Current Practice

PRACTICAL PSYCHIATRY

Organic Psychosis

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Brit. med. J., 1968, 4, 561-564

(Last week Professor Cramond discussed the clinical features and management of organic psychosis. The article is concluded by an account of illustrative case histories.)

The following examples are given to show the presentation of organic psychosis when caused by the underlying conditions of infection, trauma, drug overdosage, abnormal drug response, vitamin deficiency, neoplasm, and degenerative brain disease. This list is not intended to be comprehensive, but is designed to show some of the clinical issues and management discussed in the first paper.

Acute Organic Psychosis Due to Infection

Mrs. A. B., aged 67. This lady's husband reported that for a period of about six weeks he had noticed his wife becoming forgetful, leaving her reading glasses on items of furniture and then forgetting where she had left them. She then believed that people were deliberately hiding them from her. She was also mildly forgetful for recent events and had a tendency to repeat stories and anecdotes on a number of occasions to the same person, clearly having forgotten that she had told the story before. Her husband had also noted that her behaviour had changed in that she would mutter to herself while doing housework. He was never able to hear what she actually said, but this was a new feature of her behaviour. She began to express ideas of depression because she thought that she was failing mentally but then became rapidly confused one morning, disorientated for time and place, and memory for both recent and past events was markedly deficient.

A careful history from the husband revealed that the confusional state had antedated the depressive reaction to it so that an organic aetiology was presumed. Prior to the onset of forgetfulness his wife had been more than usually alert and fit for her age.

The patient was found on examination to be suffering from a low-grade bronchopneumonia, which responded to chemotherapy, and as the infection was treated so her mental state improved. Over a period of about 10 days she became correctly orientated, talked clearly and rationally about her home and her marital relationships, and had insight into the fact that she must have been confused. Her disturbed psychiatric state required no particular medication and treatment was directed towards the underlying infection. Admission to hospital was not required, as the husband and neighbours were able to supply essential care.

Post-traumatic Psychosis

Mr. C. D., aged 17. This young man received severe head injuries in a vehicle accident and was unconscious for several weeks. On recovery he was left with a left facial weakness, monoplegia of the left arm, and a motor aphasia. He had difficulty in walking because of incoordination of both legs, mainly the left. He also complained of diplopia. While his walking and speech improved

slowly, the patient complained bitterly of difficulty in concentrating for any time longer than a few minutes. He over-compensated for his physical disabilities by becoming euphoric in mood and over-ambitious and over-confident of his abilities. He tended to deny his slurred speech and unsteady gait. He projected some of his own inner problems by stating, "I worry about the lack of critical faculties in the people around me. I react to this in a profound way."

He was unrealistic and grandiose in his plans for the future. At home after hospital discharge his mother particularly found him to be aggressive. He refused to get out of bed in the morning and paid no attention to his parents. Psychological testing at this point was directed to tests where motor function was not required. Arithmetic and vocabulary tests showed that his intellectual level prior to the accident was superior. His verbal I.Q. after the accident still rated at 117, but there was significant loss of concept formation and a difficulty in limiting responses to essential material. He had a tendency to include irrelevant material in his answers without realizing the inappropriateness of it. There was, then, some definite organic loss of intellectual function, although he was still able to function at an above-average level. The patient remained frustrated and resentful of his dysarthria and his motor incoordination, and gradually withdrew into a world of fantasy. The family doctor attempted to interest him in adolescent church groups, but his personal behaviour deteriorated still further and eventually a diagnosis of post-traumatic psychosis, schizophrenic in type, was made. Hospital admission was arranged to provide for a longer period of care in a structured environment but the prognosis was thought to be poor. The youth was seriously injured at a time when he was in the middle of an adolescent sexual crisis. The serious brain injury prevented the resolution of his conflict, since he was not allowed to participate in the normal athletic and social activities of his peer group, including car driving. This total ban forced him to obtain gratification in fantasy. In many cases complete prohibition of athletic social pursuits will be undesirable because of the psychosexual implications.

