MEDICAL PRACTICE

Contemporary Themes

Review of Schizophrenics in a Rural Practice over 26 years

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British Medical Journal, 1973, 1, 465-469**Summary**

Over 26 years some 73 patients with schizophrenia were observed. Three types were considered, true schizophrenia, schizophrenia simplex, and schizoaffective disorders. Of those traced and alive in 1971, some 18% of the group had recovered, 46% had made a social recovery, 25% were unemployed in the community, and 11% were long-stay hospital patients.

Introduction

Many long-term surveys have been done on schizophrenics, but most have been from hospitals and clinics and very few by a single observer working more or less on his own in the community. Mayer-Gross *et al.*¹ suggested that studies lasting longer than 15 years are liable to become unreliable because the criterion of diagnosis may have changed. This it was felt applied to illnesses with a periodic course, and such patients could well belong to affective psychosis. With this possible source of error in mind the recurrent doubtful cases are classified in this series as schizoaffective disorders, and this group is considered separately.

Over 26 years ago I started to practise in Ibstock, and from the start I made a special note of every schizophrenic illness occurring in the practice of the three doctors. The practice is rural with a remarkably static population of about 8,000 persons so that the follow-up was possible by me in person, and a total of 72 schizophrenic patients were seen during that time. All but five (7%) could be traced. It was felt that here was an excellent chance

of seeing what happened to those patients who had acquired a label of schizophrenia. This survey included all the diseases named in sections 300.0 to 300.7 of the International Classification of Disease, under the heading Schizophrenia.

Schizophrenia might well be described as the malignant disease of psychiatry, and while under modern treatment many are helped back to a reasonable state of health, some victims steadily deteriorate in spite of everything that is done to help them. This is such a serious disease that in general every case seen by the family doctor should be referred to a psychiatrist for an opinion and advice. On the other hand, some of these patients avoid seeing any doctor and indeed may resent his attention. Altogether, 11 in the series were not seen by a consultant. Six of these were eccentrics who, while clearly disordered, were not causing trouble, three refused to see a consultant, or the relatives did not want such advice, one was treated at home successfully, and one committed suicide before an opinion could be sought. A further five patients were seen by a psychiatrist and were not admitted to a mental hospital and the others, 56 in all, were admitted to a hospital for observation and treatment. Half were compulsory admissions. It is interesting to note that, in spite of the serious nature of the disease, six (8%) were able to live in the community without having any medical attention. In a nation-wide survey of mental illness² it was found that 4% of persons who were clearly mentally ill were in fact able to survive in the community without causing any trouble. This latter figure is probably an underestimate of the proportion, and 8% could be nearer the truth.

Present Study

The whole series of 72 cases (30 males and 42 females) were divided into three broad categories.

Schizophrenia.—There were 41 cases, 19 males and 22 females (57%) in this category, including the classical types, which were in the main cases of hebephrenia. In most of the cases the diag-

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nosis was agreed on with hospital consultants as unequivocal cases of schizophrenia.

Simple Schizophrenia.—Altogether, there were 11 cases, 9 males and 2 females (15%).

Schizoaffective Disorders.—There were 20 cases in all, 2 males and 18 females (28%).

It was felt the latter two categories needed to be defined by case histories.

Schizophrenia Simplex.—This illness was much more evident in males. The patient showed no gross psychotic manifestations, but without being depressed the patient lost his drive, and tended to become a vegetable. Many tramps belong to this category. Some are withdrawn eccentrics, and some in a limited way can live productive lives.

CASE 1

A single man of 34 decided to pack in his work. For some weeks he pretended to go out to his job. He used to don his work clothes in the mornings and take his sandwiches with him when he left home. It was only after some weeks when he could not produce money for his board that his mother felt there was something wrong. He refused to go and see a doctor so I called at the house. He was a quiet, inoffensive little man who could not account for his strange behaviour. He was not depressed and there were no overt psychotic symptoms. He refused to attend a psychiatric clinic, but had no objection to seeing the specialist at home. He refused to go to a mental hospital for investigation, so he was sent there under order. Nothing wrong was found with him beyond his strange apathy and loss of drive. He has been at home for the past 10 years, and has never worked. He calls for his medical certificate every 13 weeks, he says very little, and appears contented to sit at home and do nothing.

