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Capgras Symptoms with an Organic Basis

By W. A. G. MacCALLUM

Since the French psychiatrists Capgras and Reboul-Lachaux published their paper first describing the 'illusion of doubles' in 1923, other cases of the syndrome have been published giving the impression that it really occurs only in affective disorder and in schizophrenia. This viewpoint was definitely expressed in the excellent review of the Capgras syndrome in *Some Uncommon Psychiatric Syndromes* by Enoch, Trethowan and Barker (1967)—'Since it occurs in a clear sensorium, it is obvious that there is no organic basis to the condition, but it is rather a functional illness and, as such, is explained on a psychodynamic basis.'

Gluckman (1968) appears to have been the first author to draw attention to a case where the syndrome occurred in the presence of apparent organic brain disease. Weston and Whitlock (1971) described a case of 'the Capgras syndrome following head injury', and drew attention to the fact that in some aspects the syndrome resembles the paranoid reactions associated with anosognosia accompanying parietal lobe damage.

The present paper presents three further cases in which the Capgras-type symptoms have occurred and in which the main factor has been organic disease, and reference is made to another two cases where it was at least contributory. Perhaps also this condition is not as rare as is generally stated, but may not have been recognized because of undue emphasis having been paid to its associations with the functional psychoses. The findings in the present cases indicate that an organic cause should always be sought, at least as a precipitant.

Case 1

A 71-year-old man with a long history of chronic bronchitis was admitted to Purdysburn Hospital on a formal basis, the general practitioner's recommendation including the following statement: 'His memory is failing. He appears to have imaginary grudges against others, is depressed.' My notes on the morning after admission include the following paragraph: 'He is orientated as far as being in hospital, date, staff, etc., are concerned, but his delusional ideas affect his views on personal identity. He knows his own identity and that I am a doctor. However, he feels that the lady with whom he has been living has changed and been replaced by an identical woman who is responsible for his being sent here as part of a plot of some sort. He believes that the nursing staff are agents of this impostor. He also believes that his brother, who accompanied him here, is not his brother but a "wax model" in every way identical with his brother in appearance, speech, etc.'

He had left his wife over 30 years ago and had had no contact with her or his six children since then, but had been living with a Mrs. A., for whom he had given up his marriage. He had kept friendly with his one brother in a large family. There was no family history of any psychiatric trouble. Eighteen months before his admission Mrs. A. had fractured a leg, and when she was discharged from hospital he had had to look after her personal hygiene. He had become depressed with having to cook, etc., and was embarrassed because their private life was now open to neighbours.

On physical examination, as well as marked finger-clubbing caused by chronic bronchitis and emphysema he was found to be suffering from bronchopneumonia. Purulent sputum culture grew coliform bacilli and staphyloccus aureus. Appropriate antibiotics produced remission of his pneumonia, and he then gained complete insight into the absurdity of his former ideas. He had been very dependent on a pressurized inhalant solution containing adrenaline 0·5 per cent and atropine methonitrate 0·1 per cent, and overdosage may have been a contributory factor in his mental symptoms.

Here then was the psychopathological setting of depression and guilt to the extent that at one stage the patient was thinking of giving up his relationship with Mrs. A. However, the toxi-

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city and cerebral anoxia associated with his chest illness were necessary for the development of the Capgras symptoms. In this case other people as well as the loved object were included in the syndrome, but they were really 'logical' extensions of the initial failure of proper identification of Mrs. A. The cure of his mental state coincided with the resolution of his pneumonia, and the symptoms have not returned in 1½ years.

Case 2

A 28-year-old spinster, who had been admitted to a general medical ward of the Royal Victoria Hospital, Belfast, with a history of three weeks' depression, and a day's vomiting one week previously, followed by a right-sided hemiplegia, was seen in the Neurosurgical Unit.

She had suffered from headaches since childhood, and these were always preceded by a feeling of nausea and dizziness and followed by a left-sided throbbing sensation which on occasions lasted for several days.

Investigations, which included Hb. and blood count, ESR, block analysis, ECG, fasting blood sugar, lumbar puncture with CSF examination, brain scan and virus studies, all gave negative or normal results. EEG was mainly irregular and of alpha type (8–10 c/s), but there were some slow theta (2–5 c/s) waves bilaterally but more prominently on the left side. Her articulation and mobility had improved considerably, but I was asked to see her three weeks after her admission because of difficulty in getting her to eat or to converse with those responsible for her care or to her mother when visiting. She talked quite freely to me (allowing for some spasticity still present), but I was a total stranger whom nevertheless she recognized as a doctor. She had become convinced that the nursing staff had been replaced overnight (there had been no such changes) and that she was going to be poisoned. When her mother had been sent for and had come to see her she felt that the staff had produced a very good imitation of her mother.

She also admitted to a certain difficulty in personal awareness, wondering if it was all a sort of bad dream. She had great difficulty in understanding why she should have a hand attached to a 'lifeless arm', over which she had little control. I tried to explain the stroke mechanism to her as best I could, and she seemed to accept the explanation, at least partially, and started to take some food again. Before her discharge this whole syndrome had fairly well cleared up; there had been further marked improvement in her hemiplegic state and the EEG had reverted to normal.

In view of the past history of migraine, both in the patient and in the family, and of her almost complete recovery, the diagnosis made was that she had had an episode of basilar migraine.

