occipital lobe lesions. Increasing the dothiepin to 250 mg daily produced improvement in mood, appetite, anhedonia, attention and concentration but not in self-neglect, poor short-term memory or loss of abstract thought. Spontaneous complaints about soreness of the eyes became less frequent although they were still present on direct questioning.

In 1990, the patient remained free of major depression in spite of the subsequent withdrawal of antidepressants. She did, however, become increasingly apathetic and now requires regular domiciliary care.

Discussion

Typically, patients with DFT present with early personality change, loss of social skills, disinhibition and apathy. At interview they show a loss of rapport, and a flat or bland affect. Hypochondriacal, obsessional or paranoid delusions occasionally occur. In later stages they show deficits in the areas of speech, reading and writing, with loss of insight. Unlike individuals suffering from Alzheimer's disease, those with DFT have few neurological signs other than the release of primitive reflexes. Characteristically, visuospatial ability is preserved. The electroencephalogram (EEG) is normal. SPECT images show abnormalities in the anterior hemisphere while in Alzheimer's disease the abnormalities are in the posterior areas (Gustafson & Nilsson, 1982; Gustafson, 1987; Neary *et al*, 1988; Neary, 1989).

Two patterns of behaviour in patients with DFT have been described: one is of apathy, slowness, aspontaneity and inertia, and the other of restlessness, overactivity, distractibility and disinhibition. The course is variable with a mean duration of eight years. As in Pick's disease there are three stages: an initial stage of disinhibited behaviour associated with restlessness and overactivity; progressive apathy with deterioration and lack of spontaneity; and a terminal stage of profound dementia characterised by apathy and mutism (Gustafson & Nilsson, 1982; Gustafson, 1987).

The patient described in this report was in some ways atypical in that she developed a depressive illness; characteristically individuals with DFT present with a blunting or fatuousness of affect (Neary *et al*, 1988). Treatment of her depressive symptoms led to an improvement of mood and social interaction. This emphasises the need to exclude an underlying organic brain disorder in depressive illnesses which respond poorly to adequate treatment, as well as the importance of treating depressive symptoms in patients with dementia of any form. In this patient the lifting of mood however did not lead to any change in self-care or delusional ideas concerning the eyes.

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*Stephen Kisely, MB, ChB, MSc, MRCPsych, FRANZCP, *Lecturer, University Hospital of South Manchester, Withington Hospital, West Didsbury, Manchester M20 8LR*; Deborah Tweddle, *Medical Student, University of Manchester*; Elizabeth Wyn Pugh, MBBS, MRCOG, MCRPsych, *Consultant Psychiatrist, North Manchester General Hospital*

*Correspondence

Capgras and Koro

MARCELLINO G. SMYTH and CHRISTINE DEAN

The concurrence of Capgras and koro syndromes in a man with affective disorder is reported.
British Journal of Psychiatry (1992), **161**, 121–123

The Capgras syndrome involves the delusion of misidentification such that individuals closely related to the subject are alleged to be identical impostors (Capgras & Reboul-Lachaux, 1923). Koro involves the belief of genital retraction, with disappearance into the abdomen and a fear of impending death (Yap, 1965). As the literature for both syndromes has expanded to record wider clinical associations,

https://doi.org/10.1192/bjp.161.1.121 Published online by Cambridge University Press

the evidence suggests that both are symptom complexes which are liable to occur in a wide variety of illness settings.

The present case records the previously unreported concurrence of Capgras and koro in a subject with underlying affective disorder.

Case report

The patient was a 23-year-old man of West Indian parentage. A police referral followed his attempt to escape persecution by his father. He had dived headlong from a first-floor window at home, in the belief that his father was an impostor, and that his only salvation from murder by this impostor was to escape home and find his real father.

Urgent domiciliary assessment found him free of serious injury but extremely agitated and fearful. He said that he was terrified of the harm his father would inflict on him. He believed that his sisters sleeping upstairs had been strangled by this impostor, and he paced around the room clutching his penis, adamant that it was disappearing into his abdomen.

Three months beforehand, he had travelled to Canada with his father and had been sullen and withdrawn on return. He had not wanted to go on this holiday but his father threatened to disown him if he backed out. Since that time, his family found him depressed, preoccupied with unemployment, and considering himself to be a social failure. He refused to talk to his father on Father's Day and had become increasingly unpredictable, overactive, and anxious. He left the family home the night before admission and walked some miles in the early hours to visit his godfather, in order to locate the whereabouts of his 'real' father. He walked by canal routes in order to avoid detection by his 'impostor' father who he felt was trying to kill him with his car.

His previous psychiatric history was confined to one episode of hypomania three years previously. This was managed on an out-patient basis and responded to oral neuroleptics. At that time also he had been worried about persisting examination failures and employment difficulties. He was discharged well from follow-up after one year.

The patient is the third of five siblings. His father is a factory worker who is anxious that his children succeed in British culture. His mother is a housewife described as more protective and affectionate than her husband. The patient has always lived in the parental home.

The patient's birth in the UK and early development was normal. He described a happy childhood only shadowed by shyness and unassertiveness in adolescence particularly with females. Having failed his school-leaving examinations, he embarked on further education to remedy this, but by the age of 23 he was still unsuccessful. He had no history of sexual relationships. His premorbid personality was recorded as that of a quiet, shy and polite young man with a stable mood. He had only a limited alcohol intake (restricted by his lack of friends) and no involvement with illicit drugs.

