Observations on the Classification of Insanity.(1) By EDWIN STEPHEN PASMORE, M.D.Lond., M.R.C.P.Lond.; Second Assistant Medical Officer, London County Asylum, Banstead.

IN introducing to your notice this afternoon a few observations on the classification of insanity, I feel able to touch only the edge of the fringe of a very large subject—a subject as abstruse as it is extremely interesting. In the course of some original work I have been carrying on at Banstead Asylum during the last few years, and which I hope to publish shortly, I was struck, whilst noting the mental states of cases, by the frequency with which some mental symptoms were always associated. This grouping, as it were, of symptoms differed in different states of mind. For instance, in one particular state of depression the symptoms arranged themselves in three groups in certain states of body I shall hereafter mention, in the following order:

1. Depression with morbid ideas and temporary impairment of memory.

2. The same condition as above with hallucinations of hearing.

3. Depression with morbid ideas, delusions of persecution, and hallucinations of hearing, but without impairment of memory.

Other psychic phenomena such as stupor, refusal of food, and suicidal tendency would in some cases be present.

Clinical history.—The following is the usual clinical mental history of this association of symptoms.

The first symptom noticeable is depression. This depression, starting from slight lowness of spirits and passing through phases of intermediary character, later may be described as a state of saturated grief; the mind becoming apathetic and introspective, energy and will are gradually lost.

Everything becomes irksome, the performancc of the ordinary and necessary duties of life are neglected in consequence, and then sleeplessness follows.

A little later on this state of depression is grafted, probably through sleeplessness, a state of general confusion of ideas. The sufferer goes about in a dreamy, absent-minded manner—

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stuporosed, in fact,—at times recognising, but not always being able to appreciate what is going on around.

With the onset of this confusion of ideas the memory begins to fail, and the faculties of attention, retention, recollection, and recognition sink into abeyance. This fact appears to increase the emotional condition, and the state of mind at this period (which may be lachrymosed, restless, resistive, with at times refusal of food and suicidal tendencies) is markedly characterised by intense mental suffering, as is evidenced by the anguished, terrified, and dejected expression.

This stage in the history of the disorder might continue for an indefinite period, but sometimes terminates in sudden recovery if the patient be young; or, on the other hand, passes on into a state of early dementia if the patient be much beyond the middle period of life.

Should, however, the case show a psychic progression, *improvement takes place for a time.* The stupor and general confusion pass off, the memory improves, the expression changes, and the patient will engage in conversation if addressed. Then, by this means, it will be found that a little before or coincidently with this apparent recovery, hallucinations, from mere sounds to well-recognised utterances, develop.

On these hallucinations theories or delusions are generally based, at first fleeting and changeable in character as a rule, later to become of a fixed persecutional type and ascribed to unseen agency, especially if the hallucinations take the form of well-defined or familiar voices.

These psychic developments, at times of such a nature as likely to give rise to fears or suspicions of personal danger, might lead to maniacal outbursts, and acts of a most violent, dangerous, suicidal, or homicidal character.

As the case goes on the disorder becomes one of chronic delusional insanity, with fixed ideas of persecution, and ends finally as dementia.

Before this end comes, in some cases, if the physical state is not a grave one, some intercurrent fatal malady might terminate life. On the other hand, *recovery takes place if the physical state is one amenable to treatment, and the mental condition is discovered at an early stage in its development before marked hallucinations or pronounced delusions manifest themselves.* With recurring attacks, as the symptoms appear to become more and

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more intensified with each successive onset, the chances of recovery become less and less.

Such, then, as completely as I have been able to trace it, is the clinical mental history of the symptom-combine which I propose to designate "deprimentia."

In 500 cases I have investigated the morbid physical states of body which were associated *with this train of symptoms* belonged to the following types :—Diabetes, gout, anæmia, heart disease due to failure of function, *i. e.* incompetence, disease of any of the glands of the body causing loss of function of those glands, due to primary disease, chronic jaundice through retention of bile, &c., amenorrhœa, metrorrhagia, and menorrhagia at all ages, chronic disease of the lungs (excluding phthisis and specific diseases), gastritis or enteritis (chronic or acute) where the condition is due to primary affection of the glands of the intestinal tract, so perverting the normal secretion.

