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Psychoses in Adult Mental Defectives: I. Manic Depressive Psychosis

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Introduction

Hurd in 1888 described cases of mania, melancholia, folie circulaire and attempted suicide in mental defectives. Ireland in 1898 described three 'imbecile lunatics' who were 'clear cases of melancholia', and quoted an earlier physician, Wells, who in 1845 had seen 'attacks of mania in cretins, as well as a peculiar suicidal form of this affliction, which prompts the wretched maniac to attempt self-destruction by throwing himself into the fire'. Clouston (1883) considered that 'congenital imbeciles may have attacks of maniacal excitement or of melancholic depression—in fact are subject to them'. Kraepelin (1896, 1902) took the view that 'imbecility may form the basis for the development of other psychoses such as manic-depressive insanity, the psychoses of involution and dementia praecox'. Gordon (1918) stated that mental defectives suffering from depression rarely express ideas of guilt or thoughts of suicide; manics lacked 'quickness of comprehension of wit or humour or sarcasm'. He noted that depression was more common than mania and that recurrences tended to run true to type. Prideaux (1921) accepted that manic-depressive psychosis could occur in high-grade mental defectives, and drew attention to the increased incidence of conversion hysteria in patients of low intelligence. Medow (1925) observed that mental defectives could manifest all the types of mental illness seen in people of normal intelligence but in the defective mental illness had a silly, fantastic, nonsensical colouring. Neustadt (1928) put forward the view that the typical psychoses of the mental defective were acute episodic states of excitement.

Duncan *et al.* (1936) presented evidence that a substantial number of the patients in a large mental hospital, including the manic-depressives, were in fact mentally defective. This paper was criticized by Slater that same year on the grounds of inadequate intelligence testing, but Duncan later in 1936 presented his findings about manic-depressive psychosis in mental defectives in more detail. He claimed that mania was four times as common as melancholia in mental defectives and went on to assert that manic-depressive psychosis did not occur in idiots. At times he appeared to be enlarging the concept of manic-depressive psychosis to include patients who were merely emotionally unstable. Rohan (1936) described 36 psychotic mental defectives some of whom were manic-depressives. He commented that delusions tended to be grandiose and expansive and that the emotional needs or advantages of illness were never far below the surface. Penrose, in the Colchester survey (1938), noted that, in the feebleminded patients, delusions, manic episodes and melancholia were all clearly recognizable. Hayman (1939) and Herskovitz and Plesset (1941) agreed with Penrose that idiots and imbeciles showed fewer typical features of psychosis. Hayman stated that 'in the lowest grades only the primitive reaction types can be distinguished, such as the hyperkinetic, the hypokinetic and the alternating or mixed types'. Myerson and Boyle (1941) supported the view that the manic-depressive trait was often conducive to social success, but they were of opinion that 'there is probably no significant difference between the incidence of mental disease in the high placed and low placed of human affairs'.

Roith (1961) described a case of depressive psychosis occurring in a 35-year-old male mongol, which lasted for 15 months and eventually cleared up completely with treatment. Nevertheless, Earl (1961) asserted that 'since cyclothymia does not occur in subnormal patients, they do not suffer from manic-depressive psychosis'. Penrose (1963) comments that manic and depressive states are often milder in mental defectives than in persons of normal intelligence: like Duncan, he takes

the view that manic-depressive psychosis is practically unknown in idiots. Tredgold and Soddy (1956) agreed that 'the classical form of cyclothymic insanity, was most unusual. Gardner (1967) queried, from an analytical point of view, whether it was even possible for a mental defective to develop a depressive psychosis. Payne, in a recent paper (1968), maintained that it was not possible to classify mental illness in mental defectives using current terminology; he felt that psychoses in mental defectives were more akin to psychoses in children. This view has been criticized by Adams *et al.*: in 1970 they described a female aged 18, with an I.Q. of 60 and a complex chromosome translocation, who suffered from a manic-depressive psychosis which responded to treatment with lithium carbonate. Mayer-Gross, Slater and Roth (1954–69) comment on the transient 'affective storms' shown by some mental defectives, but do not specify their nature.

