Pharmacotherapy for Sexual Offenders

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Over the last decades, there has been increasing interest and concern about individuals who sexually offend and what to do about them. Sex offenders are a heterogeneous group. As with the management of drug abuse and addiction in our society, the management of sex offenders has become a major function of the criminal justice system. Criminal justice system responses are focused on retribution, incapacitation, and deterrence. For reasons that are too complex to be pursued in this chapter, penological philosophy in the United States moved away from the rehabilitation models of the 1970s. Lawmakers seem to promote the belief that criminals, especially sexual offenders, cannot be rehabilitated. Sociopolitical and legislative policy have criminalized more behaviors and pushed for harsher punishments, such as longer mandatory prison sentences. Perceived high rates of recidivism among rapists and child molesters are a particular public concern. Following the *Kansas v. Hendricks* decision of 1997, a growing number of states in the United States have made provisions for the indefinite civil commitment of sex offenders.

Society is increasingly confronted with the fact that a significant proportion of offenders who find their way into the criminal justice system have a mental illness (Fazel & Danesh, 2002; James & Glaze, 2006; Steadman, Osher, Robbins, Case, & Samuels, 2009). The Los Angeles County's Twin Tower Jail, housing 1,400 mentally ill inmates, makes it the nation's largest mental institution (Montagne, 2008). For many sex offenders, their mental illness may be a complicating, contributory, or even a causal factor to their offending behavior and recidivism (Booth & Gulati, 2014; Langstrom, Sjostedt, & Grann, 2004).

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Overview of Psychiatric Disorders in Sex Offenders

Sex offenders comprise a significant proportion of those who come into the criminal justice system. They constitute between 20 and 25 % of the approximately two million males incarcerated in the United States (Berlin, Saleh, & Malin, 2009). Mental illness may play a role in an individual's maladaptive sexual behavior that brings them in contact with the law just as it can with nonsexual offenses. A number of studies of sex offender populations have shown that in addition to having paraphilic disorders, some sex offenders have non-paraphilic (i.e., sexual disorder related) diagnoses including substance abuse, depression, anxiety, bipolar disorder, autistic spectrum disorders, attention deficit/hyperactivity disorder (Dunsieth et al., 2004; Fazel, Sjostedt, Langstrom, & Grann, 2007; Kafka & Hennen, 2002; McElroy et al., 1999; Silva, Leong, & Ferrari, 2004; Siponmaa, Kristiansson, Jonson, Nydén, & Gillberg, 2001), and personality vulnerabilities, such as antisocial, borderline, narcissistic, and schizoid avoidant spectrum disorder (Dunsieth et al., 2004).

Disorders that may make a person more likely to engage in sexual offending behavior include paraphilic disorders, non-paraphilic disorders, or both. A subgroup of sex offenders suffers from psychiatric disorders classified as paraphilias, a term somewhat synonymous with sexual deviance. Per the DSM-IV:

> The essential features of a paraphilia are recurrent, intense sexually arousing fantasies, sexual urges or behaviors generally involving: 1) nonhuman objects, 2) the suffering of oneself or one's partner, or 3) children or other non-consenting persons that occur over a period of at least 6 months. (APA, 2000, p. 566)

These fantasies, urges, and behaviors cause marked distress or interpersonal difficulty for the individual. Per the DSM-5 (APA, 2013), the term paraphilia "denotes any intense and persistent sexual interest other than sexual interest

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in genital stimulation or preparatory fondling with phenotypically normal, physically mature, consenting human partners" (p. 685). A paraphilic disorder is a paraphilia that is currently causing distress or impairment to the individual or a paraphilia whose satisfaction has entailed personal harm, or risk of harm, to others. As DSM-5 points out, it is not unusual for an individual to manifest two or more paraphilias; comorbid diagnoses of separate paraphilic disorders may be appropriate or warranted if more than one paraphilia is causing suffering to the individual or harm to others (e.g., p. 687).

