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BRAIN ABSCESS PRESENTING WITH CATATONIA

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A fifty year old man presented to a psychiatric unit with catatonia. He was later found to have a brain abscess in the left frontal region. Brain abscess has not been previously reported to be associated with catatonia.

Key words: brain abscess, catatonia.

INTRODUCTION

Catatonia labels a cluster of striking motor symptoms and signs that co-exist with idiopathic psychoses (affective disorder, schizophrenia), intrinsic coarse brain disease, metabolic disorders that affect brain function or drug induced syndromes (most commonly the Neuroleptic Malignant Syndrome) (Taylor, 1990). Catatonia was first described by Kahlbaum in a monograph in 1874. Subsequently catatonia was incorporated as a subtype of schizophrenia (Fink & Taylor, 1991).

There has been a gradual recognition of the fact that catatonia can be observed in a variety of organic disorders, as well as in affective disorders (Gelenburg, 1976). The ICD-10 Classification of Mental and Behavioral Disorders (World Health Organization, 1992) has included a category of organic catatonia under F06 'Other mental disorders due to brain damage and dysfunction and to physical disease'. It has been described as a disorder of diminished (stupor) or increased (excitement) psychomotor activity associated with catatonic symptoms.

A number of neurological and metabolic disorders can present with symptoms of catatonia (Taylor, 1990). We have previously reported a case of Wilson's disease who presented with catatonia (Davis & Borde, 1993). We now report a case of brain abscess who presented with catatonia.

CASE REPORT

A fifty year old postman was brought to a psychiatric unit with the history of abnormal behavior for the past one month. Prior to this he had suddenly developed high grade fever. He was admitted in a general hospital where routine blood tests and a CSF examination were done. All investigations were normal. As he refused to eat or drink he was kept on intravenous fluids. Within a few days his fever subsided. At this stage the patient became mute and immobile. He would suddenly smile or laugh without reason followed by spells of weeping. He still refused all food or water. He was given intravenous fluids daily for two weeks. During this period he did not respond to any questions. His body remained rigid and at times he maintained odd postures which he sustained for considerable periods of time. He passed stool and urine in his clothes. Since he did not show any further improvement he was referred to this psychiatric unit for further management.

Physical examination:

At initial evaluation the patients pulse and blood pressure were normal. There was no ear discharge or sign of any infection. Neck stiffness was not present. The abdomen, respiratory and cardiovascular systems were normal. C.N.S. examination showed no abnormality except for the presence of increased tone. The deep tendon-jerks were normal and the plantars were flexor bilaterally. The fundus was normal. The patient reacted to painful stimuli by withdrawal.

Psychiatric examination:

The patient opened his eyes spontaneously and looked around. He made spontaneous movements and obeyed simple commands. He made no spontaneous speech and did not respond to any questions. He was mute throughout the examination. At times he would smile inappropriately. He showed waxy flexibility and maintained odd postures for a long time. He was actively negativistic and refused to open his mouth to take solids or liquids. On passively moving his limbs he was found to have gegenhalten. He did not have any other catatonic signs except those mentioned above.

Treatment and course in hospital:

The patient was advised further investigations including a CT scan because of the history of fever and double incontinence. However the guardians could not afford these investigations so treatment was started with Ryle's tube feeding and 20mg of trifluoperazine, 4mg of benzhexol and vitamin supplements daily in divided doses. By the next day the patient began to show considerable improvement.

He began to take feeds by mouth and to indicate his toilet needs. Within a few days all the catatonic features had disappeared and he began to speak in response to questions. He looked sad and expressed depressive thoughts, so 50mg of amitriptyline was added to the treatment regime. After ten days of treatment he was walking around, feeding and cleaning himself and would answer questions though his spontaneous speech was slow and of limited output. He was lethargic and dull and appeared depressed. At this stage the relatives wished to discharge him and to continue treatment at home. He was diagnosed to have depressive stupor and was discharged on the same medication.

Follow up:

Three weeks later the patient was brought for review. He had not shown any further improvement after discharge. For the past few days he had started passing urine in his clothes and had also developed difficulty in walking. He walked with a broad based gait. CNS examination showed the presence of bilaterally brisk tendon reflexes and a plantar reflex which was flexor on the left side and equivocal on the right side. The optic fundus showed early papilloedema. It became imperative to have a CT scan and funds were arranged. The CT scan showed multiple ring shadows with gross surrounding oedema in the left frontal region, probably due to a cerebral abscess. The left lateral ventricle was compressed and midline structures showed a shift to the right.

The patient was referred to a neurosurgeon for further treatment. The cerebral abscess was drained and irrigated and appropriate antibiotics were given. The patient made a complete recovery. A few months later he developed generalized tonic-clonic seizures which responded to treatment with carbamazepine.

DISCUSSION

Most brain abscesses are associated with chronic infections of the ear or sinuses, pulmonary infections or congenital heart disease with right to left shunts. In about 10% of cases the cause cannot be determined (no cause was found in our patient). The frontal lobe is the most common site. Symptoms of frontal lobe abscesses include headache, drowsiness, inattention and generalized impairment of mental function. Hemiparesis with unilateral motor seizures and expressive aphasia are the most common neurological signs (Harter & Petersdorf, 1987). Catatonia has not been previously reported as a manifestation of brain abscess. The patient reported here had catatonic signs such as mutism, waxy flexibility, active negativism and gegenhalten. Three is no consensus as to how many catatonic signs should be present to diagnose catatonia.

Lohr and Wisniewski (1987) have suggested that a minimum of three signs should be present. Lesions in the lobes, basal ganglia and brain stem may produce catatonia. Taylor (1990) has reviewed the relationship between the frontal lobes and catatonia. Rupture of anterior cerebral artery aneurysms, trauma, arteriovenous malformations and neoplasms in the frontal lobes have been associated with catatonia. The association between frontal lobe dysfunction and catatonia is not surprising given the roles of the frontal lobes in attention and arousal, emotional control and motor regulation. Taylor concludes that all the classic catatonic features have been described as manifestations of frontal lobe disease and have been neuropsychologically interpreted as manifestations of frontal lobe dysfunction.

This patient initially improved with antispychotics and amitriptyline, which misled us into assuming that the catatonia was functional. However when clear cut neurological signs appeared it became obvious that there was an organic etiology. Catatonia is still commonly seen in India (Bannerjee & Sharma, 1995). This case illustrates some of the difficulties that may arise when dealing with a complex disorder like catatonia.

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