"We Cut and Drink Blood When We Have Sex. Do We Have a Problem?" A Case Report of Atypical Antipsychotic–Treated Paraphilia

To the Editor: Paraphilias are a complex and heterogeneous group of disorders in which sexual deviance is regarded as a medical phenomenon.[1] We present a case of paraphilia disorder with depressive symptoms and suicidal ideations that was ameliorated with risperidone treatment.

Case report. Mr A, a 42-year-old white man, sought help for depression and suicidal ideations. On a detailed interview, the patient revealed his involvement in sexual acts that make him guilty. He reported that he participates in sadomasochistic activity with his partner, that has been involved in sadistic and masochistic activities for the last 2 years, and that he was not involved in those acts prior to that.

Mr A presented with 182 scars on his arms and chest that were very deep and in different stages of healing. He reported that he and his girlfriend of the last 2 years had been involved in cutting and drawing blood from each other's body while engaging in sexual activity. The two also drank each other's blood while involved in these sexual activities, and Mr A reported that cutting and drinking the other partner's blood was the only way for them to reach orgasm. At the time of admission, he reported remorse and depression related to such acts. He was involved in recurrent, intense sexually arousing fantasies and behaviors. There was physical and psychological suffering of self and partner, and these urges and behaviors had been present for the last 2 years. The fantasies and urges were causing impairment in his social, occupational, and other areas of function.

On physical examination, nothing significant was noted except for the aforementioned deep-seated scars in different stages of healing over the chest and arms. No scars were noted on the legs or back. His chest was clear to auscultation bilaterally, and no rhonchi, rales, or wheezing was appreciated. S1 and S2 were heard, and no murmurs were appreciated. On chest x-ray, no infiltrates were observed. A head computed tomography scan showed no acute hemorrhages or masses. His urine drug screen was negative; blood alcohol level was less than 0.03 g/dL. Most of the laboratory results were within normal range. His complete blood cell count and liver function tests revealed no abnormalities, as did urinalysis. Prothrombin time/international normalized ratio was within normal limits. Blood cultures and urine cultures were negative.

Risperidone 2 mg/d was initiated for his major depressive disorder, moderate without psychotic features (*DSM-IV* criteria). The patient reported that he felt better in the next couple of weeks. He reported fewer urges, and the behavior abated; at follow-up after 4 weeks and 8 weeks, Mr A reported abatement of paraphilic tendencies and amelioration of his depressive symptoms. He was also offered psychotherapy, which he declined because of financial problems. His partner refused both pharmacotherapy and psychotherapy.

Paraphilias may present with traits of addictive, impulsive, or obsessive-compulsive disorders or, in general, hypersexuality.[1,2] The terms *sadism* and *masochism* were introduced by the German psychiatrist Richard von Krafft-Ebing in his book *Neue Forschungen auf dem Gebiet der Psychopathia sexualis* ("New Research in the Area of Psychopathology of Sex"), originally published in 1886.[3] Practitioners of sadism and masochism derive sexual pleasure by inflicting and receiving pain, respectively. Sigmund Freud, a contemporary of Krafft-Ebing, in his *Drei Abhandlungen zur Sexualtheorie* ("Three Essays on Sexual Theory," 1905), identified that these 2 entities could be present in the same individual, which led to the development of the term *sadomasochism*.[4–6] Owing to their practice in privacy, sadomasochism and other paraphilias remain largely underreported.[7]

The pathophysiology of sadomasochism and other paraphilic behaviors remains poorly understood and underresearched.[1] It has been implicated that endocrine and temporal lobe dysfunction could underlie sadomasochistic behavior.[8] Moreover, sadomasochism has also been proposed as a potential reliever of physiologic stress as ascertained via salivary cortisol measurements.[9] In addition to endocrine explanations, it has recently been proposed that sadomasochism could be the outcome of aberrant pain pathways, in which the patient acts out to self-medicate by using synesthesia to activate mirror pathways.[10]

Currently, 3 main categories of pharmacotherapeutic options exist for the treatment of paraphilias: (1) antidepressants, (2) steroid antiandrogens, and (3) gonadotropin-releasing hormone analogs.[1] The side-effect profiles of the aforementioned treatment strategies and the endeavor to find a monotherapeutic option for the comorbidities associated with paraphilias require us to find additional putative therapeutic options.

The role of monoamines serotonin and dopamine is well identified in sexual behavior.[11,12] In preclinical models, serotonin impairs male sexual interest and behavior.[13] In subsequent clinical studies, selective serotonin reuptake inhibitors have demonstrated an impairment in ejaculatory and orgasmic function and sexual interest in a dose-dependent manner.[1,14–17] Moreover, serotonin is also implicated in comorbidities associated with paraphilias such as depression and anxiety disorders.[1]

Further support to the serotonin hypothesis in paraphilias is drawn by the similarities between paraphilias and obsessive-compulsive disorder.[18] In addition to serotonin, dopamine is also implicated in sexual disorders.[11,12] The association of dopamine with the reward system of the brain, reinforcement to perform certain activities,[19] and aggressive behavior[20] render dopamine a putative target for paraphilic behavior disorders.

Risperidone, an atypical antipsychotic, in addition to blocking dopamine receptors (D_2), binds with high affinity to serotonin receptors ($5\text{-}HT_{2A}$), which contributes to the lower incidence of adverse effects of dopamine antagonism associated with typical antipsychotics, such as extrapyramidal symptoms (EPS) and elevated plasma prolactin.[21] Undergirded with a possible neurobiological explanation of paraphilias and mechanism of action of risperidone,[22] we gave this patient a trial of low-dose (2 mg) risperidone. As noted, he reported abatement of paraphilic tendencies and amelioration of his depressive symptoms at follow-up after 4 and 8 weeks.

We found no report in the medical literature citing the use of atypical antipsychotics in the treatment of paraphilia. Hence, we hereby report, for the first time, a potential application of atypical antipsychotics, such as risperidone, in the treatment of paraphilia disorder presenting with depressive symptoms and suicidal ideation. Future placebo-controlled investigations are warranted to support plausible use of atypical antipsychotics in the treatment of paraphilia.

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