Psychosis Due to Drug Overdosage

Mrs. E. F., aged 32. This lady, separated from her husband, was reported to have had two seizures which from a relative's description were clearly grand mal fits. There was a past history of a seizure while pregnant six years before. She was known to have a marked personality disorder and it was considered that a drug overdosage was a possibility in this patient. Examination showed a blood pressure of 165/110 mm. Hg; other systems were essentially normal. Her deep reflexes were depressed but equal, and there were equivocal plantar responses. On examination 24 hours after the last seizure she lay in bed grimacing and gesturing, was tense and restless and slow in speech. She was disorientated for time, place, and person. She expressed paranoid delusions, believing that the police were to come and imprison her. She was aurally hallucinated and could hear her daughter's footsteps in the corridor outside the room. Other voices told her, "Do what dad says." She misidentified the family doctor, whom she normally knew well. A tentative diagnosis of toxic confusional state due to drug overdosage

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was made and she was transferred to hospital. The only positive findings were amphetamine detected in the urine analysis, while a culture of the urine showed a growth of a coliform bacillus. The E.E.G. showed a mildly abnormal record with generalized slow-wave dysrhythmia best seen posteriorly.

Her restlessness and frightening hallucinations were controlled by chlorpromazine 100 mg. t.i.d. orally. The urinary tract infection was treated. When she became clearer mentally in 36 hours she admitted taking an amphetamine and barbiturate preparation in increasing doses for her "nerves." She had run out of tablets and had had none for the 48 hours preceding her two seizures. She refused long-term support and expressed the intention to leave the district.

Psychosis Due to Vitamin Deficiency

Miss G.H., aged 69. This lady came to attention because of a neighbour's report that she had been wandering in the street clad only in her nightgown. She was a pensioner living by herself and had been noted to have been progressively withdrawn over a period of months. She had been irritable and had refused help. Her memory had become uncertain. Physical examination was negative, but routine blood examination showed the haemoglobin to be 60%. Examination of the bone marrow showed an erythroid hyperplasia with the presence of a few giant white blood cells. Serum vitamin B₁₂ studies were carried out and gave low readings of the order of 96 pg. per ml. Serum folate was 8.5 ng. per ml.

Treatment with hydroxocobalamin 1,000 µg. was given daily for one week, followed by weekly injections for two months with a final maintenance dose fortnightly. Recovery was obtained over a five months' period.

Abnormal Reaction to Drugs

Mr. J.K., aged 48. This patient was admitted following a vehicle accident and was found to have a dislocation of his left hip and a fracture of his left humerus. Following operation he became unsettled and distractible and was given phenobarbitone 30 mg. q.i.d. After three days he became very restless and confused. He confabulated and misidentified hospital personnel whom he previously had been able to recognize. Further communication with the family doctor revealed a history of heavy drinking. Withdrawal of the phenobarbitone and its replacement with chlordiazepoxide 10 mg. q.i.d. brought a speedy improvement in the patient's mental state.

Early brain damage due to chronic alcoholism was later diagnosed. In elderly people or in people with brain damage barbiturates may cause confusion and these drugs are better not given.

Psychosis Due to Cerebral Neoplasm

Mr. L.M., aged 47. This man presented to his family doctor complaining of a sudden onset of headache, vomiting, and drowsiness. After three days he was admitted to hospital, where a subarachnoid haemorrhage was diagnosed. Lumbar puncture showed grossly and uniformly blood-stained fluid under normal pressure. Carotid and vertebral angiography were performed and showed no abnormality.

Physical examination showed a complete left homonymous hemianopia. E.E.G. showed no significant abnormality. The patient's previous history indicated an acute schizophrenic breakdown characterized by paranoid ideation several years before, but that this had responded to treatment and had not recurred. The patient appeared to make a satisfactory recovery from his subarachnoid haemorrhage and was discharged home.

However, within a few days he began to develop delusions of persecution; he was complaining of insomnia; he ate and drank voraciously; he was running up expensive telephone calls; and much of the time was spent praying in a rather histrionic manner. Reference to people who knew him well showed that there had been some personality change. There was a family history of psychiatric illness. When he was

treated with phenothiazines his more overt psychological symptoms settled, but closer examination showed that he was mildly confused, and on psychological testing he showed signs of organic damage.

At this stage it was learned that he had had a tumour removed from his chest wall some four years before. He had been told that it was an infected lipoma, but further checking revealed that the tumour was in fact a malignant melanoma containing numerous mitoses. An E.E.G. now showed localized abnormality in the region of the right ventricle. A repeat carotid angiogram also showed a vascular tumour in this region. An exploratory craniotomy proved a large vascular tumour, which was completely removed; sections showed that the growth was a malignant metastatic tumour with much necrosis. Histologically the features were consistent with a secondary tumour from a malignant melanoma.

