

A CASE OF NEPHRITIS SIMULATING DIABETES INSIPIDUS.

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THE case described as diabetes insipidus by Dr. A. H. Carter in THE LANCET of August 26th (p. 588) has prompted me to narrate the following case which occurred in Sir Thomas Fraser's wards of the Royal Infirmary, Edinburgh, in the summer of 1897.

The patient was a girl, aged 11 years, who was admitted with the complaints of great thirst and the passing of large quantities of urine. Her previous health, beyond the fact that at the age of three years she had had jaundice and when six years old she had measles, was stated to have been good. There was no history of an attack of scarlet fever. Ever since infancy she was said to have drunk large quantities of fluid; even when a baby her nurse noticed that she consumed much more milk than is usual in an infant of her age. She was always thirsty and would drink any fluid to which she could get access if deprived of a sufficiency of water. At times she was also exceedingly voracious. For a few months previous to admission to hospital she had been getting rather weak and she was noticed to be languid and easily tired.

On examination the patient was observed to be thin but not emaciated; she weighed 3 stones 1 pound. The mouth was dry and the tongue was slightly furred. The bowels were said to be usually constipated. The circulatory system was apparently healthy; the pulse tension was not increased nor was the vessel wall thickened. The skin was rather dry and harsh. Nothing abnormal was to be detected in the respiratory, hæmopoietic, or nervous systems. The urine during the first ten days in hospital averaged 90 ounces; it was clear, neutral or faintly acid, of specific gravity from 1003 to 1006, and contained a faint trace of albumin; no tube casts were found. The urea averaged 194 grains per diem.

During the first two weeks she was in hospital she did not look seriously ill, but at the end of ten days it was observed that both the quantity of urine and the amount of urea passed began to diminish. Four days later she complained of discomfort in the epigastrium; nothing abnormal could be discovered on examination, but her general condition became more disturbed than could be accounted for by a simple stomach-ache. She was nervous and restless and the respiration began to become deep, anxious, and jerky. On the following day the bowels were very freely moved—the result of medicine—and she ceased to complain of the epigastric discomfort. She, however, now developed an acute pain over the left clavicle for which there was no apparent local cause. Her anxiety and restlessness increased and she cried continuously. The respiration had become even deeper and more jerky. The tongue was furred, the pulse was 124 and bounding, and the temperature was 97.4° F. As the day advanced she became quieter, but drowsy and weaker and complained of inability to swallow. There was, however, no apparent paralysis. During the last 24 hours she had passed about 40 ounces of urine. By the following morning she had become unconscious; the right pupil was widely dilated and the left only partially so. The pulse was weaker and the temperature was 97°. There was commencing Cheyne-Stokes respiration. She gradually sank and died at 7 P.M. the same evening. There was some twitching of the limbs before death.

The post-mortem examination revealed no noteworthy morbid appearances except in the nervous and the urinary systems. The brain substance was found to be œdematous; the grey matter of the cortex and the basal ganglia showed irregular patches of congestion. The pons was studded throughout with numerous small hæmorrhages about one-sixteenth of an inch in diameter. These were of quite recent character, symmetrically arranged on the two sides, and were more numerous in the middle of the pons. Only a few small hæmorrhages were present in the lower part of the crura and one or two were seen in the upper part of the medulla. The rest of the medulla showed general congestion

of the grey matter but contained no hæmorrhages. The following is the report on the kidneys: "The left weighed two ounces and the right three ounces. Both were extremely small; the capsule of each was adherent; the surface was somewhat irregular and showed extreme waxy pallor. On section the cortex was enormously diminished, especially in the left kidney, so as to constitute a mere line at places, with pyramidal cortex also diminished but to a less degree. The whole kidney surface was of somewhat translucent yellowish-white colour with only a few points and streaks of congestion at places. There were numerous small cysts present both in the cortex and in the medulla; these were more numerous in the left than in the right kidney. The Malpighian bodies appeared enlarged at places. The condition was chronic nephritis with extreme contraction and atrophy, probably following acute and subacute changes. The extreme anæmia of the kidneys was very striking. No waxy change was present."

From the above description it is seen that this case closely resembles that described by Dr. Carter. Unless one is content to use the term "diabetes insipidus" as a mere name for a symptom one must be in a position absolutely to exclude the possibility of the case being one of nephritis, and that, as the foregoing instance shows, can be done only by a post-mortem examination.

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DEATH CERTIFICATION.¹

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I AM presuming to address you on a subject which interests me personally as a medical officer of health and interests also the registrar of deaths, who, as a rule, is not conversant with the medical terms used or with the pathology of disease.

Death certification gets very scant attention from the various teachers in the medical curriculum, so that when a young man is launched forth fully qualified, unless he has had an opportunity during his vacation of seeing some general or out-door dispensary practice, he is somewhat at a loss to record in exact terms the cause of death in many of his patients.