CASE 2

This man was the youngest of six children. He went to grammar school where he did well in his A levels, but soon afterwards became a different person. I first saw him when he was 18. He was then very quiet and withdrawn compared to his siblings, and only did things if pushed along. He had no friends, and was happy doing odd jobs on his father's farm. When his parents died, to everyone's surprise he was prepared to work on the roads. Today he lives alone, and keeps himself reasonably clean and tidy. He has no friends, and never speaks to anyone if he can avoid it, but he is a good, consistent, low-grade worker. This man who is clearly an arrested schizophrenic has never been seen by a psychiatrist.

Schizoaffective Disorders.—There are cases where the diagnosis of schizophrenia is not easy, especially if the patient is reviewed over many years.

CASE 3

A woman twice had puerperal psychosis. She became aurally hallucinated, had ideas of reference, had the most peculiar notions that there was gold under the house, that her husband had another woman, and so on. She was seen at home by a psychiatrist who reluctantly made this diagnosis. She was removed to a mental hospital where she recovered, but she needed continuous treatment with amitriptyline.

Many of the patients have recurrent attacks of illness, and when ill have symptoms typical of schizophrenia, but the symptoms tend to come and go. There seem to be two types: the more common is an intermittent illness with complete recovery, and the other is when there are signs of increasing deterioration with each fresh attack. In my opinion the first type is more akin to the manic-depressive psychosis than true schizophrenia. This syndrome on the whole carries with it a much better prognosis than classical schizophrenia and it is far more common in women than in men.

CASE 4

The patient was 17 in 1931 when she had her first attack of mental confusion. She was so ill she was admitted to a mental hospital. She was discharged a few months later only to relapse, and was again sent to a hospital. In 1936 she was seen by Professor Mapother as a private patient, and he said she was a typical case of schizophrenia, and that the prognosis was bad. I saw her first in 1948 and my first impression was that she had schizophrenia. When ill she looks a typical case, and in between the attacks is a normal person, and even after some 40 years of intermittent illness there is no mental deterioration. To my mind she is much more a manic-depressive type than a case of true schizophrenia. She keeps well on a nightly dose of 100 mg each of amitriptyline and chlorpromazine. If she becomes psychotic, she is given 50 mg of amitriptyline thrice daily in addition to the night-cap. This usually aborts the attack.

It seems to me that the affective psychoses can simulate any type of illness, so why should they not on occasions simulate schizophrenia?

CASE 5

A woman of 52 came under my care early in 1946. She was worried because she felt people were talking about her, and saying nasty things about her family. She had depressive delusions that the police wanted her, and were accusing her of stealing. She took to wandering off, and she had to be certified and taken into care. She had electric convulsion therapy and improved enough to be sent home, but she was always a bit strange, talking a lot to herself. In 1949 she had to go back to hospital for a spell. Again she improved, but was never really well. She would retire to bed for days on end, and the family did not like to leave her alone. In 1959 she was admitted a third time, and was given chlorpromazine. This drug improved her a great deal and she was kept on a steady dose of 25 mg four times a day for years. At the time of writing she was 78, and either the phenothiazine drugs were losing their effect or cerebral arteriosclerosis was taking its toll. She is a strange old lady, who sees people long dead, hears voices, and can live at home only because she is well cared for by her family. In contradistinction to the last case over the years there has been a slow but steady mental deterioration.

Incidence of Schizophrenia

In a period of 25 years* I collected some 72 cases, which means on average I was finding 2.9 new cases a year. With 8,000 persons at risk this means an incidence rate of about 0.36 persons per 1,000. If incidence is based on the figures for the first admission to a mental hospital for schizophrenia (for which comparative figures are available), there were 56 such admissions, the figure then falls to 0.3 persons per thousand of the population, which is the same first admission rate as for the country as a whole over the years 1956-8.³

For the first 15 years the admission rates to mental hospitals for schizophrenia were constant, and from 1961 they have fallen dramatically (table I). This is in sharp contrast to the

TABLE I—Numbers of First Admissions to a Mental Hospital with a Schizophrenic Disorder by Persons Over Periods of Five Years, Compared with the Total Number of Mental Hospital Admissions.

