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DEPRESSIVE STATES: THEIR AETIOLOGY AND TREATMENT*

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Depression is a large subject, and the purpose of this paper is to discuss merely a few aspects of it. Some years ago a front page to the out-patient notes of psychiatric patients attending Westminster Hospital was devised which was intended to give the essential facts of the case when the patient came up on subsequent occasions. It was envisaged, of course, that the data collected might be examined, for the hospital is fortunate in having a records officer and a Powers-Samas machine; but no particular piece of research was in mind at the time. These points are mentioned since it is relevant to notice that the original observations were made without any motive save of a very general kind, and the results, being computed by a machine, should be free from the unconscious distortion that can sometimes mar such retrospective studies. Data of this kind could be produced for any psychiatric syndrome, and a study of anxiety states on somewhat similar lines has already been published (Garmany, 1956).

A group of 525 consecutive cases has been chosen, comprising depressive states of all kinds. In each of these an effect of sadness would be both dominant and primary, and the series should not include, for example, anxiety states with depressive features or schizophrenia presenting with depression. At the time each patient was seen the depressive was classified as endogenous, reactive, or involutional, and this classification is preserved in the data which follow. In considering, as we must, how the distinction was made, it may be noted that the vast majority of the assessments were made by me. It is not suggested that this fact confers upon them any quality save a relative uniformity of approach.

Classification of Depression

Endogenous depression, as its name suggests, is a depression coming from within, which means much the same as idiopathic and essential in other contexts—namely, that we do not know why it happens at all. Coming without apparent cause, it usually runs a self-limited course of six to nine months, and this period can be greatly shortened in the large majority of cases by electroplexy. The family history is often positive, and there is some correlation between the tendency to develop this form of depression and the possession of a pyknic habitus, of which the familiar picture of John Bull is a typical example. The well-known work of Kretschmer in this context has not been an unmixed blessing to psychiatrists, many of whom have a strong

resistance to the recognition of endogenous depression in those of asthenic habitus. Sometimes these patients are suspected quite unjustly of concealing important psychopathological data, or, alternatively, much time may be spent in working on material which is present but irrelevant.

In making a diagnosis of endogenous depression I have been influenced by many factors. An absence of precipitating causes is clearly one, for it is implicit in the definition of the disease. A history of periodic attacks with recovery in between, either in the patient or in members of his family, is important. Equally so is the presence of a temperament known to predispose to the disease, whether it be depressive, hypomanic, or cycloid—moving between the two extremes. Finally, I have been influenced by the cross-sectional picture which has been regarded as typical of endogenous depression. Such a picture would include remorse and self-blame about the past, hopelessness about the prospects of future recovery, and psychomotor retardation. In very few cases would all these things be present, but enough would usually be there for a confident diagnosis to be made. To what extent such confidence was justified is one of the questions to be considered.

Reactive depression is regarded as a progressive reaction to events, in the Meyerian sense, and not as a disease entity, as is endogenous depression. It is therefore in theory traumatic, and, as was noted during the war, trauma is more effective in producing the illness when it is slight but sustained than when it is acute but short-lived. The diagnosis is therefore made when a depressive illness follows upon sustained trauma, and it is particularly liable to follow a long period of tension (Curran and Garmany, 1944). The cross-sectional picture is traditionally a different one from that presented by an endogenous depression.

Psychomotor retardation is not present, and blame of others for his plight is more usual than remorse. Hopelessness about recovery is uncommon, and so, for the same reason, is suicidal preoccupation. The diagnosis is sometimes influenced by the probable or known results of treating the patient with electroplexy, on the basis that if the patient responds his illness could not have been psychogenic, a conclusion which is neither logical nor true.

In making a diagnosis of *involutional depression* I have used far stricter criteria of a classical kind. To fall within this group the patient had to be of an age ranging from one corresponding with that of the menopause in women and extending up to old age. The

*A shortened version of an address to the Folkestone Medical Society on April 24, 1958.

pre-morbid personality had to be of a rigid and rather obsessional kind, quite dissimilar from the likable pyknic of tradition. There should have been no previous attacks, and the clinical picture should show both agitation and hypochondriasis. I think it is true to say that these five criteria have been accepted in psychiatry for a long time, though in clinical practice they are seldom followed strictly. I have followed them myself, however, largely in order that I should know in the future what I meant when I saw the patient. The comparatively small number of involuntional depressions in the series is probably to be attributed to this rather purist approach, and illustrates very well the difficulties in making comparisons in psychiatry when the criteria of diagnosis can vary so much.