In addition to identifying paraphilic disorders, other psychiatric disorders that are comorbid to paraphilic disorders in sex offenders need to be identified and treated to further decrease an offender's risk for sexual and nonsexual criminal behavior. For example, a pedophile previously able to control his deviant sexual impulses, may, in the context of a manic episode, engage in pedophilic acts. Acute psychiatric illness and active symptoms can be a significant dynamic risk factor that may increase the risk of sexual offending. Once diagnosed with an underlying psychiatric disorder, standard of care dictates that appropriate medications be given to control the mood dysregulation (i.e., manic or hypomanic symptoms). Therefore, there are clinical and risk management reasons why one needs to identify and treat both the sexual disorder and the comorbid psychiatric conditions in such offenders.

Sexual offending behavior is heterogeneous and multifactorial and, therefore, calls for a variety of approaches to treatment. Cognitive behavioral therapy, the mainstay of both institutional and outpatient treatment for sexual offenders, has shown modest reduction in recidivism rates, but significant and long-term benefits have been less robust (Losel & Schumcker, 2005; Seto et al., 2008). To date, with few exceptions, treatment, when provided at all, has predominantly consisted of individual and group therapy and behavior modification. Although the literature supports the use of pharmacotherapy in selected sexual offenders (Bradford, 2000; Saleh & Guidry, 2003), medications have not been used—as the next section of this chapter will explore—to the extent that they could.

Turf Issues and Lack of Familiarity with the Medical Model

Lack of familiarity with the medical model and pharmacology lessens the likelihood for the use of medications among those who treat psychiatrically ill sexual offenders. Sexual offenders are often seen within criminal justice settings that have an inherent bias against the mentally ill, frequently misinterpreting psychiatric symptoms as bad behavior or malingering (Felner, 2006). Most mental health professionals who deal with sexual offenders do not have medical backgrounds. Nonpsychiatric mental health professionals may have varying levels of exposure and experience to serious mental disorders and may not identify the complex interplay of Axis I and Axis II disorders in their clients. They may not be aware that medications can help manage paraphilic disorders or the comorbid psychiatric conditions that may trigger or worsen such behavior (Noroian, Myers, & Saleh, 2009).

Notwithstanding their notable contributions toward the understanding of sexual psychopathology, psychiatrists have, as a group, not been on the forefront of the evaluation and treatment of sexual offenders in recent times. Most residency training programs do not provide significant didactic and clinical time in the area of sexual psychopathology and its treatment. In many ways, the field of sexual offending research is reminiscent of drug and alcohol treatment 30 years ago. Dual diagnosis, the coexistence of psychiatric illness with substance abuse, and the need to address both simultaneously have only been recently accepted. Drug and alcohol counselors trained exclusively in nonmedical models of addiction actively opposed the use of medications. Physicians, including psychiatrists, had little interest in dealing with alcoholics and drug addicts, even though alcoholics and drug addicts formed a significant number of both medical and psychiatric patients. The American Board of Psychiatry and Neurology did not introduce the subspecialty certification in Addiction Medicine until 1995. Medications now play an important role in treating substance abuse disorders.

Interventions based on the medical model are notable by their absence in leading journals that address sexual offending. There are just seven articles on the use of medications in the treatment of sexual offenders in the *Sexual Abuse: A Journal of Research and Treatment* from 1988 to 2014. Few psychiatrists join organizations dealing with sexual offenders and are poorly represented on the editorial boards of journals that deal with sexual behavior.

Psychiatrists' Reluctance in Treating Sexual Offenders

In the last two decades, there has been an explosion of medication use in psychiatry with a parallel reduction in the use of psychotherapy in community settings. These are driven by complex factors including disillusionment with the psychoanalytic model that dominated academic psychiatry into the 1970s, managed care, a better understanding of brain-based behavior, and, most importantly, the availability of more effective medications with more tolerable side effect profiles. Medications are routinely used in controlling agitation and violence and are seen as an efficient way of dealing with the mental health problems of a large population that has

