Treatment of Paraphilic Disorder Using Medroxyprogesterone Acetate

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Paraphilias are a group of disorders defined by abnormal sexual behaviors, thoughts, and interests that can result in immense distress for affected patients and are associated with an increased risk of sex-offending behavior. The societal harm these disorders can cause makes it important to identify effective and reliable pharmacologic treatment methods and to dampen deviant sexual arousal in affected individuals.[1] According to the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (*DSM-5*) criteria, paraphilia becomes a pathology only when this behavior brings significant distress and impairment of functioning to the individual or if it involves personal risk to self or others.[2] The etiology of paraphilias is not well understood, but it is postulated that genetics and psychological factors could play a major role. Most patients with paraphilic disorder are legally mandated or forced by their family or friends to get help with treatment.

Traditionally, the preferred method of treatment for paraphilias is selective serotonin reuptake inhibitors (SSRIs), antiandrogens, and various behavioral therapies. Most of the time, the aforementioned treatments are only partially effective. We need more strategies and interventions to treat this condition effectively.[1] Medroxyprogesterone acetate, colloquially termed "chemical castration" in this patient population, is a relatively recent intervention used to induce feedback inhibition of the hypothalamic-pituitary-gonadal axis, suppress testosterone production, and reduce paraphilic sexual urges.[3] As per a 2015 Cochrane Review,[4] more evidence is needed to firmly make a case for antitestosterone therapy use in paraphilic disorders. Our case report examines the use of intramuscular medroxyprogesterone acetate in 2 patients with exhibitionist and pedophilic urges, respectively.

Case 1

The patient, a 48-year-old man with a history of *DSM-5* schizoaffective disorder, bipolar type, and intellectual disability, was admitted for intentional suicide attempt by aspirin overdose. The patient had multiple episodes of exhibitionism and often waited with his genitals in hand for staff to enter his room. He was, unfortunately, unable to control his urges despite multiple staff redirections. The patient failed initial trials with SSRIs and carbamazepine, as they were less tolerated (SSRIs worsened irritability, and carbamazepine led to hyponatremia and mild rash). He was later started on medroxyprogesterone acetate 150 mg intramuscular (IM) with a gradual increase to 300 mg long-acting monthly injection for his exhibitionism. The patient tolerated the medication well and reported a reduction in urge, and no subsequent episodes of exhibitionism occurred during his hospitalization course. Valproic acid 500 mg twice a day for his mood swings was initiated by the end of the hospital stay, as he continued to have irritability and mood swings without any exhibitionism. The patient was then transferred to another inpatient facility without the potential for follow-up.

Case 2

The patient, a 37-year-old man with *DSM-5* schizoaffective disorder, depressive type, was hospitalized for suicidal behaviors and severe distress over pedophilic urges. He was arrested 18 years ago for possession of child pornography and is currently on the sex offender registry. The patient showed insight into his disorder and threatened suicide if discharged due to fear of harming children. During his hospitalization, the patient was started on carbamazepine 200 mg 3 times daily. He was on sertraline 100 mg daily at the time of admission, and it was eventually increased to 200 mg daily. The patient continued to endorse obsessive pedophilic thoughts and suicidal urge. His baseline serum testosterone, prolactin, estradiol, and estrone levels were 34.8 pg/mL, 17.9 ng/mL, 35 pg/mL, and 37 pg/mL respectively, ie, within normal limits except for estradiol. The patient was started on medroxyprogesterone acetate 150 mg IM; he reported a decrease in pedophilic thoughts, sexual impulsivity, and suicidal ideations 2 days after administration of the medication. The patient did not report any side effects during the rest of his stay or pain at injection site, and he tolerated the medication well. He was transferred to another inpatient facility soon afterward without potential for follow-up.

Discussion

Medroxyprogesterone acetate usage in the treatment of paraphilic disorders is not widespread, and only a handful of reports regarding this regimen are currently available despite the potential of this

treatment for paraphilic disorders and hypersexuality in psychiatric patients.[3] It can also be used as a safe and effective medication to treat hypersexuality and aggression in elderly male patients with dementia.[5,6]

However, medroxyprogesterone acetate injections in male patients may not have gained widespread traction due to side effects of weight gain and fatigue (common), migraine headaches, leg cramps, insomnia, and impotence.[5,7] Other side effects include depression, diabetes, elevation of blood pressure, insomnia, nausea, phlebitis, loss of body hair, hot and cold flashes, and loss of ejaculatory volume.[6] Due to lack of research regarding medroxyprogesterone injections in men, information on side effect profiles and long-term tolerance is scarce. The aforementioned Cochrane Review noted that clinical trials on medroxyprogesterone acetate and its use in urge reduction have not been published in the last 20 years.[4]

Both patients in our report experienced successful reduction of symptoms (exhibitionism and pedophilic thoughts, respectively) after they were treated with medroxyprogesterone acetate injections, and they tolerated the medication well without any side effects during hospitalization. Our first patient responded solely to medroxyprogesterone after failing the initial trials with SSRIs and carbamazepine. In the case of our second patient, it is difficult to conclude whether symptoms improved from medroxyprogesterone alone or in the combination with carbamazepine and sertraline. However, the patient reported a greater reduction of pedophilic thoughts and suicidal ideations after medroxyprogesterone was initiated. Our findings will add to the pool of literature addressing the benefit of medroxyprogesterone acetate use in paraphilic disorder. This case report is limited by lack of observation of the long-term tolerance and effects of medroxyprogesterone, as both patients were not followed up after they were transferred to another facility. In the future, it will be important to perform larger-sample longitudinal studies on medroxyprogesterone acetate use in paraphilic disorders to evaluate tolerance and continued symptom control.

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