Five-year Periods	Schizophrenia		Total No. of Mental Hospital Admissions
	Classical	All Cases	
1946-50 ..	9	15	58
1951-5 ..	8	13	72
1956-60 ..	8	16	83
1961-5 ..	2	8	85
1966-70 ..	2	4	104
Total ..	29	56	402

* There were no new cases of schizophrenia in 1971, the 26th year of the survey. The whole series were in fact seen in 25 years.

admission rate for all cases of mental illness, which has almost doubled. The overall increase of admissions reflects the growing respectability of the psychiatric clinic in the eyes of the public. The figure is also boosted by psychogeriatric cases. My partners and I have found it very difficult to account for the drop in the incidence of schizophrenia. This is not the kind of diagnosis which could remain hidden for long. The drop began about 1960, which is when the phenothiazines and the antidepressant drugs became available. It may be that the better domiciliary treatment of the depressive disorders has obscured patients who in the past would have been classified as schizoaffective cases. Even with this possible source of error it seems as if for the time being there is a fall in the incidence of classical schizophrenia in this practice.

PREVALENCE OF SCHIZOPHRENIC DISORDERS

The figures for the survey are shown in table II.

TABLE II—Prevalence of Schizophrenic Illnesses in Istock During 1971, by Type of Illness and Sex.

Type of Illness	No. of Patients		
	Male	Female	Total
Schizophrenia	12	16	28
Schizophrenia simplex.	8	1	9
Schizoaffective disorder	2	16	18
Total	22	33	55

Thus in 1971, at the end of the 26-year period there were in this community or in hospital from this community 55 persons who at sometime had suffered from a schizophrenic disorder. With some 8,000 at risk this amounts to a prevalence rate of about seven per 1,000. Most authorities are agreed that the life-time expectancy of developing schizophrenia is about 10 per 1,000 (1%) of the population.⁴

WHAT HAS HAPPENED TO SCHIZOPHRENIC PATIENTS OVER THE YEARS?

Recovery.—This implied that no ordinary person meeting the patient would realize he or she had ever been ill, and the patient was no longer under any form of treatment.

Social Recovery.—This means that the patient is able to work and be a useful member of society, but either the patient was still under treatment, or symptoms of the illness would be obvious to the discerning eye.

Unemployed.—The patient could live at home but was unable to hold down a full-time job.

Long-stay Hospital Patients.—These people are likely to end their days in a mental hospital.

Died.—Over the survey period some four schizophrenics died in hospital and five died at home. All were psychotic at the time of death. Two schizoaffective women patients died in hospital, as did one simple schizophrenic woman.

Untraced.—Five patients could not be traced.

The recovery rate of two cohorts of patient are shown in table III, each cohort covering 13 years. The first is from 1946 to 1958—that is, roughly the 13 years before chlorpromazine became the drug of choice for this illness. The second cohort covered the years 1959-71, when the phenothiazine drugs were in general use. No dramatic improvement in the results from such treatment is evident. These figures are from a small series of cases, and that when these are divided into a number of categories, they become too small to be more than a rough guide. Of all the patients in the series, 10 in the first cohort died by 1971, and only 2 in the second cohort had died. There appear to be more recoveries in the first section than in the second. Time is still the great healer. Case 7 whose history is described in detail below, after 27 years of illness appeared in old age to have recovered. Over the years I have noticed some patients becoming upgraded. The patient who has spent some years in hospital is discharged, she is unemployed at home for a very long time, and then something happens and she goes out to work. There were more social recoveries in the second cohort, and fewer disabled at home, but the number of long-stay hospital patients had not fallen.