Distribution between Endogenous and Reactive Depression

There has for many years been dissension among psychiatrists regarding the reality of the distinction between endogenous depression and reactive depression, and regarding the existence of involuntional depression as an entity at all. Lewis (1934) in a paper which is now securely ensconced among the classics of psychiatry, attempted to answer the first of these problems. In a very careful study he was unable to satisfy himself that there was any real difference between reactive and endogenous depression, at least in terms of symptoms. Mayer-Gross *et al.* (1954), on the other hand, take the opposite view, and feel that, though the distinction may be difficult to make in many cases, it can and should be made. The problem is one of exceptional difficulty because of the universal human tendency to seek causes for the effects it witnesses. Thus it happens that both the patient with the endogenous depression and his relatives may produce all kinds of apparent aetiological factors, many of which are really the results or content of the illness rather than its cause.

Life is full of troubles, and it is statistically not unlikely that, whenever an endogenous depression begins, some traumatic incident will have preceded it, so that the one is regarded as the result of the other. The psychiatrist himself may be in a dilemma too, for if, as is usual, he regards a certain clinical syndrome as being typical of a constitutional illness—namely, endogenous depression—he may disregard dynamic external factors which are important. Thus I feel no doubt at all that influenza frequently precipitates a depression which is clinically of an endogenous type, and yet that fact should not be so if our description is correct.

A similar problem arises in the case of reactive depression. Traumatic events may precede the illness and yet we may be dealing with a temporal coincidence. A notable example is the prolonged grief reaction following death in the family circle. Depressive manifestations occur physiologically for about three months, and yet the same picture may be evident perhaps five years after the death. While on the face of it such a depressive is reactive, it is noteworthy that a considerable proportion will respond to electroplexy.

The distinction, if any, between endogenous and reactive depression is often posed as a problem which seems only verbal. Nevertheless there are certain very real questions to be answered. Firstly, we ought to know whether depressions generally can be divided into those in which constitutional factors are all-important and environmental factors of little account, and others in which the reverse applies. Secondly, and supposing the first question is answered affirmatively, we must know whether it is true that endogenous depression should be treated by E.C.T. and reactive depression by psychotherapy; for that is the usual assumption. Everyone would agree that a few cases fall clearly into one group or the other, but we must know whether the distinction is a valid one for the group as a whole. The results which are here reported bear principally upon these two questions of aetiology and treatment.

In some respects, and particularly when considering treatment, the results reported have certain limitations. They are derived from the out-patient population of a London teaching hospital and cannot be representative of the population as a whole. Many general-practitioner colleagues recognize and treat depressions on conservative lines without referring them for an opinion. Many potential patients do not become actually so because they cope with their own affective disturbances. For these reasons the patients seen probably exclude many minor cases, but, as will be apparent, this lends greater point to some of the inferences made. In London the urgent disposal of acutely suicidal patients is facilitated by the highly organized public health service, so that with such patients the doctor may often send for a duly authorized officer himself. I am inclined to think that the deviation of patients in this way is probably small in the case of depression, while it might be quite considerable in the case, say, of acute schizophrenic episodes.

Aetiology

Table I shows the incidence of constitutional loading in 525 consecutive cases of depression seen at Westminster Hospital. The cases are broken down into their three

TABLE I.—Incidence of Constitutional Loading in 525 Cases of Depression

	Endogenous Depression	Reactive Depression	Involuntional Depression	Anxiety States
No. of Cases	295	194	36	
Notable	98	40	5	61%
Possible	107	67	12	
Unlikely	85	70	13	38%
Not stated	5	17	6	3

categories, and for interest the corresponding percentages are shown for anxiety states and taken from the paper to which reference has been made. Constitution means the general mental and physical make-up of the patient, and "loading" has been inferred from a number of factors. Thus a pyknic habitus, a positive family history, and a history in the patient of previous unprovoked attacks were taken as indications of constitutional predisposition. The word "notable" means that such indications have been marked and unmistakable. The word "possible" has not in fact been used in the sense I originally intended—namely, to indicate a state of doubt. In practice it has meant "likely," and so in assessing the results I have added these two columns together. It will be seen that, although the loading is greater in the endogenous cases, it is nevertheless very high in all three categories. Bearing in mind that the presence of such loading has to some extent influenced me in diagnosing endogenous depression at all, I do not feel that the difference between 70% and 55% is enough to warrant much support for a clear differentiation between the two types of depression.

