

Gambling

Gambling may be defined as any game of chance involving financial stakes and an element of risk. Such games are common in our society, either using ones own money (e.g. the National Lottery, betting on horse or dog racing, visiting a casino or on-line gambling) or, better, other people's money (e.g. banking, insurance, the Stock Market). Gambling as a form of risk-taking and decision-making, is of interest to neuropsychologists and may be characterised as an executive function task,¹ amenable to testing with instruments such as the Iowa Gambling Task (IGT)² and the Cambridge Gamble Task.³ The neuroanatomical substrates of such decision making are believed to encompass the prefrontal cortex and the amygdala.

Gambling may be defined as pathological when greater risks are taken and potential losses are correspondingly greater. DSM categorises pathological gambling as an impulse control disorder. A famous 'sufferer' from this 'addiction' was the author Fyodor Dostoevsky, who wrote a novella, *The Gambler* (1866), on the subject (in just 26 days). Pathological gambling may also be a reflection of brain disease and its treatment.

A number of reports of pathological gambling in patients with Parkinson's disease have appeared, the common factor apparently being treatment with various dopamine agonists.^{4,5} Whether the small numbers of patients reported in these case series simply reflect the population prevalence of gambling behaviour, irrespective of treatment, or whether the numbers of PD patients with 'problematic gambling' are in fact much higher (e.g. 10% of patients prescribed dopamine agonists in the west of Scotland⁶) remains to be clarified. Certainly cases may be seen outwith dedicated PD treatment centres: I have seen two such patients in district general hospital clinics, both with debts exceeding £10000, who were able to conceal their activities from family members for long periods of time.⁷ IGT performance may be impaired early in PD suggesting ventromedial prefrontal cortical dysfunction.⁸

If gambling is an executive function, then one might anticipate that frontal lobe pathology would be associated with impaired performance on tests of gambling.³ This is the case in patients with frontal variant frontotemporal dementia (fvFTD) who have been shown to display risky decision-making, even in early disease and without evi-

dence of behavioural disinhibition or impulsiveness.⁹ FTD presenting with pathological gambling has been reported.¹⁰ Risk-taking behaviour in fvFTD may be ameliorated by methylphenidate.¹¹ In contrast to fvFTD, successful gambling may be preserved in other focal frontotemporal lobar degeneration syndromes. A patient with semantic dementia seen in this clinic,¹² who is now essentially mute, continues to bet on the horses with, according to his wife with whom he shares half his winnings, no tailing off in his success rate; the bookies have noticed he says little but believe he has had a stroke.

References

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AJ Larner
Walton Centre for Neurology and Neurosurgery,
Lower Lane,
Fazakerley,
Liverpool,
L9 7LJ,
UK.

Correspondence to:
Dr Larner,
Email: a.larner@
thewaltoncentre.nhs.uk

Awards and Appointments

Professor Gavin Giovannoni and Professor David Baker have moved from the Institute of Neurology, Queen Square, to take up joint appointments at the Institute of Cell and Molecular Science, Queen Mary University London.

Gavin Giovannoni has taken up the Chair of Neurology, with a joint appointment at Barts and The London NHS Trust. Gavin did his undergraduate medical training at the University of the Witwatersrand, South Africa. He moved to the Institute of Neurology, Queen Square, London in 1993 after completing his specialist training in neurology. He was awarded a PhD from the University of London in 1998. David Baker has a personal chair in neuroimmunology. He received his BSc in Zoology from Bedford College, University of London in 1983. He trained in immunology at The Hunterian Institute, University of London and received his PhD in



Professor Gavin Giovannoni Professor David Baker

1987 for studies on control of immune responses in delayed hypersensitivities of the skin.

David Baker developed a novel relapsing-remitting model of MS in the late 1980s, which closely mimics the clinical disease course of MS. Using this model he has discovered a particularly effective immune tolerance strategy to treat antigen-specific autoimmunity, which he hopes

will translate into clinical practice.

Their research programme includes MS-related neurodegeneration, MS biomarker discovery, neutralising anti-interferon beta antibodies as model of human autoimmunity, immune tolerance strategies and antibody mediated autoimmune disorders of the central nervous system. They currently hold a programme grant from the US National MS Society and the MS Society of Great Britain and Northern Ireland to investigate novel neuroprotective and neurorestorative therapies in patients with MS.

We would like to publish more awards and appointments in future issues of ACNR. If you know of someone who should be considered for this feature, please send details to Rachael@acnr.co.uk