These morbid states as far as our present knowledge goes *must not be traceable to any external agent.* This fact is most important.

At first sight it would appear that this grouping of mental symptoms was common, but on closer examination it will be found that such is not the case. The morbid physical states thus met with may be classified as follows :

(I) Excess of some normal constituent :—(1) Glycosuria ; (2) Diabetes ; (3) Gout ; (4) Jaundice. Sugar, uric acid, and bile being normal constituents of the blood.

(II) Deficiency of some normal constituent :—(1) Anæmia, due to deficiency of hæmoglobin ; (2) Exophthalmic goitre, which Mr. Horsley has lately attempted to show is due to a deficiency and alteration of the normal secretion of the thyroid gland.

(III) (*a*) Alteration of a physiological process without anatomical change:—(1) Amenorrhœa at adolescence ; (2) Metrorrhagia at the climacteric. (*b*) Alteration with anatomical change :—(1) Gastro-intestinal glandular disease (not due to a specific germ as far as we know); (2) Heart, kidney disease, &c.

From the classification of these morbid physical states, and from the fact that this train of symptoms occurred only when the diseases associated *were not due to some specific microbe or extrinsic cause*, it was possible to make the following enunciation, viz. that the morbid physical state of body met with was associated

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with excess, deficiency, or alteration of some normal constituent, or the disturbance of some physiological process essential to normal metabolism. I propose to comprehensively term these morbid states of body autotoxæmia, and the train of symptoms associated autotoxic insanity, or "Deprimentia." We may then define autotoxæmia as that morbid condition of body, not traceable to any external agent, but which is associated with excess, deficiency, or alteration of some constituent of, or the disturbance of some physiological process essential to, normal metabolism. The associated psychic phenomena of depression, temporary impairment of memory and hallucinations of hearing, and the subsequent progress of these symptoms, "Deprimentia." This word, therefore, I should suggest should not have a vague general meaning as melancholia has had, but should be applied specifically to the train of symptoms such as I have described, associated with autotoxæmia. [Here the author related a series of cases.]

I examined systematically 300 consecutive admissions, 100 each of consecutive deaths and discharges, and 36 cases of the same physical states of body at various ages, with the accompanying mental symptoms.

Time will not permit me to enter into detail about these statistical examinations, but from them I have compiled seven tables of reference with the following heads:

Table I. Showing physical and mental states in 100 cases of first attacks. II. Showing physical and mental states in 100 recurring attacks. III. Showing physical and mental states in 300 consecutive admissions. IV. Showing physical and mental states on admission in 100 discharges, in which officially no cause was assigned for the mental disorder. V. Showing physical and mental states on admission in 100 deaths. VI. Showing, in three sub-divisions of six each, the mental symptoms and physical states at various ages in first attacks. VII. Showing, in three sub-divisions of six each, the present and past mental symptoms and physical states.

They all tend to show that with certain states of body certain trains of symptoms exist.

Table I shows that in first attacks, with an autotoxæmic state of body such as I have described, one always gets the same train of symptoms.

Table II shows that different mental states were recognisable

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with different bodily states, and this was the case also in recurring attacks.

Table III shows the same conditions as Table II.

Table IV shows that in a great many of those discharged in which no cause could be assigned for the insanity, the physical state was one amenable to treatment, if not autotoxæmic, alcoholic, or such like; and that the train of symptoms corresponded with the physical states as shown in Tables I, II, and III.

Table V shows that a great many of the deaths were in cases where the physical states were extremely grave and not amenable to treatment, or due to some acute intercurrent disease such as pneumonia.

Table VI shows that at whatever age the same physical state occurred, the same mental symptoms were invariably present.

Table VII shows that certain cases with certain physical states tended to run the same mental course.

My reasons, then, for supposing that the train of symptoms such as I have detailed is intimately associated with and dependent on autotoxæmia as I have defined it are the following:—(1) The mental symptoms improve, and in time altogether disappear and recovery takes place with an improvement or disappearance of the morbid bodily condition. (2) With recurring mental disorder the mental symptoms differ if the physical states differ; and this fact will account for the phenomenon which is often seen in asylums, several examples of which I have collected, of melancholia being cured by some intercurrent febrile disorder. (3) That if the mental disorder has been of some standing before the case has come under notice, and delusions of marked persecution have developed, showing a saturation of the brain with the products of autotoxæmia, or if the physical state is one of great gravity, as diabetes, recovery seldom or never takes place.

