

## *Clinical and Other Notes.*

### THE PITRESSIN HYDRATION TEST IN THE DIAGNOSIS OF EPILEPSY.

BY

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IN perusing case records of patients diagnosed *Hysteria (motor-convulsions)*, one often sees that both physician and psychiatrist were in doubt as to whether the condition were epilepsy or hysteria. After observation in hospital unless the patient has definite epileptic fits he may be regarded as hysterical and disposed of accordingly. Should the patient then turn out to be a true epileptic, it is important to realize that not only injury (organic trauma) but also psychological trauma may result. The patient may have received superficial psychotherapy with the reassurance that once his mental conflict is solved the fits will not recur. The psychosomatic disturbance of epilepsy may be palliated and the patient actually improve until, one day, he has another fit. His confidence vanishes together with whatever plans he made for himself and he slumps into depression. Now, neither physician nor psychiatrist will find him an easy patient to treat, for he is distrustful and, possibly, even negativistic.

In the absence of facilities for electro-encephalography, the Pitressin Hydration Test may be found useful.

The following is an illustrative case :—

#### CASE-RECORD.

Sjt. G. Y., a regular soldier, aged 19½, was admitted for evacuation to the U.K., having been diagnosed motor hysteria.

On admission he had no complaints but wanted something done about his fits because he was afraid they might ruin his life.

*Present Complaint.*—Fits started at age of 18½, one night when he was in bed; he remembers only waking up in hospital the following afternoon though the actual fit lasted ten minutes. Two of his N.C.O. friends witnessed this fit. Here it must be noted that he was stationed in a very hot part of India at the time, but he was happy in his work and undisturbed by heat. After a period of six days' observation, during which he had no fits, he was discharged. Twenty days later, while handing over his duty one night, he had another fit, again in the presence of his two friends. This time he was in hospital for twenty-eight days during which he had several fits. A medical officer described one fit as follows: "foaming, screaming and struggling, no injury, no incontinence. Had premonition of fit by dizziness. Fit was mainly muscular spasm and there was a period of excitement following it. After seizure there was complete amnesia, weakness and left frontal headache." The psychiatrist noted: "has been in hospital on three occasions on account of fits; these fits have been observed in hospital and are strongly suggestive of hysteria." These attacks lasted about ten minutes, they were always in

the presence of other persons and the patient had never seriously harmed himself nor exhibited incontinence. The number of fits till admission to this hospital was about twenty-four. He has not had an attack for ten days while under observation in this hospital.

*Family History.*—Brother discharged from R.A.F. with “confirmed epilepsy.” He has never seen him in a fit. One sister is very nervous and two other siblings are alive and well. Mother has “hysterical fits”; he has only seen one when aged 12 and “never wants to see one again.” Father was a cruel man and left the home when patient was aged fifteen (? psychopath). The children were separated and brought up in a Poor Law Institution.

*Personal History.*—*Childhood:* Poor surroundings, never had a decent home, never happy as a child; was under strict discipline at school where he developed “nervousness.” Remembers a few neurotic traits: as child “could not stop laughing and had to be locked up in a room.”

*Civilian Life:* Worked steadily for four years as a clerk and then volunteered for the Army.

*Service Life:* Did not need to make an effort to adjust himself as he was already “used to discipline from school.” Quite happy; quickly promoted in India. A regular soldier he was content to make soldiering his career. Until the fits started he was efficient but since then his efficiency deteriorated and he has been forty days off duty.

*Emotional Growth.*—No sexual interest. Very attached to mother “being the only child who stuck to her.”

*Past History of Illnesses.*—No head injury, nil relevant.

**PHYSICAL EXAMINATION.**—N.A.D. except for signs of sympathetic system disturbance due to anxiety, i.e. mild tremors, sweating, tachycardia of 90 when excited, hot flushes. Skull and muscles X-ray, no cysts, no sign of past injury.

**MENTAL EXAMINATION.**—*Behaviour:* fidgety, normal otherwise. *Affect:* emotionally unstable and immature (burst into tears during simple interview). *Personality:* sensitive; shy, not integrated. He would be deeply concerned at the least adverse comment from a superior. *Intellect:* good functions. *Intelligence:* S.G. II (Matrix score 49 in 40 mins.). *Insight:* present. He was said to show indifference to his fits but fear of epilepsy and was found to be developing a true anxiety state.

It was decided to give him the Pitressin Hydration Test to elucidate the diagnosis.

The patient was confined to bed and put on a normal diet. His urine was tested for albumin and sugar and found to be normal. Hypertension, myocardial insufficiency, diabetes, and kidney disease were excluded on re-examination. Thus, in the absence of contra-indications, the test was carried out as follows:

An initial dose of 0.50 c.c. of a Pitressin preparation was given intramuscularly, with 300 c.c. of water orally and subsequently two-hourly I.M. injections of 0.25 c.c. each; followed by 300 c.c. of water. A total of 10 injections was given. An intake and output chart showed the antidiuretic effect with retention of water. The body-weight was increased by 2 per cent.

