



doi:10.1136/practneurol-2014-000855

RARE GENES, RARE CONDITION SO WHAT?

The genetics of hereditary spastic paraparesis (HSP) are complicated: 22 known genes are implicated, accounting for up to 30% of cases. Exome sequencing and network analysis identified 18 further genes in 55 families, providing an explanation in up to 75% of families studied. Five of these genes were validated by identification in a further cohort of 200 patients. This permits the identification of biological pathways and processes and may help filter private mutations in other unsolved families. Finally, HSP genes may overlap with genes for Alzheimer's, Parkinson's and motor neurone disease, but not for epilepsy or autism.¹

TRANSLATION, TRANSLATION, TRANSLATION

Education in UK schools is currently the subject of great debate. What may be less controversial, and certainly less publicised, is a recent initiative, backed by the Wellcome Trust and the Education Endowment Foundation, to apply neuroscientific findings to the school environment. Factors such as sleep quality, starting the day later for teenagers, and the more judicious use of computer-based exercises could potentially benefit students. It remains to be seen whether translating neuroscience into education practice will be less troublesome than into clinical practice (<http://www.bbc.co.uk/news/education-25627739>).

PIE-PHONE?

A Fo Ben is as guilty as anyone of spending too much time fixated on a smart phone, often to the irritation of partners and children. However, as a recent case report suggests, it is possible to take this bond too far. The authors report a patient who

was abusing phencyclidine while using his phone. In response to the ensuing auditory hallucinations, he attempted to swallow the handset (figure 1). Luckily, a skilled surgical team were on hand to extract the phone and the patient made a full recovery. History does not relate the fate of the phone.²

A DISH SERVED COLD

Revenge has long been the last resort of wronged wives and despotic emperors the world over. A recent study into the psychology of revenge suggests that vengeful acts can restore a person's psychological balance. However, the desire for revenge can be long lasting and dysfunctional, leading to destructive acts, such as murder. The authors also suggest although revenge is rare, it often does not satisfy the need for retribution. A fascinating discussion of the psychology of why letting bygones

be bygones is probably better for our long-term mental health.³

GRAND THEFT NEURO

The world of computer gaming increasingly collides with that of neuroscience, not only because such research can increase the impact factor of the journals in which it is published (*Carphology passim*). In a recent neuroimaging study, researchers investigated changes in white matter in response to driving the same track in a computer game for 2 h. Subjects showed a change in the structural integrity of the fornix, which was not there in people who had spent 2 h driving around a number of different tracks in the same game. What these changes reflect is unclear, even though the authors also present histological data from a similar study in rats. Disappointingly, the rats weren't asked to play the computer game.⁴



CrossMark

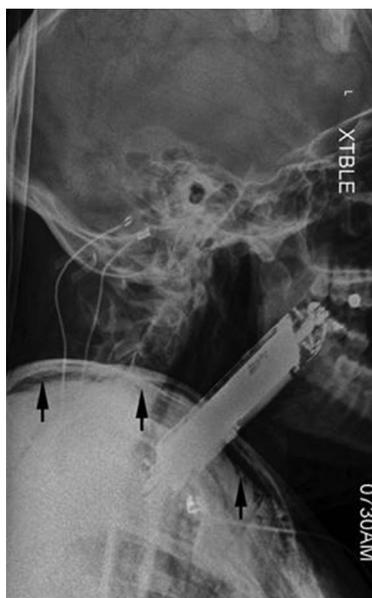


Figure 1 This rings a bell. Lateral neck X-ray: arrows show bilateral pneumothoraces.

REFERENCES

- 1 Novarino G, Fenstermaker AG, Zaki MS, *et al*. Exome sequencing links corticospinal motor neuron disease to common neurodegenerative disorders. *Science* 2014;343:506–11.
- 2 Levy Z, Jesus J, Osborne A, *et al*. A man with drug-induced psychosis attempts to swallow his cellular phone. *Intern Emerg Med* 2013;8:541–2.
- 3 Grobbink LH, Derksen JJ, van Marle HJ. Revenge: an analysis of its psychological underpinnings. *Int J Offender Ther Comp Criminol* 2014. [Epub ahead of print].
- 4 Hofstetter S, Tavor I, Tzur Moryosef S, *et al*. Short-term learning induces white matter plasticity in the fornix. *J Neurosci* 2013;33:12844–50.