limited mental health care access. For example, annual expenditures for medications in the Iowa prison system increased 28-fold, from $291 per 100 inmates in 1990 to $8,138 in 2000 (Lund, Flaum, Adam, & Perry, 2002). However, such a trend is not seen in the area of treating paraphilic sexual offenders. Psychiatrists may be overly cautious of the side effects of antiandrogen medications and are unfamiliar with the literature. While the risk of antiandrogen use cannot be minimized, many other commonly prescribed psychiatric medications can have serious and potentially life-threatening complications as well. With proper patient selection, protocols, and monitoring, androgen deprivation treatment may not carry more risks than the use of other psychotropic medications (Berlin, 2009; Reilly, Delva, & Hudson, 2000; Saleh, Berlin, Malin, & Thomas, 2007). Practitioners who use a particular medication or group of medications become more observant in identifying adverse effects early on in treatment, thereby increasing safety of such treatment modality.

The pharmaceutical industry is not committed to invest in the lengthy and expensive process of getting FDA approval for drugs that may be beneficial for treating paraphilias. Research-based evidence from large or even moderate randomized controlled double-blind trials and prospective open-label studies are lacking. Guidance for using medications is based on case reports or series, marked by methodological biases (Bradford, Fedoroff, & Gulati, 2013; Thibaut, De La Barra, Gordon, Cosyns, & Bradford, 2010). Treatment based entirely on off-label use has limited appeal with physicians. Generally speaking, endocrinologists are unlikely to treat sex offenders, and psychiatrists are wary of drugs with endocrine/metabolic complications.

Resistance on the Part of Patients

Sexual offenders may be resistant to considering medications for a variety of reasons. They may be in denial of their problem (e.g., denying culpability, difficulty controlling their behavior, or having sexual deviance). They may fear stigmatization as a psychiatric patient. For example, only one-third of sexual offenders in prison who were eligible to participate in California's Sex Offender Treatment and Evaluation Project (SOTEP) at Atascadero State Hospital chose to do so (Marques, Wiederanders, Day, Nelson, & Van Ommeren, 2005). Patients with prior exposure to medications may be concerned about the adverse effects (e.g., lethargy, dystonia, tardive dyskinesia) of psychotropic medications and distrustful of mental health professionals. Historically, many psychiatrists have overplayed the benefits and failed to adequately disclose potential harmful effects of biological interventions (i.e., lobotomy, electroconvulsive therapy (ECT), antidepressants, and antipsychotic medications). Psychiatrists are suspect of coming up with simple solutions for complex conditions (i.e., violence, fear, unhappiness) for which no "magic bullet" exists (Valenstein, 1986). For the psychiatrist and other medical providers, developing the trust of the patient remains an important part of the treatment dynamic. Adequate informed consent, which includes providing material information on medication side effects and realistic information on the benefits of proposed treatments, is a key element in developing a therapeutic alliance between patient and physician. The treatment provider needs to be open regarding the limits of confidentiality and about issues of dual agency. No less than in other areas of medicine, the establishment of the doctor-patient relationship becomes critical in the safe and effective use of available treatments. Ethical considerations regarding the use of pharmacotherapy for sexual offenders and specifically issues regarding informed consent will be addressed in the Informed Consent and Legal sections to follow.

Rationale for Treatment

Sexual offending imposes a terrible burden on individuals and society (Hankivsky & Draker, 2003; Shanahan & Donato, 2001). Sexual crimes such as rape and child molestation come at great cost, both human and financial. Rape and child sexual abuse often involve violence and may require medical attention. Other costs include victims' lost wages, psychological treatment, legal system fees, and imprisonment of the offender. The total national cost of sexual violence in 1996 was estimated at $261.25 billion (Post, Mezey, Maxwell, & Wibert, 2002). Hanson et al. (2002) conducted a meta-analysis of 43 studies of groups of sexual offenders (combined $n = 9{,}454$) who received psychotherapy; they were followed for an average of 4–5 years. Hanson et al. reported a 7 % decrease in sexual offense recidivism as a treatment effect, although those positive results were derived largely from studies with significant methodological issues. Consequently, any viable intervention to decrease further sexual victimization is relevant.

The following list, though not exhaustive, is an outline of the goals of treatment:

- Assist the offender to prevent sexual offense and recidivism.
- Control deviant urges in paraphilic offenders.
- Control aggressive behaviors in paraphilic and non-paraphilic offenders.
- Control impulsive behavior.
- Reduce distress produced by active symptoms of the paraphilic disorder.