The patient died some 48 hours after this operation with a terminal haemorrhage from the upper alimentary canal with signs of acute tentorial herniation in addition. The organic psychosis was predominantly paranoid in presentation, but minor memory disturbance inconsistent with the patient's degree of intelligence and educational background pointed to an organic lesion rather than a functional condition. The paranoid flavouring was thought to be due to his normal way of handling stress.

Chronic Organic Psychosis Due to Degenerative Brain Disease

Mr. N.O., aged 49. This patient actually presented with prolapsed haemorrhoids. Following surgical treatment for this condition he was noted to be mildly confused. A more detailed history by the family doctor, including interviews with relatives and workmates, showed that he had been out of work over the preceding six months because of inability to hold his job, as he was mildly confused from time to time. His behaviour had deteriorated in that he had been stealing money from a cousin with whom he lived and using it to drink immoderately; this behaviour was quite foreign to his previous personality. The patient had minimal insight into the fact that he had difficulties with his memory. There had been a period of two or three months when this had caused him to be somewhat depressed because of memory failure, but by the time he had recovered from his haemorrhoidectomy he was clearly indifferent to the memory disturbance. If left alone he would sleep until the middle of the afternoon and then remain restless, wandering around and interfering with other people's belongings until the early hours of the morning. He had no idea where his bedroom was and lost his way about the house. Even small amounts of alcohol began to have an undue effect on him. He was occasionally incontinent.

In conversation it was obvious that both recent and remote memory were equally affected. An E.E.G. was mildly abnormal, the disturbance being compatible with diffuse cortical dysfunction but lacking in any focal features. Air studies revealed the typical widening of the sulci and disappearance of cortical structures. A diagnosis of Alzheimer's presenile dementia was made and long-term hospital care was organized for the patient. While awaiting this the family doctor used 50 mg. thioridazine to control the evening restlessness; the urinary incontinence was helped by advising the relatives to take the patient to the toilet every two hours.

Early Psychosis Due to Chronic Barbiturate Overdosage

Miss A.B., aged 44, attended the doctor's surgery stating that she had difficulty in sleeping because of a nervous condition. In addition to her insomnia she had for some time felt mildly depressed. She told the doctor, to whom she was a new patient, that Sodium Amytal was the drug which gave her the best sleep. She was noted to look tired and lethargic. A certain amount of periocular twitching was noted. On testing she was mildly confused for the day and date but rationalized this by saying that she had not seen the papers that morning. She agreed that a blood sample should be taken, and it was found later to contain 1.1 mg./100 ml. barbiturate.

The patient later confessed to attending a number of doctors' surgeries in order to obtain adequate supplies of Amytal, which she had been taking for many years. She refused to have any psychiatric treatment, stating that she had previously been in mental hospitals but without any effect.

Organic Psychosis Due to Carbon Monoxide Poisoning

Mr. C. D., aged 28. This patient was found deeply unconscious in a situation which suggested an attempt at suicide by carbon-monoxide poisoning. The complete history, formulated later, showed a previous attempt at suicide by gunshot a number of years before. There was no family history of mental illness, but the patient came from a very deprived home with particularly poor relationships with his mother. There was a history of childhood neuroticism. His marriage had lasted eight years and was apparently infertile.

Premorbidly his personality had been that of a rather isolated man, jealous and moody. From time to time he became depressed about his sterility. After a deteriorating marital situation his wife had left him five days before the gassing attempt. On recovery the patient showed the classical symptoms of an organic confusional state, which over the period of a week improved. During this time the patient was overactive and made overtly sexual approaches to the nursing staff in a disinhibited way. As the weeks passed he was left with a residual defect of recent memory and occasionally confabulated—he invented stories to account for the gaps in recent memory. There was no evidence of depression, and no other thought disorder or hallucinations. He showed slight anxiety. There were two distinct problems. Firstly, his memory did not improve significantly as far as being able to retain new information was concerned. Remote memory was little affected and it was thought that there would be a degree of permanent memory impairment. The second major problem concerned his personality traits of a paranoid tendency, his difficulties in handling aggression, and his sexual problems.