If he has a Nomenclature of Diseases as published by the Royal College of Physicians of London or if he will adopt a classification adopted by some authors in their text-books on medicine he is somewhat helped. The best synopsis is that found in Tanner's Index of Diseases. The death certificate book does not help him much, although you will find a list in the first few pages of the book and you will also find the following remarks: "It is highly desirable that medical practitioners should use in their certificates of death only those terms which are recognised by the Royal College of Physicians of London. The cause of death should be stated precisely and briefly; English names for diseases being used in preference to their equivalents in other languages. Vague terms such as *decline*, *consumption*, *tubes*, *cachexia*, &c., should be avoided; and *hæmorrhage* should not be assigned as the cause of death without indication of its origin and probable cause; *dropsy* should never be returned as the cause of death without particulars as to its probable origin—e.g., in disease of the heart, liver, or kidneys." Now I agree with these remarks although the list given is not in strict accord with the pathology as dropsy is only a symptom. Precise and brief should be the record of the cause of death. The disease and not a symptom should denote the cause or, in other words, the pathological term should be employed. Hæmorrhage is only a symptom, dropsy as before stated is only a symptom, hyperpyrexia is only a symptom.

Whilst thinking out this paper I came across the following.² It is from the annual report of the Registrar-General for England and Wales for the year 1902.

Inadequate Certification.—The deaths of 50,170 persons during 1902 were attributed to causes that are practically useless for purposes of classification. A much larger number of deaths from indefinite causes would have appeared in the report but for the systematic inquiries

¹ Abstract of a paper read before the Wigan Medical Society on Sept. 1st, 1904.

² Brit. Med. Jour., August 20th, 1904, p. 417.

addressed to medical practitioners respecting deaths certified as due to dropsy, tumour, hæmorrhage, and certain other indefinite conditions. In the course of the year 4706 replies to these inquiries were received, resulting in most cases in a more precise classification of the causes of death. For example, 448 deaths from malignant disease, 367 from tuberculous disease, 165 from appendicitis, 153 from puerperal septic diseases, and 111 from gastric ulcer were transferred to their proper headings, as a result of the additional information so obtained.

I have taken somewhat haphazard from the list of returns for one year made to me by the registrar of deaths. These returns are also sent to the Registrar-General in London. The following are given as causes of death:—

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| 1. Acute pneumonia. | 1. Gangrene of foot. |
| 2. Cardiac failure. | 2. Lymphangitis ten days. |
| 1. Scarlet fever 14 days. | 3. Operation. |
| 2. Otitis media. | 4. Exhaustion. |
| 1. Bronchitis. | 1. Scarlet fever and measles 20 days. |
| 2. Cardiac failure. | 2. Bronchitis six days. |
| 1. Premature birth. | 1. Teething. |
| 2. Asthenia. | 2. Congestion of lungs. |
| 1. Pneumonia two days. | 1. Acute suppurative periostitis six days. |
| 2. Syncope. | 2. Exhaustion. |
| 1. Severe pressure during birth. | 1. Valvular lesion of heart five and a half years. |
| 1. Acute mania. | 2. Ascites 20 days. |
| 2. Gangrene of both feet. | 3. Operation (tapping) two days. |
| 1. Broncho-pneumonia. | 4. Syncope. |
| 2. Cardiac failure. | 1. Carcinoma breast (scirrhus). |
| 1. Malignant tumour of colon 12 months. | 2. Operation. |
| 2. Exhaustion. | 3. Recurrence. |
| 1. Tubercular ulceration of stomach. | 4. Exhaustion. |
| 2. Exhaustion. | 1. Measles. |
| 1. Enteritis. | 2. Pneumonia. |
| 2. Meningitis. | 3. Cardiac failure. |
| 1. Bright's disease three months. | 1. Chronic nephritis. |
| 2. Hæmorrhage from brain one day. | 2. Suppression of urine. |
| 1. Zymotic enteritis. | 1. Chronic ovaritis. |
| 2. Collapse. | 2. Salpingitis 12 months. |
| 1. General tuberculosis. | 3. Operation. |
| 2. Convulsions. | 4. Syncope. |
| 1. Severe burn on knee (left) nine months. | 1. Acute congestive laryngitis five days. |
| 2. Disease of knee-joint probably tubercular. | 2. Cyanosis. |
| 3. Operation 24 days. | 3. Asphyxia. |
| 4. Pyæmia six days. | 1. Interstitial nephritis. |
| 1. Senile decay. | 2. Embolism. |
| 2. Cerebral hæmorrhage. | 3. Heart failure. |
| 1. Bronchitis with abscess one year probably tubercular. | 1. Tubercular ulceration of intestines. |
| 2. Asthenia. | 2. Diarrhœa. |
| 1. Cerebral hæmorrhage. | 1. Enlargement of liver. |
| Coma. | 2. Abdominal tumour. |
| | 3. Dropsy. |
| | 4. Heart failure. |

Examples of Coroners' Verdicts.