This undoubtedly organic type of case showed an interesting overlap of the Capgras-type symptoms with some depersonalization and doubts about her hemiplegic arm and hand. Interesting also is a perusal of her two former admissions to general medical wards, which show that she could very easily on those occasions have been admitted to a psychiatric unit, one time as a depressive and the other as a hypomanic patient. Her iron deficiency anaemia was treated on both occasions.

Case 3

A 45-year-old steel erector was admitted as a formal patient to my wards. He had been a heavy drinker of spirits for a number of years, a paternal failing also, which was the only evidence of family instability. His marriage of twenty years' duration had been satisfactory, and his only previous admission to hospital had been a year earlier to another psychiatric unit—a six-week stay because of alcoholic hallucinosis. After this he had again resumed work, his record at which was good.

On admission he showed rather a belligerent attitude for several days. He expressed the idea that a couple of days before admission his wife and children had left the house and other persons dressed up to resemble them had come into it. He had accordingly turned these impersonators out of the house. He was convinced that his wife's recent return to work had all been part of a plan to annoy him. He also complained of voices which were trying to make a fool of him.

This alcoholic paranoid state, which included the delusion of replacement of his wife and family by identical people, cleared suddenly ten days after admission, when he had been thoroughly detoxicated and given intramuscular injections of vitamins and tranquillizers. He admitted to having been drinking beer again for two months and more than one bottle of whiskey daily for three weeks at least before his present admission.

Here again the organic factor was necessary in the production of the masquerade syndrome. Only when the patient had become well physically did it disappear. There has been no

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recurrence of the syndrome and no alcohol intake in the 15 months since discharge.

These three cases led to the review of a former patient whom the author had treated in 1966 in St. Luke's Hospital, Armagh.

Case 4

This 44-year-old lady was admitted for the fifth time because of a recurrence of endogenous depression. Because ECT and anti-depressant drugs had formerly seemed to be only partially successful, it was decided to concentrate less on physical methods of treatment and more on the social aspects. Six weeks after admission she suddenly became deluded that she was about to be hanged, and for two weeks she was convinced that both the hospital and the staff were exact replicas of what she had known them to be. She was correctly orientated in time, but in her distraught stage pleaded that we would not torture her, we being masqueraders with obviously evil intent. The Capgras syndrome, which persisted for three weeks, was accompanied for a period by organic signs, such as perserveration and spatial disorganization in tests, for example drawing a house, tests of laterality, etc.

Her condition remitted when she was given pericyazine. However, after a further two months the Capgras syndrome returned: 'I feel you are not Dr. MacCallum. You are someone dressed up as Dr. MacCallum.' On this second occasion her ESR was 47 mm. in the first hour, and it was found that she had a buttock abscess; this responded to penicillin. A finding of a diabetic glucose tolerance curve led to proper treatment. Review of the investigations carried out when she first developed the Capgras syndrome showed that she was low in folic acid at that time (serum level 2·6 mg./ml.).

This case had two episodes, during a depressive illness, in which the building, as well as people, was included in her Capgras disturbance. Initially the credit for her improvement was given to the pericyazine, but she did not respond permanently until her diabetic state was controlled, and the abscess treated.

Case 5

The only other case of the syndrome in the author's practice has been a 75-year-old spinster, seen on a domiciliary visit, who was upset at the thought of re-housing; she showed a paranoid state without any definite signs of dementia. However, in view of the fact that she had been refusing food because she was convinced that the home help had been replaced by an identical masquerader, malnutrition was a possibility. She did, however, accept placement in a welfare home, and the symptoms disappeared.

Discussion

At a recent Royal College of Psychiatrists' meeting, Enoch (1972) maintained that the title 'Capgras syndrome' should be reserved for the delusional misidentification and replacement by an identical double in a clear sensorium, and this without organic basis, i.e. in a setting of functional illness with a psychodynamic interpretation.

The fact that the author has personally treated five cases presenting with Capgras symptoms and that at least three of these had definite organic causes, leads one to suspect that the symptom complex is not nearly so rare as is commonly stated. An attempt should always be made to look for organic factors, despite the presence of apparently appropriate psychopathology, such as was present in Case 1 and possibly Case 4. It is generally accepted that changes in affect as well as in perception can be caused by organic factors, and therefore there seems no good reason to limit the mood changes in the syndrome to a setting of the functional psychoses.

Two recently published cases by Nilsson and Perris (1971) and Bland (1971) were explained on psychodynamic lines. The first case, however, occurred in a setting of depression associated with childbirth and therefore raises the possibility of hormonal changes having an effect. Moreover pneumoencephalography indicated 'a slight atrophy of the right temporal lobe'.

To confine interest to those cases where no organic cause can be elicited is to limit the syndrome too narrowly, and seems to miss the point that both psychodynamic and physical causes can produce an overlap of symptoms. By widening the concept one can make a useful analogy with 'the schizophrenia-like psychosis of epilepsy' described by Slater and Beard (1963). These authors showed that some cases formerly considered as schizophrenic are in fact epileptic. Case 2 presented here showed a very interesting mixture of Capgras symptoms with depersonalization and anosognosia.

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Coleman (1933) added a new dimension to the Capgras syndrome when he described a case in which it was not the actual person who was said to have changed but the letters written by that person. Case 4 showed an extension of the delusion of doubles to the hospital building—a new departure in the symptom-complex.

Summary

Five cases are presented showing a variety of colourings to the Capgras syndrome. Three of these cases had a definite organic basis, and in the other two cases physical causes may also have been present to a significant degree. The author believes that a physical lesion should be energetically sought in all cases, even where there appears to be a satisfactory psychopathology, and produces evidence to support this viewpoint.

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