There is a need, therefore, for a further study to clarify if manic-depressive psychosis does occur in mental defectiveness, and if it does, to determine how the phenomenology is modified by the presence and the degree of mental deficiency. Information is also needed about the natural history and response to treatment of this psychosis in mental defectives.

Methodology

This investigation was undertaken in 1969 and 1970 principally at Strathmartine Hospital (for mental deficiency), but also at the Royal Dundee Liff Hospital (for mental illness), as part of a wider survey into the subject of mental illness in mental defectives. Mental defectives over the age of 16 years who were considered to be mentally ill were referred to the author by the medical and nursing staff at these hospitals. Of the many patients who were seen 21 were found to be suffering from a manic-depressive psychosis. These patients were examined and followed up by the author for a period of at least six months, and usually for considerably longer. Relatives were also interviewed, and background information was obtained from various sources including schools and social work departments. Each patient was physically examined by the author, and routine tests, including chest X-ray, full blood examination, screening for syphilis and amino-acidopathies, and cytogenetic analysis, were carried out in each case. Skull X-rays and EEG's were performed where they were indicated on clinical grounds. I.Q. testing was undertaken by a psychologist with special experience in the assessment of mental defectives, using whatever test procedure she considered appropriate. Personal histories, including records of school and occupational performance and social integration, were compiled for each patient, and family histories were also constructed. On the basis of information derived from these various sources patients were graded by the author into idiots, imbeciles, feeble-minded and borderline mental defectives. The approximate I.Q. gradings are as follows:

Table 1

		I.Q.
Severely subnormal	Idiots	0–19
	Imbeciles	20–49
Subnormal	Feeble-minded	50–69
	Borderline	70–80

Full details concerning methodology and the detailed case histories are available on request.

The clinical psychiatric grouping adopted was based on the reaction types described in successive editions of Henderson and Gillespie's *Textbook of Psychiatry* (1927–69). Psychiatric diagnoses were codified according to the Glossary based on the International Statistical Classification of Diseases.

Prevalence

The study was not designed as an epidemiological investigation; no screening survey was undertaken and the author relied largely on the medical and nursing staff referring patients to him. Accordingly, prevalence estimates are minimal and reflect the ability of staff to identify mental illness in the mental defectives under their care. On 1 March 1970 there were just over 500 adult patients in Strathmartine Hospital: on that day the combined prevalence rate for manic-depressive, schizophrenic and paranoid psychoses amongst these patients was

calculated to be around 44 per thousand. The prevalence rate for manic-depressive psychosis was 12 per thousand, and for schizophrenic psychosis (including paranoid psychosis) it was 32 per thousand. It should be emphasized that these prevalence rates apply only to Strathmartine Hospital, not necessarily to other hospitals for mental defectives, and certainly not to mental defectives in the community.

Results

Thirteen female and 8 male patients were identified as suffering from a manic-depressive psychosis. The age range was from 20 to 70 years with a mean age for females of 38 years and for males of 47 years. Of these patients, 16 were treated at Strathmartine Hospital, 4 at the Royal Dundee Liff Hospital, and in one case care was shared. A total of 30 instances of affective psychoses were observed: 15 depressive psychoses, (I.S.C.D. No. 296·2), 5 manic psychoses, (I.S.C.D. No. 296·1), and 7 mixed affective psychoses (I.S.C.D. No. 296·8). Three other patients showed consecutive manic, depressive and mixed affective states during the course of a prolonged illness. Of the 21 patients, 3 were idiots, 5 were imbeciles, 8 were feebleminded and 5 borderline mental defectives (see Table II).

Diagnosis

It was found that manic-depressive psychosis could be diagnosed on the usual clinical grounds in feebleminded and borderline defectives and in some imbeciles. The presence of a psychosis may in fact make a mental defective appear less defective than he really is, since when psychotic he may express concepts such as that of moral guilt which seem alien to him when well. This may facilitate diagnosis.

