

THE PHARMACOLOGICAL TREATMENT OF SEXUAL OFFENDERS

Psychopharmacology Committee Newsletter Column

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As a result of the *Kansas v Hendricks* decision in the US Supreme Court, upholding the civil committal of sexual offenders under sexual predator statutes, the treatment of sexual deviation has become a focus of considerable national interest. The effective treatment of sexual deviants is a complicated issue that involves psychological and pharmacological treatment approaches. Psychiatrists because of their training in medicine and skills in psychotherapy should be ideally suited to treat these individuals as there is general agreement among experts that a combined psychological and pharmacological treatment approach is most effective.

The pharmacological treatment of the sexual offenders is based on the assumptions that the behavior is sexually motivated and that the suppression of sexual drive will reduce the sexually deviant behavior. The goal is to preserve normophilic sexual interests and behaviors while reducing deviant or paraphilic behaviors. This would result in deviant sexual fantasy, urges and behavior being suppressed while non deviant fantasy, urges and behavior would be preserved. Already, pharmacological treatments have been shown to reverse the fundamental pathology in pedophilia; the deviant erotic preference.

Biological treatments, specifically surgical castration and stereotaxic neurosurgery have been used historically in the treatment of sexual offenders to reduce their sexual drive and to prevent recidivism. The studies of these biological interventions have reported low recidivism rates of about 5% following long periods of study. These outcome studies of surgical castration provided the theoretical basis for the understanding the pharmacological treatment of the paraphilias. The biological effect of surgical castration and androgen suppression by antiandrogens and hormonal agents have the same effect on sexual behavior.

The most common pharmacological treatments include: ANTIANDROGENS (Cyproterone acetate); HORMONAL AGENTS WITHOUT A SPECIFIC ANTIANDROGEN PROFILE, (Medroxyprogesterone acetate, LHRH analogues) and the SEROTONIN SPECIFIC REUPTAKE INHIBITORS.

Cyproterone Acetate

Cyproterone acetate (CPA) has antiandrogenic, antigonadotropic and progestational effects. CPA is 100% bioavailable when taken orally with a half life of 38 hours. The injectable form reaches maximum plasma levels in 82 hours and has a half life of about 72 hours. An oral dosage range varies from 50 mg to 200 mg daily, while a parental dosage is 200 mg to 400 mg every 1- 2 weeks. CPA rapidly reduces sexual drive, deviant sexual fantasy and urges. CPA is not available in the USA but is available in Canada. Side effects of CPA include liver dysfunction, adrenal suppression and feminization with gynecomastia. CPA has been shown to be similar to castration in reducing sexual offender recidivism.

Medroxyprogesterone Acetate

Medroxyprogesterone acetate (MPA) is the hormonal agent that has been used most frequently in the USA. The oral dosage ranges are 100 mg to 400 mg per day. The parental dosage starts usually at 400 mg given weekly and then is titrated in frequency and dosage to establish the total plasma levels at about prepubertal levels. Side effects include weight gain, decreased sperm production, a hyperinsulinemic response to a glucose load, gall bladder and gastrointestinal dysfunctions. However desirable effects on sexual functioning were observed, including: reduction in sexual drive, deviant sexual fantasy, sexual activity and urges and possibly aggressiveness. These effects are dose dependent and in the case of MPA the levels of plasma testosterone are very important to the treatment outcome. Meyer, et al (1992) studied 40 men treated with MPA, group and individual therapy.(13) They were mostly pedophiles (n=23). They were treated with MPA for six months to 12 years at a dosage level of 400 mg per week. A control group (n=21) of treatment refusers, were followed over the same period but only received psychotherapy. Eighteen percent reoffended on MPA and 35% after it was discontinued, compared to 55% of the control group. The risk factors for reoffence were elevated baseline testosterone levels, previous head injury, alcohol, and drug abuse.

Luteinizing hormone-releasing hormone (LHRH) analogues also have a role in the treatment of the paraphilias. They produce a "medical or pharmacological castration" by "exhausting" the hypothalamic pituitary axis. Studies are ongoing with these agents and they are likely to have an increasingly important role in the treatment of severe sexual deviation in the future.

SSRI's

An important recent development in the pharmacological treatment of the paraphilias is the use of the specific serotonin re-uptake inhibitors (SSRIs). The role of these agents in the treatment of obsessive compulsive disorders (OCD) has been described in the general psychiatric literature. The consideration of the paraphilias as part of OCD spectrum disorders was first presented by one of these authors (JB) in 1991. Subsequently Bradford et al (1995,1998) completed a dose titrated trial of sertraline in the treatment of pedophilia. This study included detailed penile tumescence testing as well as certain peripheral neurobiological markers of central serotonin metabolism. Two other clinical studies (Greenberg & Bradford et al 1997 & 1997) were also completed and also showed the clinical effectiveness of the SSRIs in the treatment of the paraphilias. There are now a number of clinical studies that all consistently show the effectiveness of the SSRIs in the treatment of the paraphilias and support this theoretical position. There are however many studies that show that 5HT has a role in the neurobiology of sexual behavior and therefore the OCD spectrum model is not essential to understanding of the treatment success of the SSRIs in the paraphilias. The side effect profile is also significantly different and less potentially serious than antiandrogen and hormonal treatment. This means the average psychiatrist could play a larger role in the treatment of the paraphilias in the future. It also means that females and adolescents are candidates for pharmacological treatment as previously antiandrogen and hormonal treatments were difficult to implement in these patients.

CONCLUSION AND COMMENTS

The pharmacological treatment of the paraphilias (including sex offenders) with antiandrogens and hormonal agents is successful in reducing recidivism rates through the reduction of sexual fantasies, sexual drive, sexual arousal, and sexual behavior. There is empirical evidence that CPA and sertraline have a differential effect on the sexual arousal patterns of pedophiles suppressing the pedophilic arousal and enhancing the arousal toward adult consensual sexual activity. CPA, MPA, LHRH analogues and the SSRIs have all been demonstrated to be effective treatments in the paraphilias although clearly double blind placebo multicentred studies are lacking. A combined treatment approach using pharmacological and cognitive behavioral treatments should be followed in most cases. More recently we have been using a combination of an antiandrogen and a SSRI in the treatment of pedophilia.. In addition the lower dose of antiandrogen means less risk of unwanted side effects. Further at a theoretical level the sexual component of the paraphilia as well as the OCD component are being treated by this approach.

The need for indefinite ongoing treatment in some high risk individuals is essential for the reduction of recidivism . At this time there are a spectrum of pharmacological treatments available with different indications for usage. The SSRIs are rapidly becoming the first line pharmacological intervention in most cases other than the more serious paraphilias. They are also the exclusive treatment for females and most adolescents. This is followed by the use of oral MPA or CPA in more severe paraphilias. The aim of treatment here is not to create an asexual individual but rather one who has a reduced sexual drive and no deviant sexual urges or fantasies. The most severe paraphilias would be treated by intramuscular MPA and CPA. Finally the very severe cases of sexual sadism would be treated by intramuscular CPA or a LHRH agonists. LHRH agonists are likely to become the treatment of choice in the future for these difficult cases. The success of the pharmacological treatment approach depends on the intensive pretreatment evaluation of the person presenting with a paraphilia, including physiological assessment of sexual arousal; a sex hormone profile; various questionnaires that measure cognitive distortions; quantify sexual fantasies, and establish the extent of co-morbidity of the paraphilias and other psychiatric disorders. The degree of alcohol and substance abuse is critical to the ultimate success of treatment. Random urine screening for substances is also a critical component of relapse prevention.

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