With such a small series, the most one can say is that there is a hint of improvement in the prognosis, but there is still a small group who steadily deteriorate, and need institutional care. The fate of the classical schizophrenic is probably of most interest. Over the 26 years some six cases out of 27 (22%) had recovered. Social recovery accounted for a further 41%. Some 15% were unemployed at home, and 22% were permanent hospital residents. Mayer-Gross *et al.*¹ compiled a table which suggested a recovery rate of about 14%. The figures from eight surveys mentioned varied from 6.6% to 24.5%. All these surveys were carried out before the advent of the phenothiazine drugs, and the category of social recovery was not mentioned. Henderson and Gillespie⁵ stated that while a great number of cases readjust themselves satisfactorily, a large number make a social recovery, but no figures were given. Norris⁶ suggested that the prognosis in schizophrenia was still gloomy, and that about 33% of the patients who were admitted to a mental hospital would end their days there. The Istock figures for unequivocal schizophrenics is lower, only 22%.

There is a second way of looking at the course and outcome of the illness, and the four categories listed below do not coincide with those in table III. There is indeed some degree of overlap. Various endings to the disease are possible, and in the 55 living traced cases these were as follows.

Complete Recovery after a Single Attack.—These patients were so well and so normal it was not possible to detect any evidence of their past illness. This occurred in 11 (20%) of the series. Nine of the patients were having no treatment at all, two

TABLE III—Recovery Rates for All Types of Schizophrenia Located in Istock During Two Periods of 13 Years, by Type of Illness and Sex. All Patients were Alive at the End of the Survey

Category	Schizophrenia				Schizophrenia Simplex				Schizoaffective Disorders				All Types	
	M.	F.	Total	%	M.	F.	Total	%	M.	F.	Total	%	Total	%
1946-1958:														
Recovery	2	2	4	30	0	0	0	0	0	2	2	18	6	19
Social recovery	3	2	5	34	3	0	3	50	0	5	5	46	13	42
Unemployed	2	0	2	15	3	0	3	50	0	4	4	36	9	29
Long-stay hospital patient	2	1	3	21	0	0	0	0	0	0	0	0	3	10
Total	9	5	14		6	0	6		0	11	11		31	
1959-1971:														
Recovery	1	1	2	15	0	0	0	0	1	0	1	12	3	12
Social recovery	1	5	6	47	1	1	2	66	0	5	5	63	13	54
Unemployed	0	2	2	15	1	0	1	33	1	1	2	25	5	21
Long-stay hospital patient	1	2	3	23	0	0	0	0	0	0	0	0	3	12
Total	3	10	13		2	1	3		2	6	8		24	

were on very small doses of phenothiazine drugs, and both were very reluctant to try to live without them.

Liable to Recurrent Attacks of Illness.—This applied to a further 11 patients (20%). All but two were on continuous treatment by drugs, which it was felt prevented the patient from a relapse. Most lived useful active lives. All of these patients were in a schizoaffective category.

Arrested Schizophrenia.—Nineteen patients (35%) came into this category. The illness had left its mark, and although the patients could work, and a few worked very well, they were odd people, and schizophrenia was evident to an experienced observer. All were at work or, if a woman, able to function as a housewife.

Chronic Disabled.—There were 14 of these patients (25%), of whom six were permanently in hospital. All were completely unable to do a proper day's work or, if a woman, run a home.

Long-Term Follow-up

Most that has been written about the long-term follow-up of schizophrenics has been with patients who have been treated at least part of the time in hospital. What happens to the untreated case? Case 2 was classified as a simple schizophrenic, and he was never even seen by a psychiatrist. The following case histories are of psychotic patients who for one reason or another never had treatment.

CASE 6

A man of 40 was first seen by me early in 1948. He was the only case of true paranoia I have ever had to deal with. He was physically fit and an excellent worker, his only abnormality being a fixed delusion that his wife was having an affair with some lover he was unable to catch. Apart from this highly systematized delusion there was nothing abnormal, and my partner at the time did not believe that the chap was ill. It was the usual story. If his wife looked at the clock, she was working out when she would next meet her lover. If she rustled some paper, it was a note. If a car hooted as it passed, it was sending her some secret signal. At times he had threatened his wife, and as I felt that she was in some danger I asked a psychiatrist to call and see him at home.