- Treat coexisting Axis I and Axis II psychiatric symptoms/conditions that may contribute to offending risk, i.e., negative emotionality (irritability, anger, impulsivity), cognitive impairment, bipolar disorder, depression, traumatic brain injury.

Pharmacologic Agents

Androgen-Lowering Medications

Androgen-lowering medications should be considered for sexual offenders presenting with intense symptoms of a paraphilic disorder, such as intrusive thoughts, fantasies, or urges toward violent or "hands-on" behaviors. Convicted sexual sadist and serial killer Michael Ross wrote:

> The drug (Depo-Lupron) clears my head of the vile and noxious thoughts of rape and murder that plagued my mind for so long; the drug eliminates the previously uncontrollable urges that drove me to commit the crimes that put me here on death row. That monster still lives in my head, but the medication has chained him and has banished him to the back of my mind. And while he is still able to mock me, he can no longer control me - I control him; I am human once again. (Ross, 1996, p. #)

Surgical castration has been historically recognized to markedly reduce or eliminate sexual drive in animals and humans. Most studies since the mid-1960s show that orchiectomy reduces sexual offender recidivism with rates of re-offending between 0 and 10 % (Weinberger, Sreenivasan, Garrick, & Osran, 2005).

Individuals whose sexual offending is primarily driven by antisocial behavior or psychoses are unlikely to benefit from androgen-lowering medications. For individuals whose offending behaviors are related to psychotic disorders, treatment of the underlying psychotic disorder is the preferred treatment intervention. For those with antisocial personality disorder, antiandrogen medication would not be medically indicated where there is no evidence of a paraphilic disorder or any other condition responsive to this class of medications. Antiandrogens decrease but do not necessarily eliminate the risk of re-offending. However, given the overall data on efficacy, it would be counter-therapeutic *not* to offer these medications to symptomatic paraphilic sexual offenders, especially those with violent urges or those who are expressing a fear of losing control. The courts have upheld the duty of physicians to provide effective, available treatments. The case of *Osheroff v. Chestnut Lodge* (1984) Civil Action No 66024, Circuit Court for Montgomery County, Maryland, emphasizes that a failure to use all available and appropriate treatments could be grounds for malpractice. Dr. Osheroff, a nephrologist with a 2-year history of anxiety and depressive symptoms, was treated for 7 months with psychotherapy alone without improvement at Chestnut Lodge, a prestigious psychoanalytically oriented psychiatric hospital in Rockville, Maryland. Dr. Osheroff was then transferred to another facility where he was treated with psychotropic medications and rapidly improved. He then sued Chestnut Lodge and received a settlement (Klerman, 1990).

This concern would be especially true if it involves voluntary outpatient settings where there are no overt issues of coercion. Not educating a prospective and symptomatic patient about antiandrogen medications could be similar to failing to provide antidepressants or antipsychotic medications to a depressed or psychotic patient, respectively. There may be legal pressures not to withhold medications to those that are civilly committed since the failure to provide reasonable treatment would undermine part of the premise of their commitment. In short, medications should be considered both for the benefit of the individual and society that ultimately bears the consequences of sexual offending behavior. The successful use of resources in the community would also afford substantial cost savings. Community-based treatments operate at a fraction of the cost of inpatient treatment in hospitals or in correctional facilities.

The androgen-lowering medications such as cyproterone acetate (CPA), medroxyprogesterone acetate (MPA), and luteinizing hormone-releasing hormone agonists (LHRH) have been found to be effective in reducing sexual fantasies, desire, and urges in carefully selected and properly diagnosed patients (Bradford, 2001; Briken, Hill, & Berner, 2003). For example, leuprolide acetate, goserelin, and triptorelin are gonadotropin-releasing hormone (GnRH) analogues that have been used to treat paraphilic sexual offenders. Cyproterone acetate (CPA) is not available in the United States.