On the other hand the usual diagnostie criteria cannot be applied to idiots who havc either no speech or very severely impaired language development. In these patients diagnosis has to be based on a prolonged study of behaviour, weight and sleep pattern by observers who know the patient well: a knowledge of the family history is also necessary. In this survey the author thought that he could substantiate the diagnosis of manic-depressive psychosis in three idiots. One of them showed self-limiting phases of mischievous overactivity, lasting about 10–20 days, superimposed on his usual quiet, withdrawn behaviour. The overactive phases, which were regarded as represent-

Table II

Sex and age in years	Grading	Diagnosis	No. of episodes	Duration or mean duration
Male: 33	Imbecile	Depression	5	7 days
Female: 50	Feebleminded	Mixed	1	8 days
Male: 42	Imbecile	Mania	3	10 days
Male: 46	Borderline	Mixed	1	10 days
Male: 37	Idiot	Mixed	4	16 days
Female: 43	Borderline	Depression	1	6 weeks
Male: 57	Feebleminded	Mania	1	6 weeks
Male: 70	Feebleminded	Depression	1	8 weeks(died)
Female: 32	Idiot	Depression	1	8 weeks
Female: 47	Feebleminded	Depression	1	16 weeks
Female: 29	Feebleminded	Depression	1	24 weeks
Female: 33	Borderline	Mixed	1	6–7 months
*Female: 20	Idiot	Depression	1	9 months
Female: 29	Imbecile	Mania, depression, mixed	1	9 months
Female: 41	Imbecile	Depression, mixed	1	9 months
Female: 24	Feebleminded	Depression	1	9 months
Female: 43	Borderline	Depression	1	12 months
Female: 46	Feebleminded	Mania, depression, mixed	1	16 months
Male: 25	Borderline	Depression	1	18 months
Male: 66	Feebleminded	Mania (chonic)	1	> 2 years(died)
Female: 57	Imbecile	Depression	1	2–3 years

* Remains unwell.

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ing the psychosis, were accompanied by early morning wakening, self injury and irritability. Another idiot suffered what seemed to be a depressive psychosis in which she was depressed in mood, wept, withdrew from social contact, refused food, lost weight, and began to waken very early from sleep. She recovered spontaneously after eight weeks. The third idiot had phases of noisy over-activity and phases of weeping and depression, both lasting about two weeks and accompanied by sleep disturbance. Eventually she developed a more prolonged state of depression in which she appeared miserable, behaved in a more childish way than usual, attempted to draw attention to herself by adopting unusual postures and inflicting injury on herself. This psychosis did not respond to treatment with antidepressant drugs. Two and possibly all three of these patients had a family history of manic-depressive psychosis.

Precipitants

In four patients there was a clear precipitant to the psychosis. A depressive psychosis followed termination of pregnancy and sterilization in a young feebleminded female, influenza in an elderly feebleminded male, and hepatitis in a young male borderline defective. In one old feebleminded male a manic psychosis followed prostatectomy. In three other patients depressive psychoses were seen in relation to loss of job, discharge from hospital of a close friend, and postponement of a holiday. A mixed affective psychosis occurred in a middle-aged feebleminded female in association with confinement to bed with oedema of the leg due to a deep venous thrombosis. A mixed affective psychosis, with delusions of guilt, wealth and great power, followed a small win on the horses by a middle-aged male borderline mental defective.

Clinical features

Manic psychosis. In manic patients the elation of mood was rarely infectious, and was sometimes poorly sustained: they lacked wit and humour and it was often hard to empathize with them. Motor activity was sometimes episodic, and pressure of talk was more marked than flight of ideas or clang associations. The latter if they occurred at all were of a very simple nature: e.g. 'winter' and 'winder'. Delusions were florid, naive and grandiose: one feebleminded male aged 66 had a special relationship with the Queen, could make 'the sea fresh' and had extraordinary powers. He was the 'King of Jesus'. Another feebleminded male aged 57 knew all about the Bible and had unrealistic and grandiose ideas about discharge and marriage. An imbecile woman aged 29 knew everything, could afford everything, had saved £6,000 and wanted to buy the doctor a car. Hallucinations, in the few cases where they were encountered, were simple and naive. The 'King of Jesus' had simple and naive conversations with God: he also saw him, but his vision was prosaic, 'just a man, something like you'.