The consultant agreed with my diagnosis. No treatment was thought likely to be effective, and it was felt that to lock up the man would only fan the flames of his delusion. It was decided to persuade the wife to leave him and get a separation order. This she did, and they lived apart for two years. Then she returned to him, and although the delusion was still there the urgency and fire had gone out of it. They had one child, a boy who was by then 14. If his father started to complain to his wife he would tell his father to stop his nonsense, and the symptom gradually faded into the background. Two years ago, 22 years after the first contact with this man, he came to see me about some physical illness. When I had finished I asked after the domestic situation, and he said it was alright. As he reached the door he turned back, and with some feeling told me that everything he had complained about in 1948 was completely true. It was clear that the old delusional system was still there, but it no longer caused any trouble in the family.

CASE 7

This man, a somewhat similar case, also had a monomania but of a different kind. Apart from the one delusion, he was a healthy and hard-working chap who never missed a day's work. He was 47 when I was consulted by him. He told me that he had a cancer in his mouth and that he was able to keep it at bay only by applications of acetic acid to the gums. His mouth was a fearful mess of acid burns. He had been given himself "the treatment" for about five years. He had been persuaded to see me by his wife who was quite sickened by the horrid ritual of applying the acid every night. His whole family had done their best to dissuade him, but he felt that without the treatment he would die. He said that it was a punishment of God, because he had backed a horse in a race, and that was against the principles of life laid down by his father. He was not particularly depressed, nor did he seem worried. He would never have seen me but for pressure from his wife.

He had absolutely no insight into his trouble, and was completely convinced that his arguments, and his treatment were the correct way to meet the situation.

He was referred to a psychiatrist who found some evidence of hallucinations besides the basic and fixed delusion. He was labelled a paraphrenic, and it was felt nothing could be done to help him at the moment. He refused to stop his self-medication and he was at work. A bad prognosis was given, and the consultant predicted that the man would end his days in a mental hospital.

In 1967 he came to see me again, and was still in the same state. He said he would like to consult a cancer specialist, and he was referred to a radiotherapist. His story to this consultant had now changed. His "cancer" was due to a blow on the jaw he had received in 1940. The consultant assured him knocks did not cause cancer, that he had no cancer, and he was doing serious damage to his mouth. He offered to see him again at any time if he had further worries. Much to everybody's surprise the patient accepted this reassurance. No acid was used thereafter. After 27 years the delusion had faded away.

An Acute Schizophrenic Episode

CASE 8

A girl of 25 came to the surgery one Saturday morning, a picture of acute schizophrenia. The girls at the office had accused her of being pregnant, everyone was talking about her, and she could hear voices. She was irritable and angry, and left to report her troubles to the police. I saw her parents who said she had been in this state for only one week. I could not get a psychiatric opinion for several days, so I gave her chlorpromazine 100 mg every four hours, and on this she slept most of the time. After five days I reduced the dose to 25 mg every four hours, to ensure that she was awake and could talk to the psychiatrist. When he saw her he could find no evidence of any psychosis. She was off work for two weeks and on tablets for three months and remained well eight years afterwards.

The Schizophrenic in the Modern World

Before 1930 pretty well all the difficult schizophrenics were committed to the custodial care of a mental hospital where, as Bell⁷ suggested, everything possible was done to degrade the mental patient by way of bad food, shoddy ill-fitting clothes, and lack of privacy. This resulted in what Barton⁸ called institutional neurosis, which did more to cripple the patient in many cases than the schizophrenic processes. The schizophrenic who was discharged from an institution tended to be the exception. Whatever the demerits of this system were, this attitude certainly had the effect of stopping known schizophrenics from breeding. Today most schizophrenics are discharged from hospital, and even the most difficult types who default in taking their tablets can be controlled by regular fortnightly injections of the moderate type of drug. There is thus a greater likelihood of them becoming parents, but fortunately they tend to be an infertile section of the community.

The average family in England and Wales in 1962 was about 2.3 children.⁹ In the present small series of schizophrenics, where the size of the family was known with certainty, the average number of legitimate children was: in the case of classical schizophrenia patients, 0.9; in schizophrenia simplex patients, 0.6; and in those with schizoaffective disorder, 1.6. The average for all families in the series was 1.0 children.