His sterility was further investigated and an epididymo-vasal operation was performed, but the chances of this improving his fertility were considered minimal. General support for his wife, who had agreed to go back to him, and himself were offered. No medication was thought appropriate, but the prognosis was considered poor.

Organic Psychosis in Children

Children may develop organic psychosis, the clinical picture of which will be influenced by the child's degree of developmental maturity, by his emerging personality and ways of coping with stress, and by his family environment. Acute organic psychosis with delirious features can occur in young children and adolescents after infection—for example, encephalitis. As part of the differential diagnosis, we must remember in adolescents nowadays the possibility of a drug-induced psychosis—for example, with amphetamine or marijuana. With the increase in venereal disease among adolescents at present being noted, juvenile general paralysis of the insane must also be remembered.

A child with a chronic organic psychosis may be withdrawn and depressed, partly because of and partly reactive to his intellectual deficits and inertia. This in turn loosens the child's hold on reality, and there is an increasing difficulty in self-control and in the maintenance of satisfactory social relationships with his or her peers and with authority figures. There is, almost without exception, a disturbance and disharmony of mood with superficiality of interest and increasing self-absorption. Such children who suffer from brain damage, whether acquired or congenital, are prone to attacks of anxiety and are unable to tolerate stress and frustration; thus the presenting symptomatology may lie in the behavioural field with episodes of destructive behaviour, truancy, stealing, and aggression directed at other children, and by sleep disturbances.

Head banging and epileptic phenomena may also be noted. The severity of the neurological disorder bears no relationship to the psychological disturbance, as the latter is a factor of the child's internal and external environment. The warmer and more supporting this is, the better the child will do. A child who has already been rejected and has been something of an outcast in his own family circle will clearly be even less able to cope with this problem after brain damage than before, and his psychotic symptomatology will be intensified as a result of this. The management of such children is never easy and must depend on the resources of parents and the needs of other siblings. The family doctor will have to guide the parents on the tight-rope between overprotection and undue pressure on the child in competition with other siblings. A number of these children will be depressed by reason of their inability to keep up with their peers, both at school and in the family, and they may be helped by small doses of nortriptyline or imipramine. The parents will have to be encouraged to talk about their feelings, particularly those of guilt and anger at the situation.

The availability of child psychiatric clinics and of inpatient services, including special school facilities, will also decide the best programme of treatment for such children. Drug therapy, using, for example, thioridazine in appropriate dosage (5–25 mg. t.i.d.), may control symptoms which are distressing to both child and parents and allow the latter to make better relationships with the child. Anticonvulsants can be helpful in cases where epileptic symptoms occur. Diazepam (1 mg. t.i.d.) has been shown to be of value in overactive, restless, clumsy, hyperkinetic children with multiple minimal cerebral damage.

In cases of severe disturbance, or where the mother in particular is unable to profit from psychotherapy in her handling of and relating to the child, inpatient care with continuity of a mothering figure is required. This period of inpatient care should aim at giving more time for help with the family group, so that it may still be possible to support the psychotic child in the home after a variable period of retraining in a suitable inpatient environment.

Indications for Referral

The family doctor or house physician will usually be the first person to be required to deal with the psychotic patient. If the condition is acute it should be remembered that with appropriate treatment and proper handling nearly all disturbances will settle within 48 hours. During this time increasing contact with the patient becomes possible and the necessary investigations for an exact diagnosis and the selection of specific therapy can be undertaken. Whether or not referral to a consultant psychiatrist or to a hospital is required will depend on the previous experience of the doctor of first contact and his assessment of the local scene, which will include the resources and skills of helping personnel and the availability of skilled help.

It is important to remember that a considerable number of acute psychotic episodes can be avoided or at least minimized if the doctor plans ahead. He does this by anticipating the need for further drug treatment to prevent the emergence of further symptoms—for example, a patient who is beginning to be afraid and restless is better sedated at that point rather than waiting until the full-blown excitement occurs some six hours later. Adequate instructions for telephone communication and for the giving of other extra drugs on a time schedule within the effective period of the last medication will spare anxious moments. If the helping personnel are well motivated and have good common sense the patient may well be nursed at home. However, if family members have mixed feelings, are uncertain, or are outrightly rejecting, hospital care is required, otherwise a day and night special nurse must be provided. Referral to

the hospital should always include a verbal communication, followed by written, recording the onset of the illness as seen by observers and as understood by the doctor, and whether alcohol, drugs, or both are likely to be incriminated.