Depressive psychosis. Depressed patients rarely complained of depression of mood: they were more likely to be sullen and to say they were afraid or fed up. As in the manic patients, the mood change was sometimes poorly sustained. Psychomotor retardation of variable degree was seen in many patients, though in some cases it was replaced by agitation or anxiety. Delusions of persecution tended to be vivid and dramatic, as for example in one feebleminded woman aged 29 who believed that men were planning to break her arms and legs and cut off her head. Delusions of guilt were described by several patients: an imbecile woman kept clasping her hands, wrongly blaming herself for a minor accident to another patient, praying and exclaiming 'I *am* a bad lassie'. Another feebleminded woman saw her dead, aborted baby swinging from the light bulb 'come back to punish us, I done wrong'. A middle-aged female borderline mental defective was more conventional in her expression of guilt, ruminating over her past life and blaming herself for her parents' death. Auditory hallucinations were common: voices were threatening or frightening, and criticized or warned of disaster.

In four of the patients there was a past history of attempted suicide occurring in the setting of a depressive psychosis: a young female borderline mental defective had tried to jump out of the window, an elderly feeble-

minded male had taken an overdose of drugs and alcohol with presumed suicide intent, a middle-aged female borderline mental defective had made four suicide attempts by gas, drugs (twice) and lysol, and another middle-aged feebleminded female had tried to burn herself to death with paraffin. None of the patients included in the survey attempted to kill themselves during the period of observation, though one young feebleminded female who ran away from the hospital may have been contemplating suicide and concealed the fact on her return. Preoccupations with suicide or death were common and often dramatic; one female borderline mental defective was thinking of killing herself to forestall those who were plotting to murder her, and one young male borderline defective 'confessed' to crimes of arson and child assault, hoping to be 'put away'. Among the feebleminded defectives one woman felt like killing herself or choking others to death, and another young woman wanted 'a good long sleep'. One young imbecile woman asked for pills to be 'doped, put out of the world'.

Self-injury, defined as any painful or destructive act committed by the patient against his own body which did not involve an apparent attempt to end life, was seen in two of the idiots: a woman of 20 started to chew her wrists and strike her face with her fists, and a male aged 37 inflicted quite deep scratches on his face. (He was classified as suffering from a mixed affective psychosis, though the condition could have been an agitated depression.) In both these patients self-injury was confined to the duration of the affective psychosis. One young male imbecile who suffered from recurrent depressive psychoses broke windows and inflicted lacerations on his forearms when depressed. Between illnesses he showed no tendency towards self injury.

Attempted suicide and preoccupation with death or suicide was therefore common among feebleminded and borderline mental defectives, whereas minor self-injury was more common amongst the idiots and imbeciles. It may be that in a few cases self-injury in severely subnormal patients is an extension of suicidal behaviour.

Mixed affective psychosis. Mixed states combining manic and depressive symptoms were also seen. Sometimes they occurred as transitional states between manic and depressive phases. The mood tended to be one of perplexity, lability and irritability. There were curious dissociations between motor and mental overactivity, for instance pressure of thought and talk without motor over activity, or flight of ideas without pressure of talk. Delusions and hallucinations were sometimes unusually grandiose and florid: for example one female borderline mental defective aged 33 heard the voice of the Devil telling her that she would burn in Hell and the voice of her father saying he wished to marry her. (During previous mixed affective illnesses she had claimed to be a Russian princess or a Martian, of heavenly birth and pregnant with twins, Adam and Eve: she had also claimed to be the Queen of the 'other world', believed she had killed her husband, and talked of flying to the moon). Another male borderline mental defective aged 46 claimed that he had saved thousands of lives and said he was going to be burned to death in the fires of the sun to save the world from destruction. He heard voices accusing him of the murder of a teacher and the death of a film star. A feebleminded woman aged 50 stated that there was someone outside her window who spent the night bashing her. She believed there was a baby coming out of her leg and asked for it to be removed from her bed. A feebleminded woman aged 46 kept winking at an imaginary man outside the window who was accusing her of being a Catholic.