Table II shows a list of stress factors enumerated at the time the cases were first seen. They were present at the time the illness developed and were considered to be aetio-

TABLE II.—Stress Factors

	Endogenous Depression	Reactive Depression	Involuntional Depression	Anxiety States
No. of Cases:	295	194	36	
Personal	170 (58%)	115 (59%)	24 (66.6%)	70%
Domestic	83 (28%)	94 (48%)	3 (8.3%)	35%
Work	38 (13%)	35 (18%)	8 (22%)	20%
Other social	15 (5%)	17 (9%)	0	10%
Financial	13 (4.3%)	20 (10%)	1 (3%)	9%
Housing	11 (3.6%)	8 (4%)	0	9%
Physical	51 (17%)	80 (41%)	3 (8.3%)	27%
None found	64 (21%)	11 (5%)	8 (22%)	9%

logically important in its development and perpetuation. Thus if after influenza a depression developed with a typical "endogenous" appearance, I would mark the illness as being associated with a physical stress factor, since to do

otherwise seems against reason and good sense. Similarly, if a man developed an endogenous depression with motor retardation and told me that the illness arose after his wife had left him, then I would mark this as a domestic stress factor rather than dismiss it as mere content of his illness. The personal stress factor requires some explanation, since it has been used in a special sense, and it must be distinguished from constitution.

Constitution refers in this context to an inborn loading which predisposes to depression. Personal stress factors mean those facets of personality structure which make living less easy, but do *not* of themselves predispose to depression. Thus an overactive conscience may be acquired in a strictly religious family, and would make life in a stockbroker's office more of an exercise than it would be in a vicarage. This would be recorded as a personal stress factor. The meticulous obsessional character creates what to others may seem to be unnecessary burdens for itself. It delegates badly, it concerns itself overmuch with trivia, and it sets out to live up to standards of performance which are abnormally high. This is not depressive loading, but it certainly constitutes a stress factor of some magnitude. These then are the senses in which I have used these two expressions, and it is because others might use them differently that I feel I should describe them.

It will be noted in Table II that the percentages add up to more than 100 because, of course, several factors might be operative in one particular patient. There is no doubt that the incidence of stress factors, other than personal ones, is higher in the reactive group than in the endogenous group. Nevertheless it is high in both columns, and the intrapersonality stresses were the same in both. I was extremely surprised to find that domestic stresses had been thought to be important in almost one-third of the cases of endogenous depression seen and in nearly half of the cases of reactive depression. Had I been given these figures before they were computed I would have thought them exaggerated. This is perhaps an interesting example of how superior old traditions can be when contrasted with the newer psychiatry. Most women regard development of depression in a husband as a serious personal reflection, and it would appear that in a large proportion of cases they are right. Because of a rather unhappy oversight when the transcriptions were drawn up, the machine has proved incapable of sex differentiation, and I cannot therefore give figures which would inculpate husbands.

The important role of physical factors in reactive depression is noteworthy, though this must, in some measure at least, be the result of work done in a general hospital, since nearly half the patients seen come from colleagues who may have been dealing with associated physical anomalies. Financial difficulties and the housing shortage, as in the case of anxiety states, appear to play little part in aetiology. It is interesting to note that in only 20% of cases did endogenous depression seem to come "out of the blue"—that is to say, without external factors, and, interestingly enough, this is almost exactly what Rennie (1942) found. It may, of course, be said that I have mistaken content for cause, for this criticism was made of Rennie's figures. I cannot prove that this is not so, but can only emphasize that I counted these stress factors only in those instances where temporal coincidence suggested that I must. To have done otherwise would have been to assume the truth of a proposition that I hoped to investigate.

