tricked into false lateralisation of his sensory loss by the Janet test.

Comment

The situation Charcot described is well known in orthopaedics. That which we describe more truly fits the diagnosis of hysterotraumtic monoplegia or compensatory neurosis with neurological signs.

HYSTERICAL GAITS

Charcot detailed only one example, a 45 year old man with hysterical coxalgia after an accident three years earlier. He walked as though he had organic disease of the hip, but both the motor symptoms and the extensive sensory loss were shown to be manifestations of a neurosis.

Parallel example

A 17 year old girl staggered and preferred to walk with her toes curled under her feet. She had been admitted for investigation of asthma of four years' duration and convulsions of three years' duration. The convulsions were characterised by a preliminary sensation of blackness and loss of memory, followed by hallucinatory spells, hearing nonsensical voices, and seeing flowers and coloured spots. She would talk nonsense to herself and would occasionally bite her tongue. The attack would be followed by a right sided headache and sleepiness. Several episodes were witnessed, each lasting several minutes. She would fall to the floor without self injury and lie there unresponsive. She mumbled and salivated. These features were succeeded by very slow tonic-clonic movements of her feet and arms and spontaneous dilatation and constriction of her pupils (hippus). An electroencephalogram showed a right occipital delta and sharp wave focus and semi-rhythmic 3-5 Hz activity overlying the left Sylvian and posterior temporal regions.

Comment

This girl came from an inadequate home in a deprived area but her Intelligence Quotient was above average. Her hysterical symptoms were regarded as a protective reaction against physical pressures.

Discussion

The term conversion state is used when the manifestations of organic disease are mimicked by the subconscious. When such

manifestations appear to be grafted on to organic disease the term "functional overlay" may be used. Hysteria may be a psychosomatic reaction to organic disease, a psychosomatic reaction to psychiatric trauma, or an emotional physical reaction dependent on social maladaptation.⁷

The particular form of conversion reaction chosen is important. If we accept that conversion reactions are moulded by unconscious stimulation of disease entities⁸ then it follows that the form may be suggested, among others, by: chance physical trauma, unimportant in other settings; disease afflicting relations or acquaintances; or organic illness suffered by the patient. Our own experience, well illustrated by the present examples, would suggest that organic illness suffered by the patient often underlies conversion reactions. In a culturally primitive community hysterical reaction states seem to provide a non-verbal language whereby attention may be drawn to organic troubles.

The experience of Ziegler *et al* is similar to our own.⁸ Not only did they see the classical symptoms of "loss of function" or "hysteroepilepsy" in patients from comparatively backward rural areas but they also reported on patients who expertly simulated complicated disease entities—including two secretaries to neurological departments, one of whom simulated multiple sclerosis while the other simulated symptoms associated with a cyst of the third ventricle. "We conclude," they wrote, "that symptom patterns change with changing medical knowledge of the patient and of his cultural milieu. . . . Less than half of our conversion patients were so-called hysterical characters and we therefore agree with Chodoff and Lyons⁹ that this personality pattern is not a prerequisite for the conversion process."

To work with patients from ethnically backward areas is to appreciate the continued existence of florid forms of hysteria such as Charcot described; to read his lectures is to appreciate the considerable neurological skill on which his diagnoses were based.

We thank Dr David B Clark and Dr Michael P McQuillen for their encouragement and advice in the preparation of this paper. The figure is reproduced from *An Atlas of Clinical Neurology* by kind permission of the author, J D Spillane, and Oxford University Press.

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Marathon runners' pseudotorsion

A 19 year old man was admitted with pain in the right side of his scrotum. On the previous day he had run 19 miles preparing for the London marathon without his "jock strap." At operation both testes were found to be hanging from a mesentery with an elongated epididymis. Bilaterally the cords and epididymides were swollen and oedematous, although the scrotal layers were oedematous only on the right side. Bilateral orchidopexy was performed. We suggest that those people with an anatomy predisposing to torsion may cause trauma to their cords by unprotected prolonged jogging.—R M KIRBY, surgical registrar, and S H MEECH, house surgeon, London.