

# Kleptomania following hypoxic-ischaemic damage to bilateral caudate nuclei

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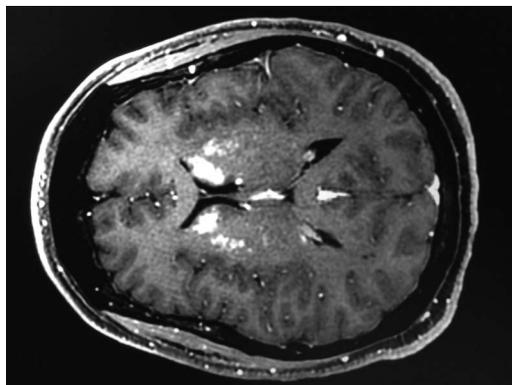
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## DESCRIPTION

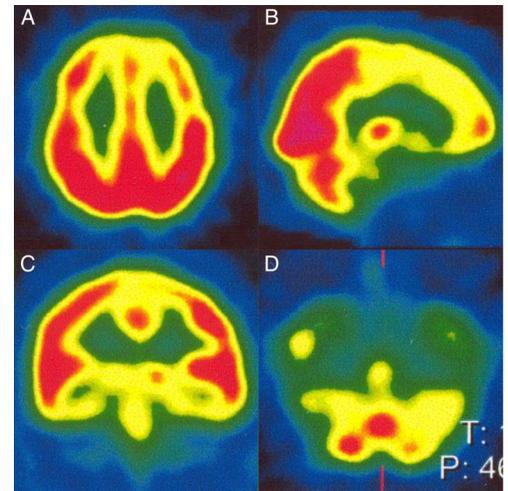
We report a case of a 40-year-old woman, with no history of mental illness or substance abuse, who underwent cosmetic plastic surgery. In the immediate postoperative period, she presented somnolence, disorientation, apathy and memory deficits. Neurological investigation with brain MRI (figure 1) and cerebral perfusion scintigraphy (figure 2) was conducted. The former revealed bilateral nucleocapsular hypoxic-ischaemic injury, while the latter demonstrated relative hypoperfusion in the frontal lobes (figure 2A), anterior portions of the cingulate gyri (figure 2B), basal ganglia (right more than left) (figure 2C) and cerebella (figure 2D). In the following days, she started experiencing recurring intrusive thoughts and an irresistible compulsion towards stealing as well as feeling relieved after the act. This clinical symptomatology resolved a couple of weeks thereafter. She was diagnosed with transitory kleptomania/impulse control disorder.<sup>1</sup>

Hypoxic-ischaemic brain injury has been associated with a variety of neuropsychiatric outcomes. These include cognitive impairment (mainly memory deficits), language dysfunction, as well as behavioural and emotional changes—such as impulsiveness, distractibility, irritability, etc.<sup>2</sup> Specifically, regarding impulse control disorders, there have been a few reported cases of either de novo or worsening kleptomania after traumatic brain injury or neurosurgery, as well as one case of new onset kleptomania following hypoxic-ischaemic injury.<sup>3 4</sup>

In this particular case, kleptomania is believed to be secondary to the failure of inhibition from the caudate nuclei over the circuitry involving the cingulate gyri and frontal areas. This case depicts the generation of neuropsychiatric symptomatology due to neurological sequelae—particularly through imbalance within the limbic system.<sup>5</sup>



**Figure 1** Postcontrast, T1-weighted axial brain MRI demonstrating heterogeneous enhancement in bilateral putamen and head of caudate nuclei.



**Figure 2** Cerebral perfusion scintigraphy reveals relative hypoperfusion in the frontal lobes (A) and anterior portions of the cingulate gyri (B), basal ganglia—right more than left—(C) and cerebella (D).

## Learning points

- ▶ Hypoxic-ischaemic brain injury can cause diffuse damage to the brain resulting in a variety of neuropsychiatric impairments.
- ▶ Hypoxic-ischaemic brain injury to bilateral caudate nuclei can generate kleptomania.

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**Competing interests** None declared.

**Patient consent** Obtained.

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