Although diagnosis was made largely on the cross-sectional picture, it is likely that it was influenced in some measure by the presence or absence of stress factors. Thus here, as with constitutional loading, the assessments are in some degree biased. There is no way of measuring this bias, but, making allowance for it as fairly as I can, there does not seem to be any gross dissimilarity among the three groups.

Table III shows the age distribution of the three groups compared with that of anxiety states. The figures are much the same as those given by others. It will be seen that the

TABLE III.—Age Distribution on 10-Year Groups

	0-21	21-30	31-40	41-50	51-60	61-70	71-
Endogenous depression	—	51	73	76	57	35	3
Reactive depression	5	52	42	38	32	21	4
Involuntal depression	—	—	—	8	17	9	2
Anxiety states	8	36	66	28	15	4	1

risk from depression extends over a much longer period of life than does that from tension, which is at its peak in the fourth decade.

Treatment

The treatment set out in Table IV represents what was decided at the first interview. Subsequent experience of the patient may in some instances have required modification of the course first chosen. Thus a patient selected for

TABLE IV.—Treatment

	Endogenous Depression	Reactive Depression	Involuntal Depression	Anxiety States
Consultation ..	15	28	3	50%
Counsel ..	10	18	1	
Support ..	42	55	6	
Intensive ..	7 (2.3%)	17 (9%)	1	11%
Group ..	6 (2%)	2 (1%)	0	3%
Relaxation ..	12 (4%)	14 (7%)	3	33%
Environmental adjustment ..	1	5	1	2%
Mental hospital urgently ..	16 (5.3%)	4 (2%)	3 (9%)	—
Hospital otherwise ..	47 (15.6%)	20 (10.5%)	3 (9%)	3 cases
E.C.T. ..	109 (36.3%)	9 (4.5%)	14 (39%)	—
Drugs ..	57 (19%)	59 (29.5%)	9 (25%)	33%
Other ..	—	2	1	4 cases
Total ..	322 (295)	233 (194)	45 (36)	

psychotherapy may have deteriorated later and required E.C.T. I venture to hope that usually the course chosen will have been proved by events to have been correct, but with the figures available to me I cannot prove that this is so. Even if others, as is possible, have less confidence in this than I have myself, then at least clear information is given about the advice tendered at the first interview. It will be noticed that the totals at the foot of each column do not quite correspond with the total number of cases seen, which is shown in brackets. The intention was that only the major treatment should be indicated, but in some instances I forgot this and ticked two.

It is interesting to note that electroplexy was selected for immediate use in out-patients in only just over one-third of the cases of endogenous depression. If all cases of depression are taken together, then about 25% were given this treatment. If it is assumed that all cases severe enough to be sent to hospital were given E.C.T., then I believe that about 50% of all cases of depression referred to our out-patient department received this treatment. I am sure this is a clinical finding without bias, for I have no conscious revulsion against E.C.T. comparable, for example, with my dislike of leucotomy. It will be seen that E.C.T. was employed relatively rarely in those cases called reactive depression. The disparity is so great that I think it can be explained in only one way—namely, that the diagnosis was materially affected by the clinical judgment of probable response to E.C.T.

It is important to be clear what this means. It proves nothing about the constitutional loading present or about the incidence of stress factors. It merely indicates that there is a group of depressions rarely requiring E.C.T., and another group (described here as endogenous and involuntal) where E.C.T. is required in something between one-third and one-half of the cases. If there is a fundamental distinction between the groups it is to be found in the quality which is considered in the difficult or borderline case. This quality is, I am sure, *reactivity* or the readiness with which the patient will respond emphatically to changes of mood in the examiner. This quality is used to determine the need for E.C.T., the risk of suicide, and, as has been indicated, the diagnosis. Yet if we describe some depressions

as showing less reactivity than others, we mean much the same as when we say the depression is deeper. This is quite different from saying that the depression is more endogenous.

Only a very small number of patients (4.5%) were sent to mental hospitals urgently because of acute depression. A larger number (about 13.5%) were admitted, mainly to Westminster Hospital, for a variety of reasons. Elderly patients and those with certain associated physical diseases would be admitted, particularly if they had long distances to travel or lived alone. Patients showing severe associated tension or depersonalization are much better treated as in-patients, so that E.C.T. may be given under a heavy blanket of sedative. Those who have lost much weight will not usually do well with out-patient E.C.T. and should be admitted so that modified insulin can be given as well. Nevertheless a patient referred to hospital with depression can be assured, as these figures show, that he has four chances in five of being treated as an out-patient.