Symptoms common to all reaction types

Delusions and hallucinations tended to be confined to the feebleminded and borderline mental defectives. In only one of the imbeciles, and in none of the idiots, was the author convinced of the presence of delusions and hallucinations; in this one case the patient was a young woman with an I.Q. of 49. Altogether 43 per cent of the patients were auditorily hallucinated and 14 per cent visually hallucinated.

Irritability was recorded in 62 per cent of the patients: this was a feature at all levels of intelligence. Assaults were committed by 19 per cent of the patients, either on other patients

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or on members of staff. One middle-aged imbecile woman made a particularly violent and unprovoked assault on a staff nurse.

Somatic symptoms were common among all grades of mental defectives, headaches, abdominal pain and vomiting being the most frequently reported. Sometimes the psychological origin of these symptoms was not recognized by the medical staff and the patients were extensively and unnecessarily investigated.

Hysterical symptoms were common and often florid: they included a grotesque limp in a depressed male imbecile aged 33, hysterical fits in a manic female imbecile aged 29, and hyperventilation in a male borderline mental defective suffering from a mixed affective psychosis. One feebleminded manic female showed Ganser symptoms, naming the Queen as Victoria and insisting that there was snow on the ground even though it was summer. Altogether 38 per cent of the patients showed hysterical symptoms at all levels of intelligence.

Regression to a more childish pattern of behaviour was also common: e.g. two feebleminded female patients with manic and mixed affective states, began to squeal and babble like babies, and one male borderline mental defective with a mixed affective state actually went about the hospital saying he was only 5 years old. An elderly female mongol who was depressed began to play with her faeces.

Most of the patients showed a sleep disturbance at some time during their affective psychoses: in 52 per cent of the patients it took the form of early morning wakening. Diurnal variation was seen less frequently but did occur in 24 per cent of the patients. In some cases it was the somatic symptoms that showed the diurnal change: e.g. morning vomiting. As regards weight, 48 per cent of the patients were known to have gained or lost more than 7 lbs. over the course of their illness, and others complained of anorexia, refused food, or lost an unknown amount of weight.

Natural history

The age at onset of the illness was taken as the time of the first documented manic or depressive reaction: this method of estimating when a manic-depressive psychosis begins is of course prone to a considerable degree of error.

In males the mean age of onset was 37 years and in females it was 32 years.

A complete recovery from their affective psychosis was made by 18 patients, one patient remained unwell, and 2 patients died. Table II charts the duration or mean duration of each affective psychosis against the diagnosis, the number of episodes observed, sex, age and intellectual grading. The shortest attack of manic-depressive psychosis lasted seven days and the longest about three years. It should be noted that there were 5 patients whose illnesses lasted less than one month; these patients between them accounted for 14 affective psychoses, of which 5 were diagnosed as depressive, 6 as mixed affective and 3 as manic reactions. These short-lived illnesses occurred in both sexes and throughout the range of intelligence. It was in each case possible to diagnose the nature of the illness by the symptomatology and also on the personal and family histories.

It may be that in some cases the transient affective storms referred to by Mayer-Gross, Slater and Roth and by other authors, are in fact brief attacks of manic-depressive psychosis, perhaps with a florid mixed affective symptomatology.

Physical abnormalities

Two patients, one male and one female, suffered from mongolism (trisomy-21), and one patient suffered from the triple-X syndrome (47XXX). One feebleminded female patient had an unexplained marker chromosome on the E group with a well-defined satellite. The male mongol also had primary testicular failure.

One feebleminded female suffered from congenital syphilis, which had been quiescent since childhood. Two patients were nearly blind. One feebleminded male patient who had recurrent depressive psychoses suffered from bronchiectasis and emphysema and was anaemic. He died at the age of 70 of bronchopnemonia, and at post-mortem examination was found to have a small carcinoma of the oesophagus with metastases in the liver and lesser curvature of the stomach, cerebral arteriosclerosis and slight generalised sym-

metrical atrophy of the cerebral hemispheres. One feebleminded male who suffered from chronic mania died suddenly at the age of 67 and was found at necropsy to have calcific aortic stenosis, probably arising on the basis of a congenitally bicuspid aortic valve. The results of detailed neuropathological examination of the brain in this patient are still awaited, but there was no evidence of generalized vascular disease at the routine post-mortem examination.