Burns caused by getting his shirt ignited at the fire.
Suicide by cutting his throat (temporarily insane).
Natural causes. Probably bronchitis and syncope.
Burns by getting her clothes on fire same day.
General break-up of system accelerated by injuries while unloading on Lancashire and Yorkshire Railway.
Burns by getting clothes ignited accidentally.
Self-neglect and alcohol.

You will see from this list that the certification is not *precise* and *brief* but is too full, and records in many instances symptoms for a disease. Tanner in his synopsis gives a good classification and one which meets all requirements.

[Mr. Berry here introduced an elaborate classification in tabular form which we are compelled to omit on account of its length. It contained 30 principal headings with a number of subdivisions under each.]

The Registrar's register is divided into columns and he has very little space for putting in the diseases. Although English is recommended by the Registrar-General as the simplest it is not always elegant or precise. The term "inflammation of the bowels" is unsightly and not precise and is much better expressed by "peritonitis" or "enteritis"; "inflammation of the lungs" also is better expressed by "pneumonia." Latin, I think, enables us to certify a cause of death precisely and briefly, and, again, it is not always wise to let the relatives know the cause of death in plain language; they are better pleased if the name of the disease has a jaw-breaking pronunciation and is a term not easily "understood of the people." *Pew-monía* is a favourite disease from which many of our friends die, according to information supplied to us by relatives; the term certainly pleases the public.

In conclusion, I would suggest that a definite idea should

be formed as to the filling up of the certificate and then the cause of death should be as brief as possible; if a primary disease is sufficient, then leave out the secondary one; for instance, "pneumonia acuta" is sufficient without putting "cardiac failure" or "syncope." Never give a third cause if possible.

P.S.—Since the above was written the following have been registered:—1. —, aged three years: (1) acute toxæmia; (2) gastro-enteritis; (3) vomiting; (4) diarrhœa; (5) exhaustion; (6) collapse; (7) cardiac failure. 2. —, aged seven months: (1) improper feeding; (2) rickets; (3) vomiting; (4) diarrhœa; (5) cardiac failure.

Wigan.

A NOTE ON THE PATHOLOGY OF LATERAL CURVATURE OF THE SPINE.

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It is not my intention to enter at all fully into the morbid anatomy and pathology of lateral curvature of the spine, as they have been fully dealt with by many authors. It will be sufficient to remark that in those cases in which there is a lateral deviation without rotation no structural changes are present; there are only weakness and want of development of the muscles. In cases in which there is lateral deviation with more or less rotation the changes present are dependent upon the amount of rotation that has taken place; in slight cases of this description little more than muscular wasting and relaxation of muscles are noticed, whereas in more advanced cases the changes include an alteration in the thickness of the bodies and intervertebral discs.

In severe cases the bodies of the vertebræ become very dense in structure on the side of the concavity and their cancellous tissue even becomes compact. The spinal muscles in severe and long-standing cases are often found to have undergone fatty degeneration and even fibroid changes are sometimes present. The thorax has its respiratory capacity much diminished and the viscera undergo alterations in their positions. The pelvis is more or less altered in shape according to the severity of the case and the lumbo-sacral angle trespasses either on the left or right of the cavity according as to whether the convexity of the curve in the lumbar region be to the one side or the other.

Any disease, constitutional or otherwise, which produces general debility and loss of stamina, gives rise to more or less difficulty in maintaining the erect position and the result is an increase in the normal antero-posterior convexity of the spine in the dorsal region—a condition which is known as kyphosis or stooping. This general want of muscular strength if associated with some determining factor causes a lateral deviation of the spine to occur, which when persistent and if more than to a limited degree, and accompanied as it is with a weakening of the spinal ligaments, must of necessity give rise to rotation of the bodies of the vertebræ. Where there is a general falling off in muscular power it is the spinal muscles that suffer more than any other part, as they have to maintain the body in the erect position. "Determining factors" may be instanced by the standing on one leg, writing in wrong attitudes, and various positions which have to be adopted when following certain occupations. The spinal muscles are prominent on the convex side of the curve and flattened on the side of the concavity. This is due to the transverse processes on the convex side being more prominent owing to the rotation of the bodies to that side, which of necessity causes the transverse processes to come backwards, and to the transverse processes on the concave side being less prominent owing to their being rotated forwards, added to which is the fact that the muscles on the concave side are weakened.

A curvature having taken place in one part of the spine, sooner or later a compensating curve will occur in another part. It is always an important point, as far as treatment is concerned, to decide which curve is primary and which secondary. The most common deformity met with is a curve in the dorsal region with the convexity to the right and a curve in the lumbar region with the convexity to the left. In many cases the dorsal is the primary and the lumbar the compensating or secondary curve, whilst in other cases the lumbar curve is primary and the dorsal secondary. For instance, if the determining factor be the excessive use