Patients with a suspected chronic organic psychosis should always be referred for a consultant opinion. Such referral is designed to support the family doctor in his discussions with relatives, who may deny the reality of the gravity of the symptoms. The relatives may find the implications of the diagnosis, especially in the young, unacceptable and may "shop around" to find some other opinion more congenial to their outlook. A speedy referral to a specialist, while not preventing this type of medical manipulation, does strengthen the family doctor's hand. The second reason for referral, however, is to give the hospital administration knowledge of a case that may conceivably require long-term care or terminal inpatient care in the future. This allows accurate forecasting of service needs, including the provision of home helps, sheltered workshops, and hospital beds. The presence of chronic organic psychosis in the home has effects on all other family members. While they may be very willing to undertake the care of the sick member with love and devotion, the long-term effects of this may lead to feelings of anxiety, resentment, frustration, shame, and guilt. In time the more vulnerable members may react with disturbances which may express themselves both physically or emotionally.

The family doctor, therefore, requires in the long-term management of such a situation the support of the team, which

will include a variety of social work agencies who can bring relief to the family. Such agencies are usually best contacted by hospital referral and follow-up from there, working with the general practitioner, and this offers the best support to the family in crisis.

FURTHER SELECTED READING

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TODAY'S TESTS

Tests for Amyloidosis

With the help of expert contributors we print in this section notes on tests in current use in clinical investigation.

Amyloidosis is a connective tissue disorder of unknown pathogenesis, in which a glycoprotein of amorphous and eosinophilic appearance is deposited progressively in the ground substance. It occurs in localized and generalized forms. The localized form is rare and presents as circumscribed tumours which particularly affect the upper respiratory tract. Generalized amyloid may be associated with recognized predisposing diseases such as rheumatoid arthritis, chronic infections, or multiple myeloma—when it is called secondary amyloidosis, or it may occur without any such associated disorder, when it is called primary amyloidosis. The primary and secondary varieties do not have a precise pattern of organ distribution, for amyloid of any type can involve any organ.¹

A number of hereditary forms of amyloid have recently been described. The best known of these is associated with familial Mediterranean fever. Amyloidosis complicates 40% of cases of familial Mediterranean fever, and in some members of the family it may even occur without the fever. The hereditary varieties of amyloidosis thus do not fit into a rigid classification of primary and secondary forms. Differentiation into types of amyloidosis according to tissue distribution and staining characteristics is also artificial. The only real purpose of maintaining the primary and secondary labels is to denote the presence or absence of a predisposing associated disease.

Amyloidosis may be suspected in a variety of clinical situations. When amyloidosis involves the kidney it presents as albuminuria or as a nephrotic syndrome, and when it involves the liver as hepatomegaly. Cardiomyopathy and macroglossia are common manifestations when the heart and tongue are

affected. Amyloid does not evoke an inflammatory response, so that deleterious effects on organ function do not usually occur until massive amounts have been deposited. The diagnosis rests upon clinical suspicion and the demonstration of amyloid in biopsy material.

Tests

There are no laboratory tests specific for amyloidosis. The sedimentation rate may or may not be elevated. The serum proteins may vary in any direction. Raised levels of alpha 1, beta, or gamma globulins may occur, and macroglobulinaemia and hypogammaglobulinaemia have been reported. Plasmacytosis is occasionally a feature. The urinary abnormalities of proteinuria and haematuria are nonspecific.

Congo Red Test

The oldest test for amyloid is the Congo Red test, but it is not very reliable, and it is not without risk. The dye Congo Red is absorbed physically by the amyloid glycoprotein. The disappearance of the dye from the blood depends on many factors, such as the quantity of amyloid material, the affinity of the particular amyloid for the dye, and the amount excreted in the urine. A dose of 10 ml. of 1% aqueous solution of recrystallized Congo Red is given intravenously after a sample of blood has been taken. (The preparation of the Congo Red is important, as serious and even fatal anaphylactic reactions to the dye have been reported. The dye should be dissolved in distilled water, as it may precipitate from isotonic saline. The presence of a precipitate denotes that the preparation is potentially hazardous.) Further blood samples are drawn at