Mild physical abnormalities such as squint, uniocular blindness, otitis media, minor congenital abnormalities and Dupuytren's contracture were also seen.

Epilepsy was diagnosed in 24 per cent of the patients. This is comparable with Penrose's findings, in the 1938 Colchester survey, that 27·6 per cent of a series of 1,280 mental defectives suffered from epilepsy.

Differential diagnosis

It may be difficult to distinguish manic elation from catatonic excitement in a mental defective, particularly since the elation of mood often fails to be infectious and may indeed seem aimless. Furthermore mental defectives tend to deny depression of mood when they are depressed: an affective disturbance underlying disordered behaviour may therefore not be recognized. Sometimes a short-lived mixed affective psychosis presents features such as a wealth of delusions, misinterpretations and auditory and visual hallucinations which suggest a delirium or an acute schizophrenic psychosis. Hysterical conversion symptoms may for a while obscure the diagnosis of manic-depressive psychosis, and it may be difficult to distinguish a depressive psychosis from a depressive neurosis.

Treatment

The presence of manic-depressive psychosis was not recognized by the medical staff in 29 per cent of the patients in this survey, and treatment was regarded by the author as inappropriate in 24 per cent of the patients. Apparently inappropriate treatment seemed to be related both to unrecognized mental illness and to lack of psychopharmacological knowledge: e.g. a prescription of imipramine or amitriptyline for the treatment of mania.

It was not possible to draw any definite conclusions about the efficacy of physical methods of treatment of mental illness in mental defectives from this survey. Certainly in feebleminded and borderline mental defectives who suffered from a depressive psychosis, tricyclic antidepressants and ECT appeared to be effective in most of the cases where they were prescribed. One of the idiots made a spontaneous recovery from a depressive psychosis, another suffered from recurrent episodes of manic depressive psychosis which were self-limiting, and the third did not appear to respond to treatment with imipramine. Two of the imbeciles suffered from self-limiting recurrent episodes of manic-depressive psychosis, one other made a spontaneous recovery, and two developed delirious reactions when treated with moderately high doses of phenothiazines and barbiturates. Both these two latter imbeciles suffered from epilepsy, and the author got the impression that the possible presence of brain damage may have rendered them unduly sensitive to the actions of psychotropic drugs.

Discussion

It is important to recognize the presence of manic-depressive psychosis in mental defectives. There is an association between mental illness and disturbed behaviour in mental defectives, and the first step towards effective treatment is, of course, correct diagnosis. In idiots the diagnosis of manic-depressive psychosis can be disputed: in imbeciles, feebleminded and borderline mental defectives it is relatively straightforward. The symptomatology may at times be unusual, but knowledge of the patient and close study of the symptoms and natural history of the illness should suggest the correct diagnosis. The failure to diagnose and treat manic-depressive psychosis in some of the patients in this series reflects the excessive work load carried by many doctors in this field, and the resulting tendency for some to become out of touch with the main-stream of psychiatric practice. Furthermore, junior medical staff in these hospitals frequently have had little if any psychiatric training. Nursing staff may be able to sense the presence of distress and illness in the patients under their

care, but they often do not have sufficient knowledge of psychiatry to make full use of this information. A training in clinical psychiatry, psychopharmacology and the technique of ECT would seem to be necessary aspects of the training programme for medical and nursing staff in these hospitals.

Summary

The literature concerning manic-depressive psychosis in mental defectives is briefly reviewed and the methodology of the survey is explained.

It was found that manic-depressive psychosis could be diagnosed on the usual clinical grounds in some imbeciles, and in feebleminded and borderline mental defectives; in idiots diagnosis was based on careful longitudinal appraisal of the patient's behaviour accompanied by examination of the family history.

The clinical features, natural history and response to treatment of manic-depressive psychosis in 21 adult mental defectives is described.

The significance of the failure to recognize and to diagnose the presence of mental illness in mental defectives is briefly considered, and suggestions are made for the training of staff in mental deficiency hospitals.

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