

LETTER TO THE EDITOR

Cotard delusion after stroke

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Sir,

Delusional syndromes are a rare neuropsychiatric complication of stroke [1]. We report a case of Cotard delusion which has seldom been associated with stroke.

A 72-year-old man, right-handed, with atrial fibrillation and hypertension was admitted due to sudden onset of left hemiparesis. He was a church officer until the age of 66 when his left lower leg was amputated due to peripheral artery disease. There was no personal or familiar history of psychiatric disease. On admission, neurological examination disclosed visual neglect, severe dysarthria with unintelligible speech, left central facial palsy, hemiplegia and hemihypesthesia. Brain computerized tomography showed a recent right fronto-parietal cortico-subcortical infarct (Fig. 1). When he was discharged home 1 week afterwards, he was under treatment with warfarin, digoxin, pantoprazole, simvastatin and lorazepam and hydroxyzine for insomnia. Two months afterwards his speech articulation started to improve. At this point it became perceptible to his family that the patient thought he was dead. As he thought he was dead, he insisted that his son should go to the Tax Department to report his death, because he had to pay the mandatory death tax. When the son tried to argue that he could not be dead because dead people cannot speak, he answered 'I am confused'. When his son auscultated him so that he could hear his own heartbeat, he answered that he

could not do that because he was not a doctor. This delusion lasted for 2 days. There was no evidence of hallucinations, symptoms of depression such as crying, mood changes, anorexia or delirium (fluctuating awareness, memory impairment, disorganized thinking, night worsening). Some days afterwards he had a new episode in which he again stated he was dead. He remembered that a similar situation had already taken place. When the patient attended a medical appointment 1 week afterwards, he asked the physician 'Am I dead or alive?' His mini mental examination score was 22, normal for his education level – 4 years. There was no anosognosia. The remaining neurological examination disclosed the already described deficits except for neglect, which had cleared. Blood analyses were unremarkable. An electroencephalogram with hyperventilation and photic stimulation did not show epileptic activity. No treatment was prescribed to control the delusion. In the following 2 months there was no further recurrence.

In Cotard delusion, the individual insists that he is dead or part of his body has decayed [2]. Delusional patients ignore evidence in an attempt to defend their beliefs. Delusional syndromes have been considered to derive from a failure in reality monitoring. There seems to be an inability to discriminate between externally derived and self-generated

information [3]. Cotard delusion may develop from an anomalous perception caused by a neurological deficit in the affective component of visual recognition [4]. This makes the subject feel unfamiliar with everything around him. Instead of supposing that something is wrong with the external environment, he attributes the responsibility of events to himself [4]. Although mainly described in psychiatric disorders [5], Cotard delusion has occasionally been reported in neurological disorders [2,6]. We found three case reports of Cotard delusion associated with stroke, two with a right non-dominant hemispheric lesion (fronto-parietal and frontal) and one with a left parietal hemorrhagic infarct [2,7,8]. Neuropsychiatric symptoms described in patients with stroke and Cotard syndrome include visual hallucinations, feelings of depersonalization and delusional mis-identifications, which were absent in our patient [2,7,8]. Imaging abnormalities described in patients with Cotard syndrome include diffuse cerebral atrophy and right fronto-temporal and less commonly left parietal temporal lesions [8]. The finding in our patient of a right fronto-parietal cortico-subcortical infarct is in agreement with previous research linking Cotard syndrome with non-dominant cerebral hemisphere changes [8]. Our case report gathers together relevant information regarding the neuroanatomy of Cotard syndrome and its association

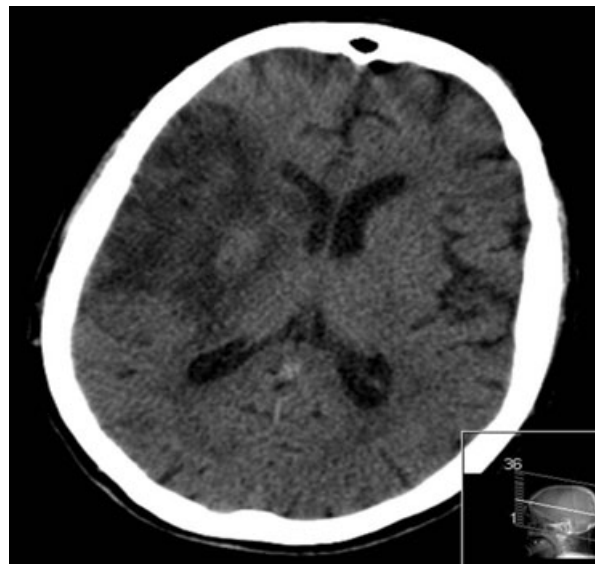


Figure 1 Brain computed tomography showing a recent right fronto-parietal cortico-subcortical infarct.

with non-dominant cerebral hemisphere lesions [8].

Disclosure of conflict of interest

The authors declare no financial or other conflict of interest.

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