After the fifth injection (total 1.50 c.c. pitressin and 1,500 c.c. extra water, 2,300 c.c. total fluid intake and 600 c.c. output) the patient had an epileptiform convulsion. He became dizzy (aura), confused and incoherent and then lost consciousness. He exhibited jactitations and later tonic and clonic convulsions of the hands and oculo-convulsions; his pupils were dilated, pulse 82, respiration 28. He had a similar attack during the early hours of the morning after the tenth injection, twenty-four hours after the beginning of the test (total 2.75 c.c. pitressin, 3,000 c.c. extra water, 6,000 c.c. total intake and 3,900 output fluid). Unfortunately, no medical officer being present during these attacks, neurological examination was not carried out. The reports of the day and night charge orderlies (experienced M.N.O.s) tallied. They thought the seizures were not imitable and that they were genuine epileptic attacks. Later he was observed by an officer in a spontaneous seizure, which confirmed the epileptic nature of the convulsions.

Patient was told of his condition and how it could be controlled. Superficial

psychotherapy was re-orientated and applied together with a short period of sedation. The patient became more cheerful and confident because "he knew where he stood now" and was prepared to cope with his handicap. He also realized that his mental condition might well precipitate the attacks. The Anxiety State lifted.

#### DISCUSSION.

The case described fulfilled most of the clinical criteria of hysterical fits :—

- (1) A poor psychiatric background.
- (2) A psychopathic personality.
- (3) Witnessing fits before.
- (4) Fits occurring always in the presence of other persons.
- (5) No severe injury incurred.
- (6) No incontinence.
- (7) Convulsions atypical and can usually be imitated.
- (8) The fits starting fairly late in adolescence.

(Described in that order to emphasize the positive psychiatric criteria first.) There were enough points to render the diagnosis doubtful: the presence of an aura, a positive family history and the absence of a typically extroverted hysterical type, he was intelligent and willing to use insight. The Pitressin Hydration Test, a slight modification of that described by Blyth (1943), was positive. This discredited the previous diagnosis and suggested a primary diagnosis of idiopathic epilepsy (latent). In this connexion it is worth while remembering that there is a psychic form of epilepsy when convulsions are not usually present and the psychiatric symptoms (from irritability to attacks of mania, etc.) predominate. Moreover, if an epileptic happens to be hysteroid, he may quite easily make use of his symptoms. Thus the differential diagnosis between the two conditions can be very difficult. It must be stressed that a psychiatric diagnosis should be made only on psychiatric grounds and not, as often, by exclusion of organic disease. Furthermore, in L. Alexander's words (1944): "The diagnosis of hysteria should only be accepted upon completion of the cure of the presenting conversion symptoms. . . . Hysteria is a working hypothesis valid only for a limited time (e.g. prior to treatment)." The Pitressin Hydration Test is of little value when the result is negative. When it is positive, and a convulsion is observed (in a patient hitherto not having been seen in a fit), the diagnosis becomes almost certain. As a word of warning it should be added that the test is not devoid of danger (e.g. status epilepticus and post-convulsive palsy) and adequate precautions are therefore necessary.

#### SUMMARY.

A case with a doubtful diagnosis of hysteria (motor) has been described. The Pitressin Hydration Test proved the diagnosis to be idiopathic epilepsy; accordingly, the patient was treated successfully.

The Pitressin Hydration Test has been described and the differential diagnosis between hysteria and epilepsy discussed.

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## SULPHONAMIDE ANURIA.

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THE dangers of crystallization of sulphonamide drugs within the urinary track are well known. That the danger of anuria is materially increased in a patient with kidneys already damaged by disease is demonstrated here; and an opinion as to the site of the obstruction within the urinary track is discussed.

Recently four cases of sulphamerazine anuria, one of sulphanilamide anuria and one of sulphathiazole anuria have been treated in this hospital. All except one of these were healthy soldiers who had been injudiciously, or illegally, treated for venereal disease; all but this one responded to medical treatment alone. One was a patient while under treatment for *B. coli pyelitis* of a hydronephrotic kidney.

The routine treatment adopted is as follows:—

On admission: the patient is kept strictly in bed and placed on an intake and output fluid chart. One pint of 3 per cent sodium citrate solution is given by fast drip intravenously followed by intravenous normal saline or glucose saline by drip. The blood urea is estimated and all specimens passed *per urethram* are sent for full laboratory examination. In addition four-hourly mist sodii cit. grains 20 to the ounce is given by mouth, and the diet is fluids only. A careful watch is maintained for any signs of alkalosis manifested by vomiting or tetany.

If no urine is passed after several hours, sodii sulph. 4½ per cent one pint is given, followed by further salines. In all but two of this series, urination was established again after twenty-four hours and normal output progressively returned.

In the first case the patient, an Australian, had been taking sulphathiazole for an unspecified time, without supervision, for urethritis.

14.9.46: He was admitted complaining of acute pain in the right loin and flank, colicky in nature and passing dark bloody urine a few ounces at a time only. The urine was found full of R.B.C.s and sulphathiazole crystals and the blood urea was 78.1 mg.