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Short report

Pathological gambling and the treatment of psychosis with aripiprazole: case reports

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Summary

This paper details three case reports that suggest that pathological gambling activity may have been adversely modified following treatment for psychosis with the antipsychotic aripiprazole. These reports are discussed in the context of previous observations of the potential impact of aripiprazole on impulse control and the implications such observations could have for clinical practice and future research.

Declaration of interest

The authors are employed in the NHS in a service providing help for problem gamblers.

Aripiprazole is an atypical antipsychotic licensed for the treatment of psychosis and some mood disorders, acting as a partial agonist at dopamine receptors, with particular affinity for receptors D_2 and D_3. Recent reports have described the emergence of unexpected changes in behaviour attributable to the initiation or continuation of aripiprazole, relating to reductions in impulse control. Here we report three cases of individuals presenting for cognitive–behavioural therapy for pathological gambling at the National Problem Gambling Clinic, whose gambling activity appeared modified following treatment for psychosis with aripiprazole. All three agreed to publication of their anonymised cases.

Case study 1

J was referred to the clinic aged 29 and was taking aripiprazole 5 mg for the treatment of paranoid schizophrenia. He reported a 12-year history of regular gambling and was gambling daily at the time of assessment. In his first treatment session he described feeling that the medication had caused an escalation in his gambling and had discontinued taking it. J managed to stay abstinent from gambling for the next 4 weeks, with the exception of one lapse. Two weeks later he was placed back on aripiprazole 15 mg following a relapse of psychotic symptoms and subsequently reported the return of strong urges to gamble that he found difficult to resist. He was pre-occupied with thoughts of gambling and his gambling activity became both impulsive and involved extensive planning in obtaining funds to gamble, including the use of crime. Following discussions with his psychiatrist, J was changed to quetiapine 400 mg and later to sulpiride 600 mg. He subsequently reported a qualitative change in his gambling, with an absence of ongoing thoughts and plans to gamble. This abstinence had been maintained when J was followed up 6 months later.

Case study 2

K referred himself to the clinic aged 28 and had previously been diagnosed with schizoaffective disorder. At assessment, K described a history of gambling on fruit machines as a teenager and fixed odds betting terminals in his twenties. He would usually gamble two or three times a week, spending about half of his money, but reported a change in his gambling following a hospital admission 10 months earlier. During the admission his medication was changed from risperidone to aripiprazole 15 mg. On leaving hospital, approximately 3 months after the prescription of aripiprazole, K described an escalation in his gambling to the extent of spending all of his money and it being 'a reason to live'. By the time he presented to the clinic he had limited his access to money but described spending 8 h a day searching the internet for free gambling opportunities. Following a recommendation to his psychiatrist, his medication was changed to quetiapine. K reported this having a 'massive impact' on his gambling. By treatment end 3 months later, he felt no pre-occupation or compulsion to gamble and was playing only once per week.

Case study 3

S self-referred to the clinic aged 26 and was taking aripiprazole 15 mg for the treatment of schizophrenia. S had experienced one episode of psychosis in 2002 and had previously taken risperidone. S reported no history of gambling prior to starting aripiprazole in summer 2006. In summer 2007, he began experiencing strong urges to gamble in the form of a euphoric feeling when thinking about gambling. In the following 2 years he incurred debts of around £25 000 on internet betting sites. S was the third individual taking aripiprazole seen since the opening of the clinic. As a consequence of the previous cases, the team wrote to his psychiatrist in the community, suggesting a review of medication. Given the time since his original psychotic episode, the decision was taken to cease all medication. S attended 1 month after discontinuing aripiprazole and reported no thoughts or 'drive' to gamble. He described an inability to reflect on his behaviour when taking aripiprazole and always suspected it had induced his gambling. S completed a gambling craving scale previously adapted from the Penn Alcohol Craving Scale.[1] His score of 13/30 at treatment start had reduced to 5/30 by treatment end, indicating 'rare', 'slight' urges that were 'mildly' difficult to cope with. His abstinence from gambling had been maintained at both 3- and 6-month follow-up.

Discussion

This paper presents three case studies in which aspects of pathological gambling are adversely changed following the prescription of the antipsychotic aripiprazole for the treatment of psychosis. At assessment all three individuals met criteria for pathological gambling according to the Massachusetts Gambling Screen (MAGS).[2] At treatment end, following cessation of

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aripiprazole, two out of the three scored in the 'none' range on the MAGS, with one scoring only as 'problem' gambling. Of the two individuals contactable at 6-month follow-up, both scored in the 'none' range, including the individual scoring previously as 'problem' gambling.

All three individuals reported a positive response in their psychotic symptoms with aripiprazole. However, they also noted distinct changes in their approach to gambling following the initiation of aripiprazole, experiencing strong urges to gamble that seemed qualitatively different from reports from other gamblers. Each individual also reported a clear change in their thinking and behaviour following cessation of the drug, indicated by a return to a more recognisable state of occasional urges that were easier to control.

These observations add to an existing literature of the potential adverse effects on behaviour of using aripiprazole in the treatment of various illnesses. Observed changes have included the development or worsening of obsessive–compulsive symptomotology, hypersexuality and excessive shopping activity in patients treated for schizophrenia, schizoaffective disorder, acute psychotic episodes and bipolar disorder.[3–6]

Of interest to us is the relationship of aripiprazole to pathological gambling. Research has previously established robust associations between the development of this disorder and treatment for Parkinson's disease using drugs with dopamine agonist properties similar to those of aripiprazole.[7,8] Aripiprazole is the only US Food and Drug Administration-approved antipsychotic that acts on the dopamine system in this manner.

It should be noted that in the three cases reported, prescription of aripiprazole is not immediately followed by the onset of pathological gambling. In two cases there was also evidence of problem gambling behaviour prior to the medication being started. The observations do, however, indicate an association between aripiprazole and a reduction in the impulse control relating to their behaviour. The qualitative behavioural changes reported correspond with those from the only other known report in the literature examining pathological gambling and aripiprazole.[9]

To conclude, the case studies suggest further potential side-effects of aripiprazole and emphasise again the need for additional research and for vigilance in its use with individuals exhibiting a history of impulse control-related difficulties.

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