Dr. John Rose Bradford, F.R.S., in the course of his experiments on the pathology of the kidneys, some of which he discussed in his Gulstonian Lectures this year at the Royal College of Physicians, found that after extirpation, wholly or partially, of the kidneys, nitrogenous extractives accumulated, not only in the muscles and organs, but also in the brain; that in consequence of this accumulation the cortex cerebri becomes more irritable and more unstable.

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He conclusively proved that the kidneys when sound had some controlling influence over the metabolism of the tissues of the body, that with weakening or loss of this controlling influence through disease nitrogenous extractives accumulated in all the organs and tissues of the body, including the brain, causing not only profound autotoxæmia, but also with this autotoxæmia increased irritability of the cortex cerebri.

[The author here related a case which had lately come under his notice.]

In this case we have the history of a woman (♀) whose mental disorder seemingly at first was only of recent date, but on deeper investigation we find that she was really suffering from depression, for the past five years unrecognised. Running parallel we have a history of an abdominal growth, proving afterwards to be renal tumour, going on during the whole of this period, practically effecting a gradual nephrectomy; then immediately after extirpation of the partially diseased organ—true nephrectomy,—the patient had a complete mental breakdown. Was the operation the cause of the insanity from shock? What was and is the insane state? Mental disorder was certainly present before the operation, so that the shock of the latter could not possibly have been the real cause. The cause must have been certainly the gradual nephrectomy that was going on. So long as the condition was of insidious onset so long were the symptoms slow in progression, to be brought to a sudden head, *i. e.* a sudden increased nervous excitability, by complete nephrectomy. The results of clinical experience are thus in complete harmony with experimental facts. This disturbance of tissue metabolism which is true of the kidneys might be easily conceived to be equally true of all the other glandular organs of the body.

Having, I trust, clearly shown then by experimental facts and clinical evidence that such a condition as "Deprimentia," as I have termed this mental derangement due to autotoxæmia, exists, it is only left for me to mention the other states of mental disorder which simulate it, and from which it is necessary to differentiate it. They are—

(1) Onset of general paralysis; (2) Depressional stage of alcoholic insanity, and other allied states, morphia, &c.; (3) Phthisical insanity; (4) Post-epileptic phenomena; (5) Hysteria; (6) Shock with acute stupor; (7) Post-febrile

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depression ; (8) Cerebral tumour or abscess ; (9) Masturbatory insanity ; (10) Dementia pura ; (11) Puerperal melancholia ; (12) Insanity with syphilis ; (13) Feigned insanity ; (14) Reflex depression (?).

Bearing in mind the fact that the present taxonomy of insanity is in a most unsatisfactory state, and that a classification ought to have for its main object the revealing of the causes of disease so as to render it serviceable for statistical registration, I shall suggest for future use the following nomenclature, built up not only on clinical, but also on ætiological and pathological grounds.

Main Classification :

1. Autotoxic insanity.
2. Exotoxic „
3. Epileptoid „
4. Degenerative „
5. Hysteroid „
6. Congenital „
7. Feigned „

1. *Autotoxic Insanity or "Deprimentia."*—We may speak of (1) Diabetic deprimentia ; (2) Gouty deprimentia ; (3) Nephritic deprimentia ; (4) Catamenial deprimentia ; (5) Cardiac deprimentia.

2. *Exotoxic Insanity.* — (i) Pathogenic. — (1) Infective insanity : (*a*) Insanity with or following the acute specific fevers ; (*b*) Puerperal mania (probably of pyæmic origin) ; (*c*) Acute delirious mania (specific ?) ; (2) Phthisical insanity ; (3) Syphilitic insanity ; (4) Gonorrhœal insanity, mania of hydrophobia.

(ii) Toxinic.—(1) Alcoholic insanity ; (2) Metallic insanity (of lead, &c.) ; (3) Drug insanity (morphinomania, &c.).