CPA is an androgen-lowering agent with antiandrogenic and antigonadotropic properties (Gilman, Rall, Nies, & Taylor, 1990; Goldenberg, Bruchovsky, Gleave, & Sullivan, 1996) that exerts its anti-libidinal effects by competitively blocking testosterone and dihydrotestosterone binding to peripheral and central androgen receptors. CPA has been used since the mid-1960s to treat paraphilic patients (Berlin, 1983; Berlin & Meinecke, 1981; Bradford & Pawlak, 1993; Gagne, 1981; Hucker, Langevin, & Bain, 1988; Meyer, Cole, & Emory, 1992). Dose range is oral (100 mg per day) or intramuscular (300 mg every other week). Possible side effects of this class of drugs include nausea, constipation, fatigue, lethargy, depression, headaches, hot flashes, night sweats, breast tenderness, galactorrhea, gynecomastia, decreased libido, thrombophlebitis, anemia, pulmonary embolism, weight gain, hyperglycemia, diabetes mellitus, hypogonadism, and hypospermia (low semen volume). Elevation of liver enzymes and hepatitis are also a concern. Bone demineralization, a potential side effect, has to be monitored and treated. Low-dose testosterone, calcium, vitamin D,

and bisphosphonate agents, such as alendronate, have been helpful in antiandrogen-related osteoporosis (Blake, Sawyerr, Dooley, Scheuer, & McIntyre, 1990; Goldenberg & Bruchovsky, 1991; Jurzyk, Spielvogel, & Rose, 1992; Levesque et al., 1989). Suffice to say, caution is required when prescribing testosterone to offenders receiving androgen-lowering medications.

Medroxyprogesterone acetate (MPA), a synthetic progestational agent, commonly used as a contraceptive in women, has been used in the treatment of paraphilic sexual offenders since the late 1960s. Injections have more predictable absorption than the oral route. Oral MPA is given in doses of 100–500 mg per day. The injectable form is given in doses of 100–1,000 mg per week although individual dosing may be increased or decreased, depending on the response (Guay, 2009). MPA exerts its anti-libidinal properties by lowering levels of circulating testosterone (Berlin & Schaerf, 1985; Gordon, 2008a, 2008b; Maletzky, Tolan, & McFarland, 2006). Adverse effects of MPA are similar to those of CPA and include weight gain, headache, nausea, gynecomastia, lethargy, elevated blood pressure, hot flashes, and thromboembolic events. Loss of bone density is also a serious potential adverse effect and must be carefully monitored in those receiving this treatment.

Leuprolide acetate (leuprolide), a synthetic analogue of endogenous gonadotropin-releasing hormone (GnRH analogue), with androgen-lowering properties and synthetic LHRH agonists such as leuprolide, triptorelin, and goserelin, is more potent than the LHRH secreted by the hypothalamus. Leuprolide has been found helpful in the treatment of paraphilias (Krueger & Kaplan, 2001; Saleh, Niel, & Fishman, 2004; Schober et al., 2005; Thibaut, Cordier, & Kuhn, 1993). Neuroimaging studies suggest leuprolide may decrease the brain activation responses to visual sexual stimuli in some pedophiles (Moulier et al., 2012).

Extensive experience and knowledge has been gained by the use of leuprolide in treating prostate cancer (Smith, 1986; Williams et al., 1983). GnRH analogues have also been used to treat paraphilic sexual offenders. Doses range from 3.75 to 7.5 mg per month. LHRH agonists like leuprolide cause an initial transient elevation in testosterone that may result in an increase in sexual drive. This risk can be lessened with the concurrent use of a testosterone-lowering agent. A transient increase in testosterone levels with increased sexual drive and fantasy has been reported during the first 2 months after leuprolide treatment cessation has been reported (Koo et al., 2013).

Adverse effects of leuprolide include bone mineral loss, nausea, weight gain, hot flashes, local reactions at the site of injection, blood pressure changes, depressive symptoms, and gynecomastia.