This discharge of schizophrenics is in many ways a good thing, but in my view the pendulum has swung too far. In a determined effort to keep the problem of long-stay patients under control, a few are discharged either too soon, or sent back to families who cannot cope.

CASE 9

A 17-year-old boy had to be referred to a mental hospital. He had had a grammar school education and was a bright lad. He suffered schizo-

phrenic deterioration, but was able from the mental hospital to hold down a semi-skilled job in a factory earning £18 a week. This situation seemed pretty stable and he was doing so well he was discharged from hospital, where he had grown some roots. He had no home to go to, the "digs" he found were not to his liking, and in no time he was back in hospital unable to work at all. He has since been discharged again, but was unemployed and a burden on the tax payer with little hope of improvement.

It seems a pity the stable situation of working from a hospital, where he felt secure, had to be broken.

This I feel is a serious problem, although I am not suggesting it is a large one. Most schizophrenics can live away from the hospital environment. Of the 55 schizophrenics alive in 1971 from our practice, I think that about three who live in the community would be better in some kind of institution. Only 11% were long-stay patients, and as the years pass this figure will drop even further, but there will always be a hard core of chronic sick who do better away from home. No one

wishes to see the deterioration of hospital neurosis affecting these patients, but neither should they be allowed to destroy family life. Perhaps the provision of small hostels with suitable supervision will be found to be the answer.

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Hospital Topics

Extended Deep Femoral Angioplasty

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Summary

At present reconstructive arterial surgery for atherosclerotic disease below the level of the inguinal ligament is restricted to femoropopliteal bypass grafts. We have found a new operation, which we call extended deep femoral angioplasty, to be effective not only in some cases where bypass is possible but also in many cases where it is impossible because of a poor run-off, lack of a suitable vein, or even when a bypass has failed. In a consecutively treated group of 34 patients operative reconstruction was limited to the deep femoral artery and a success rate of 65% was achieved. Most gratifying was the saving of a leg in eight patients in whom bypass was impossible.

Introduction

The importance of the deep femoral artery (profunda femoris) as an alternative main carrier of an adequate blood supply to the lower limb was underestimated in the early years of vascular surgery. In cases with arterial lesions proximal and distal to the inguinal ligament, however, proximal reconstruction usually sufficed so long as a good flow of blood could be

established in the deep femoral artery.¹⁻³ This stimulated some surgeons to operate on the deep femoral artery when an autogenous femoropopliteal graft was either undesirable or impossible.⁴⁻⁷ Their encouraging results suggested to us that operations on the deep femoral artery alone might have even wider applications.

The incidence of atherosclerotic occlusion of the deep femoral artery seen in angiograms is between 4 and 6%.^{8,9} Stenosis of the deep femoral artery has been reported in 10 to 12% of patients with peripheral arterial disease.^{9,10} Waibel⁵ pointed out that there is a high incidence of posterior atherosclerotic plaques that run from the common femoral artery well into the division of the deep femoral trunk. Cormier and Dumas¹¹ found that plaques in the deep femoral artery are restricted to the posterior wall of the artery in 80% of the cases. Hence their depiction by angiography is difficult or impossible in frontal views. Other difficulties in the anteroposterior view are that the origin of the deep femoral artery may be obscured by a partially or totally patent superficial femoral artery and the deep femoral artery is often foreshortened.¹² In 15% of cases there is not a single trunk for the deep femoral artery; some or all the branches have separate origins from the common femoral artery.¹¹

Our findings have been similar except that in atherosclerosis of the deep femoral artery not only the orifice but often a considerable length of the vessel is affected, even when the lumen appears smooth in the angiogram. Occasionally up to 13 cm must be dissected before a soft, pliable artery can be found. Plaque formation usually stops immediately proximal to a major bifurcation of the trunk (lateral circumflex excluded). Therefore at operation the artery must be cleared much more extensively than has been suggested. To stress this we describe the operation as "extended deep femoral angioplasty."

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