3. *Epileptoid Insanity.*—(1) Idiopathic epileptic insanity ; (2) Hystero-epileptic insanity ; (3) Psycho-epileptic insanity : (*a*) Recurrent mania ; (*b*) So-called folie circulaire ; (*c*) Epilepsie larvée of the French.

4. *Degenerative Insanity.*—(i) General paralysis and its varieties.

(ii) Dementia pura (not symptomatic dementia, the terminal stage of most mental disorders).—(*a*) Senile changes : (1) Atheroma and its allied atrophic degenerations ; (2) Spino-cerebral pachymeningitis ; (*b*) Gross lesions ; (1) Tumour and

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abscess (including gumma); (2) Traumatism; (*c*) Idiopathic brain wasting; (*d*) Chronic progressive meningitis; (*e*) Secondary to systemic nerve disease; (1) Locomotor ataxy with mental symptoms, &c.

5. *Hysteroid Insanity.*—(1) Hysteria gravis; (2) Moral insanity; (3) Masturbatory insanity; (4) Hypochondriasis and neurasthenia; (5) Acute mental stupor, catalepsy, trance, ecstasy, &c.

6. *Congenital Insanity.*—(1) Idiocy; (2) Imbecility; (3) Cretinism; (4) Paranoia (a doubtful condition).

7. *Feigned Insanity* (generally symptomatic only).

Let us look at the classification from another point of view. So far back as 1876 Dr. Maudsley, in his *Physiology of Mind*, writes:—"Whatever be the real nature of mind, *it is certainly dependent for its every manifestation on the brain and nervous system.*" And all psychologists hold to-day that the actions which take place in the nerve-cells, however produced, are the physical concomitants of mind. Physiologists and histologists teach us that the nervous system is composed of elements—the neurons—each neuron an independent unit in itself, not united to, but influenced in some way by its adjacent fellow. Let us ask ourselves, then, what are the conditions that would affect this independent unit, the neuron? They are—(1) Hereditary predisposition; (2) Congenital defect; (3) Arrest of development; (4) Plasmic influences due to (*a*) Autotoxic and (*b*) Exotoxic poisons; (5) Degenerations caused by traumatism, growths, age, &c.; (6) Innervation from adjacent neurons.

It will be seen that if the actions in the upper neurons which are supposed to have a restraining influence on the lower neurons be the physical concomitants of mind, these actions will vary as the physical conditions of the neuron vary.

We might divide these actions, then, into—

(1) Congenital.
(2) Autotoxic } Plasmic.
(3) Exotoxic }
(4) Degenerative.

The hereditary predisposition will account for the fact that some people go through life with all diseases and never become affected mentally, while others will break down early or late under the least indisposition and strain.

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The conditions of arrest of development of the neuron and the power of innervation that adjacent nerve tissue has, might account for the other two divisions of the classification, viz. (5) Hysteroid, (6) Epileptoid, and finally we might add (7) Feigned.

The minute histological pathology of how these conditions affect the neuron, and so pervert its psychic function, whether it be that the toxins of the body manufacture are not so potent as the toxins introduced from without; whether the former only temporarily paralyse the neuron in whole or in part only of its structure, why we usually get recovery with cessation of autotoxæmia, or whether the latter destroy the neuron, and thus, as in states such as those due to alcohol and other exotoxins, we more frequently get complete amnesia and dementia eventually, it is not the province of my paper to-day to discuss.

In conclusion I can only add that if it is possible to correlate mental disorder with bodily disease, it would be impossible to lose sight of such an important relation. In the early stages, when the disorder is more amenable to treatment than when it is fully developed, what good might be done. The great stumbling block to the advance of alienism in the past has been its separation from the domain of general medicine.

If the object of my paper to-day—the comparison of the correlation of the phenomena of mental disorder with the phenomena of bodily disease—has not been as fully proved as I should have liked, yet I shall rejoice if I have opened up only for discussion the subject of the mental taxonomy of to-day, a subject which in our speciality is in such an unsatisfactory state.

(1) Read at the General Meeting, London, 12th May, 1898. (2) This patient made a complete recovery. This emphasises the fact that with the removal of the *morbi causa* the mental symptoms improve or disappear. The remaining kidney is probably healthy, and is now doing the work of both.

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