The figures given for treatment by drugs are misleading in that, rather arbitrarily, they were regarded as subsidiary forms of treatment when associated with E.C.T. or with psychotherapy. As a result they would often be omitted from the transcription sheet. The incidence of associated pharmacological therapy must in fact have been very high.

Summary

A study has been made of 525 patients suffering from depression divided into the three traditional categories of reactive, endogenous, and involutional depression.

The constitutional loading in patients developing these illnesses is in all cases high, but the incidence does not suggest any qualitative difference among the three types.

Stress factors are important in all groups, and stresses produced by abnormal personalities are especially so. Again, a study of these stress factors does not suggest a distinction worth making among the three groups.

Domestic stresses appear to be highly important in the genesis of reactive depression, of considerable importance in endogenous depression, and of small importance in involutional depression.

Endogenous depression, despite its name, appears to come "out of the blue" in only 20% of cases.

Of all cases of depression referred to hospital, 25% need E.C.T. straight away, and a further 25% after admission to hospital.

Very few cases of reactive depression received E.C.T., and it is believed that these patients were characterized above all by their "reactivity" to outside stimuli.

It is concluded that the distinction between these three forms of depression, and particularly between the reactive and endogenous varieties, is an unreal one. Constitutional predisposition and the incidence of stress factors appears to be much the same in these groups.

The distinction traditionally made appears to be a distinction between those depressions which show more reactivity, are less severe, and infrequently require E.C.T. and those depressions showing the reverse features.

It is believed that this resolves itself into a distinction between mild and severe depression.

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PROGNOSIS OF TROPICAL SPRUE

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There has long been doubt regarding the prognosis of tropical sprue, some regarding it as a seriously chronic disorder in which those affected suffer severe and protracted disablement, remain continually susceptible to relapses, and seldom recover completely (Low, 1928). Stitt (1945) gives a typical opinion in stating of sprue: "Unless adequately treated, however, severe cases are ultimately fatal within a period varying from about one to fifteen years." A further relatively unfavourable prognosis is expressed in a recent textbook (Mackie *et al.*, 1954), where of sprue it is written that "more commonly fats in the diet must be restricted permanently and parenteral injections of liver continued at intervals of one to two weeks." Others (Rodriguez-Molina, 1943; Woodruff, 1949) have produced evidence that the disease has a more favourable prognosis.

The reason for this apparent divergence of views may well be that in different studies different types of cases have been followed, that those with a poor prognosis have been patients affected with idiopathic steatorrhoea or non-tropical sprue, and that those with a satisfactory prognosis have been suffering from tropical sprue. The question might, it was thought, be resolved by ascertaining the ultimate outcome of the disease in patients affected with tropical sprue during the last war. If these patients are still suffering from symptoms of sprue, then the tropical variety of this disease must indeed be one with a protracted course and may well have much in common with idiopathic steatorrhoea, which is generally held to be a chronic disorder. If, on the other hand, tropical sprue is followed by only a short period of disability, then a point of difference of considerable diagnostic and aetiological importance would be established. The point is also of importance in the management and disposal of patients suffering from the disease and concerning the advice to be given them regarding diet and consumption of fats.

A Previous Study

Woodruff (1949) carried out a study in which patients invalided from India to Britain with tropical sprue were followed for 2½ to 3 years. Ten years have elapsed since that study was carried out, and it is therefore possible to review the prognosis of some of those patients, using a longer time scale than was possible in 1949.

The patients were originally diagnosed, treated, and invalided from a mobile R.A.F. field hospital in the Arakan; they have now become widely dispersed throughout Britain, the United States, and a number of Commonwealth countries, and therefore it has not been possible to examine them personally. A detailed questionnaire has accordingly been sent to them, and this report is based upon the answers given in it. Of the 47 patients reported in 1949 (Woodruff, 1949) it had been possible to follow up 34 at that time. Further letters were recently written to these patients and 17 replies were received.

Original Condition of the Patients

The clinical features of the 47 patients with sprue have previously been described (Woodruff, 1949). The records of the 17 patients who replied to the recently issued