His mental state was dominated by a fearful affect and restless overactivity. His speech involved rapid changes of topic. The delusion of substitution of his father was held with absolute conviction and he said that this impostor had replaced him for the past 20 years. He suffered from threatening second-person auditory hallucinations. He held his 'disappearing' penis and pleaded for help, despairing of ever being able to obtain sexual experience. The leap from the window had been prompted by panic and escape motives and he denied any suicidal intent.

The diagnosis was felt to be an acute psychotic state with features of paranoia, Capgras misidentification and koro. A physical examination was normal. Routine blood and endocrinological investigations were normal, and an electroencephalogram and computerised tomography scan were normal.

He was treated with neuroleptic medication (thioridazine) and ceased protecting his penis after 24 hours. The delusional misidentification persisted for one week, by which time he still had symptoms of resolving mania. One month afterwards, while on maintenance fluphenazine, he complained of frank depression with accompanying biological symptoms. There was no recurrence of delusional ideation. A diagnosis of bipolar affective disorder was felt to be substantiated and he was commenced on lithium prophylaxis alone. He has complied for two years without any recurrence of symptoms and is currently employed as an apprentice plumber.

Discussion

In this case the essential features of both Capgras and koro syndromes are demonstrated, providing a further challenge to the specificity of both as distinct nosological entities.

The Capgras misidentification has been identified in a wide variety of illnesses, including functional psychosis, organic conditions, and medical and endocrine conditions (e.g. Berson, 1983). Regarding koro, many reports have indicated its occurrence in non-Chinese subjects. While the majority of cases have an indisputable cultural origin, others present in the context of acute anxiety states (Yap, 1965), or as an overvalued idea or delusion accompanying affective disorders, schizophrenia or organic disorders (e.g. Devan & Hong, 1987; Durst & Rebaudengo, 1988). The non-culture-bound occurrences (as in this case) are characterised by absence of the complete syndrome in most cases (penile shrinkage not always accompanied by disappearance into the abdomen, or the fear of death), resolution in step with the underlying illness and in younger patients, prominent psychosexual conflicts (e.g. Devan & Hong, 1987).

As affective disorder has been described in relation to both syndromes (e.g. Berson, 1983), the presence here of an underlying mood disorder provides an acceptable explanation behind the combined occurrence. Recent research by Thase *et al* (1988) makes the koro aspect less coincidental. He found that in depressed men, there was a significant

https://doi.org/10.1192/bjp.161.1.121 Published online by Cambridge University Press

association between affective disorder and diminished penile tumescence. Oyebode (1986) had previously related diminution of penile size to subjects' awareness of shrinkage, in terms of a psychophysiological dysfunction.

Apart from the functional psychoses (affective in this case) it is of interest that similar pathogenetic mechanisms have been invoked separately for both syndromes. These have been organic lesions and depersonalisation. Both syndromes have been reported in relation to organic brain disorders. Koro has now been described in various organic conditions (including a tumour of the corpus callosum (Durst & Rebaudengo, 1988)). No organic contribution was detected in our case. While Berson (1983) stated that there was no neuroanatomical conformity to reports of Capgras implicating organic conditions, Ellis & Young (1990) re-examined the association with prosopagnosia and occipito-temporal lesions. They proposed a defect in dorsal facial recognition pathways. The affective component involving the conflictual father–son relationship in this case (traditionally regarded in psychodynamic terms) can be integrated with such an organic formulation in that desynchronisation may occur between the affective meaning of recognition and facial recognition itself (Anderson, 1988).

Depersonalisation has featured in pathogenetic explanations for both syndromes. As the depersonalisation involved, partial in koro (Yap, 1965), and projected in Capgras (O'Reilly & Malhotra, 1987), is different in form, and is as yet an ill-understood non-specific phenomenon, it provides only a tentative and theoretical link between the concurrence of both syndromes.

Finally we considered 'disturbance of the body image' as a unifying aspect. Mellor (1988) cited koro in considering the role of depersonalisation in contributing to disturbances of the body image. Chowdury (1989) demonstrated the perceptual constancy of 'dysmorphic' penile image using graphomotor tests in a group of koro subjects. While koro does lend itself to consideration as localised body-image disturbance, Capgras syndrome is less immediately amenable to such an interpretation. We note that explanations involving prosopagnosia (e.g. Ellis & Young, 1990) and autoscopy (Christodoulou, 1978) have been advanced for this misidentification symptom. Berson (1983) highlights the numerous reports of Capgras involving duplication of the self, although these are not a feature of the present case. Recent proposals by Silva *et al* (1990) may endorse the consideration of Capgras as a disorder of body image. They suggest a revised classification system for the misidentification syndromes based on the patient's belief about the degree of constancy of the physical and psychological self. If the vexed concept of body-image disturbance is expanded to include internal and external change in physical or psychological identity (as occurs in the misidentification syndromes) then the combined presentation of Capgras and koro is less surprising.

The literature on both syndromes highlights the underlying mood disorder as the most relevant explanation. As for the question of body image disturbance, Sims (1988) argues that the route most likely to achieve unification in this area is that of further reports of phenomenological psychopathology.

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*Marcellino G. Smyth, MRCPsych, *Senior Registrar, West Midlands Regional Health Authority, Uffculme Clinic, Mosely, Birmingham*; Christine Dean, BA, MD, MRCPsych, *Senior Lecturer, Department of Psychiatry, University of Birmingham*

*Correspondence

https://doi.org/10.1192/bjp.161.1.121 Published online by Cambridge University Press