## CAPGRAS' SYNDROME AND CEREBRAL DYSFUNCTION

DEAR SIR,

Doctors Hayman and Abrams (1) in their article of the above title have suggested that prosopagnosia (face non-recognition) could be due to specific cerebral dysfunction, and MacCallum (1973 (2) has reported a case of 'Capgras' Syndrome' caused by cerebral anoxia due to broncho-pneumonia. In this connection I wish to report the following case:—

An 85-year-old married man was admitted with a history of confusion of a day's onset when he misidentified his wife as a strange woman and thought his true wife had been taken away from him by an outside agency and that this strange woman was acting for that agency. He had a history of being depressed before and was being treated by his general practitioner with amitriptyline 25 mgms t.d.s. for the preceding three weeks. On admission he had a pulse rate of 46 per minute, and apparently had been told when in the Army, that he always had a slow pulse. An ECG showed complete heart block with coupled ventricular ectopics. Amitriptyline was discontinued and his confusion improved. It was thought that this episode of confusion and prosopagnosia was probably ischaemic secondary to an arrhythmia caused by amitriptyline. He was referred to a cardiologist who put in a pacemaker, and has since been physically and mentally well.

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### References

(1) HAYMAN, MARTIN A. & ABRAMS, RICHARD (1977) Capgras syndrome and cerebral dysfunction. *British Journal of Psychiatry*, **130**, 68–71.

(2) MACCALLUM, W. A. G. (1973) Capgras symptoms with an organic basis. *British Journal of Psychiatry*, **123**, 639–42.

### Acknowledgement

I wish to thank Dr M. E. Elsarrag under whose care this patient was admitted, and Dr Gareth Jones for his guidance.

## EEG STUDIES IN MALE POLYGONOSOMIC PSYCHOPATHS (47, XYY AND 47, XXY)

DEAR SIR,

Some data have been reported about polygonosomic patients (i.e. patients with supplementary X or Y chromosome), that suggest the idea of a minimal brain dysfunction (1, 2) which causes more vulnerability to the environment (3). Further data can be obtained with cerebral evoked responses (ER) and event-related slow potentials.

We have studied seven 47, XYY and four 47, XXY adult psychopaths (27 ± 6.6 years), from our psychiatric security setting who had had no previous treatment and compared them with a control group of 11 patients of the same age (27.5 ± 6.5 years). We recorded ER (Visual, Auditory, Somato-sensory) and Contingent Negative Variation (CNV) as usual in our laboratory (4).

The table shows there are some significant differences between 47, XYY and controls, and between 47, XYY and 47, XXY (statistical analysis performed according to non-parametric C1 test of Fisher-Yates-Terry (5). Fewer differences are observed between 47, XXY and control patients (see Table p. 288).

In 47, XYY there is a significantly higher amplitude in the latest components of VER, AER and SER (II = secondary complex related to the integration where latencies are more than 100 ms), and in the After Discharge (AD) as in hypovigil levels of consciousness (such as drowsiness) (6). The amplitude of the earlier components (I = primary complex corresponding to the afferents) is not affected, and there is no significant difference in latencies. ER in 47, XXY do not differ from controls. In 5 out of 11 polygonosomics there is an abnormal CNV (less amplitude and abnormal waveform called 'late CNV' with a persistant negativity after the motor response) as described in some psychiatric disorders (7, 8, 9).

Electrophysiological multiparametric outlines in psychiatric or sociopathic disorders could show some correlations with character features: ER discriminates 'hypovigil' 47, XYY and 'hypervigil' 47, XXY sociopaths with a lesser interindividual variability than in controls; the abnormality of CNV found on both polygonosomics can be related to a motivational dysfunction which indicates some particularities of the subject's attitude in expectancy and stressing situations (8).

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