

Pandora searches world literature and other sources for evidence, news and matters of interest to bring the reader (and doesn't shy away from controversy). She welcomes comments and suggestions (via [ip@rcpsych.ac.uk](mailto:ip@rcpsych.ac.uk)).

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### *Antipsychiatry under fire*

Psychiatry, more than any other medical specialty, has been under attack from its very conception to the present. In the liberal 1960s, the antipsychiatry movement flourished, with well-known figures within the profession such as the psychiatrists Thomas Szasz, R. D. Laing, David Cooper and others questioning the validity of its diagnostic and treatment methods and its legitimacy as a medical specialty.

At the very heart of the antipsychiatry movement is the claim that diagnostic methodology and psychiatrists' ability to distinguish normality from 'insanity' are flawed. A highly influential experiment by David Rosenhan in 1973 claimed a 'harrowing' experience by a group of pseudo patients admitted to psychiatric hospitals in the US. Rosenhan claimed to have recruited eight volunteers, including himself, who presented to various psychiatric hospitals in the US complaining of hearing voices. Following admission, they behaved normally. He claimed they were, all but one, diagnosed with 'schizophrenia in remission' on discharge up to 52 days after admission.

Hans Pols (from the School of History and Philosophy of Science, University of Sydney, Australia), in an article in *Science*, criticises antipsychiatry, quoting a book by Susannah Cahalan, who discredited Rosenhan's claims after a thorough investigation of his study methods and outcome. She obtained Rosenhan's data and notes from his son and others who worked with him (Rosenhan died in 2012) and was able to trace and interview three of the pseudo patients involved in Rosenhan's experiment in 1973; she was unable to trace the rest of the group and, taking into account some of Rosenhan's notes, she doubts they ever existed. She found that the experience of those interviewed was far from 'harrowing' and could even be considered as pleasant. All of them stated that they left hospital when they felt like it, they did not stay as long as the claimed 52 days and were not labelled as schizophrenic.

It's time for us psychiatrists to stop being defensive and take pride in our specialty and our skills in diagnosing and treating our patients in the absence of biomarkers. Hopefully, these will become available in the near future, given the rapid progress in the neurosciences.

Pols H. (2019) Undercover in the asylum; a defining antipsychiatry text comes under fire. *Science*, 366, 697.

Cahalan S. (2019) *The Great Pretender: The Undercover Mission that Changed our Understanding of Madness*. Grand Central Publishing.

### *Is playing football bad for your brain?*

It is well known that professional boxers often suffer brain damage through repeated knocks to the head ('punch drunkenness'). It has been noted in the past 10 years that a significant

number of retired soldiers and American football players show signs of chronic traumatic encephalopathy, a neurodegenerative disease, which is characterised by an accumulation of tau protein in the brain. Clinically, this presents as depression and cognitive decline and over the years it can also cause motor deficits. The definitive diagnosis can only be made post-mortem by identifying tau protein in the brain.

A study in California claimed that a single season of high school American football caused microscopic changes in the brains of the players. The investigators carried out brain scans using a new type of magnetic resonance (diffusion kurtosis, which is capable of examining the intricate neural tangles of the grey matter) in 16 high school football players, aged 15 to 17, before and after one season of football. All players wore helmets while playing, and accelerometers were placed inside the helmets to measure the number and position of any impacts. It should be noted that none of the players sustained a concussion. Nevertheless, the researchers found significant changes in the structure of the brain in the areas most likely to sustain impacts, not only in the front and posterior areas of the grey matter of the brain but also in deeper brain regions such as the putamen and thalamus. Further tests showed no evidence of cognitive impairment for the duration of the football season.

Clearly, repeated blows to the head can cause microscopic changes to teenagers' brains. However, given that the young brain is still developing, how these changes will progress is unclear. Will they adversely influence brain maturation, or will the developing brain remedy these abnormalities?

It should also be asked whether conventional football could be associated with similar changes, and whether adult footballers' brains can be affected in similar ways after repeated blows to the head.

Gong N.-J., Kuzminski S., Clark M., et al (2018) Microstructural alterations of cortical and deep gray matter over a season of high school football revealed by diffusion kurtosis imaging. *Neurobiology of Disease*, 119, 79–87.

### *Should antipsychotic treatment be used in delirious patients?*

It has been the practice for many years to use antipsychotics – in particular, haloperidol – to prevent or treat delirium in adults. Delirium by definition is a state of mental confusion that develops quickly and tends to fluctuate in severity, and it can be associated with delusions and hallucinations. It occurs in one in ten patients admitted to hospital. The causes are multiple and diverse and include infections, post-operative state, drug treatment with psychotropic and other drugs, dehydration and alcohol withdrawal.

Is the practice of using antipsychotic drugs to treat this diverse condition really effective? A systematic review carried out at The Johns Hopkins University examined the benefits and harm of antipsychotic drugs used for the prevention and treatment of delirium in an adult patient population. The investigators included randomised controlled trials of antipsychotics that evaluated benefits or harms, and also observational studies that considered harms. They found that the effects of haloperidol and second-generation antipsychotics on the length of hospital stay were no different to those of placebo. There was little or no evidence to determine the effect of antipsychotics on the severity of delirium or cognitive function. Worryingly, however, cardiac effects – in particular, prolongation of the QTc interval – occurred more frequently with antipsychotic treatment; interestingly, this was more so with second-generation antipsychotics. Is it time to review the treatment of delirium?

Neufeld K. J., Needham D. M., Oh E. S., *et al* (2019) *Antipsychotics for the Prevention and Treatment of Delirium*. Comparative Effectiveness Review No. 219. Agency for Healthcare Research and Quality.

### ***Contraceptives can make adolescents and young women depressed***

The contraceptive pill has liberated women, but it has been associated with a number of physical health problems, in particular, vascular thrombosis. An association has also been found

with the development of later depression, particularly in younger women.

A recently published study endeavoured to examine the association between oral contraceptive use and concurrent symptoms of depression in adolescents and young women. The study followed a cohort of 1010 females, aged 16 to 25, on oral contraceptives over a period of 9 years. Depressive symptoms were assessed using the DSM-IV-oriented affective problems scale of the Youth (aged 16 years) and Adult Self-Report (aged 19, 22 and 25 years). Use of oral contraception did not show any association with depressive symptoms when the participant age groups were assessed as a whole. However, when separate age groups were examined, an association was present in the 16-year-olds, who had higher scores for depressive symptoms when using contraception compared with same-age girls who were not on oral contraception.

The authors recommend monitoring adolescents for depressive symptoms, as these may affect their quality of life and risk of non-adherence. Further studies are needed to examine whether these early depressive symptoms could predict later depressive illness and, if so, whether alternatives to oral contraception should be considered.

De Wit A. E., Booji S. H., Giltay E. J., *et al* (2019) Association of use of oral contraceptives with depressive symptoms among adolescents and young women. *JAMA Psychiatry*, doi: 10.1001/jamapsychiatry.2019.2838.