Selective Serotonin Reuptake Inhibitors (SSRIs)

Tricyclic and specific serotonin reuptake inhibitor drugs have been used in the general management of sexual offending (e.g., both paraphilic and paraphilic-like behavior) as well as "hypersexuality" (Greenberg & Bradford, 1997). While it appears to be beneficial to some individuals, the response to serotonin-enhancing drugs has not been comparable to hormonal treatments in controlling sexual offending behavior in those with paraphilic disorders.

Unlike antiandrogen drugs, the neurobiological rationale for the use of SSRIs in the treatment of paraphilic disorders remains somewhat speculative. Low brain serotonin states have been associated with both pathological impulsivity and obsessive-compulsive disorder. SSRI use in those treated for anxiety, depression, and obsessive-compulsive disorder has been associated in some cases with sexual side effects such as decreased libido, erectile difficulties, ejaculation failure, and delayed or absent orgasm. These side effects are estimated to occur in 2.7–75 % of users and are dose dependent (Baldwin, Thomas, & Birtwistle, 1997; Balon, 2006). If the primary mechanism of the "antiparaphilic" effect of these drugs is based on sexual side effects, it would be a problem since these side effects are not predictable and enduring. Of the four phases of the normal human sexual response cycle—desire, excitement, orgasm, and resolution—SSRIs predominantly affect ejaculatory function and orgasm but sexual desire is decreased unevenly or not at all (Ashton, Hamer, & Rosen, 1997; Keltner, McAfee, & Taylor, 2002; Rothschild, 2000; Seidman, 2006; Williams et al., 2006). Tolerance to SSRI-induced sexual side effects is common (Zajecka, 2001). Placebo-controlled studies and clinical trials assessing the efficacy of SSRIs in paraphilic sexual offenders have not been published (Baldwin et al., 1997; Montejo-Gonzales, Llorca, & Izquierdo, 1999; Stark & Hardison, 1985; Zajecka, Mitchell, & Fawcett, 1997).

Nonsexual side effects include gastrointestinal distress, hyperactivity/behavioral activation, "manic switch," akathisia, apathy, affective blunting, forgetfulness, and, in rare cases, the potentially life-threatening serotonin syndrome.

Selected Studies Pertaining to SSRIs and the Paraphilic Disorders

Stein et al. (1992) retrospectively studied five males ranging in age from 23 to 40 years old with sexual sadomasochism, pedophilia, fetishism, and cross-dressing in an open-label trial. Medications included clomipramine (an anti-obsessional medication) 200–400 mg for 3–6 months, fluoxetine 60 mg for 2–7 months, and fluvoxamine (an

antidepressant) 200–300 mg for 8 weeks. There were no changes in fantasies or sexual symptoms in any male except one who had decreased masturbation from impotence. Significant improvement was noted in OCD (obsessive-compulsive disorder) symptoms.

Kafka and Prentky (1992) treated 20 patients over a 3-month period. Subjects were diagnosed with either paraphilia or "non-paraphilic sexual addictions," with fluoxetine, mean dose of 39 mg per day. Paraphilic symptoms decreased after 4 weeks, but normal sexual behavior was maintained.

Kafka (1994) treated 24 men with paraphilia (exhibitionism, fetishism, transvestic fetishism, telephone scatologia, and voyeurism) or paraphilic-related disorders. Patients were treated with sertraline, 25–250 mg per day from 4 to 64 weeks. Nine sertraline nonresponders were switched to fluoxetine from 10 to 80 mg per day. Seventy-one percent improved with either sertraline or fluoxetine.

Bradford, Greenberg, Gojer, Martindale, and Goldberg (1995) treated 18 pedophiles with sertraline, mean daily dose of 131 mg. Deviant sexual arousal was self-reported and penile plethysmograph was reduced. Normal arousal was preserved and was increased in two patients.

Strohm and Bernerbtreated 16 male outpatients; age range was from 30 to 70 years with hands-on and hands-off (noncontact) paraphilias. Significant comorbidity was noted in the group. Duration of treatment was 23 months (ranging from 2 to 78 months). All patients also received psychotherapy. Marked reduction in paraphilic fantasies and masturbation was noted (Hill, Briken, Kraus, Strohm, & Berner, 2003).

SSRI efficacy has been assessed in open-label and retrospective studies with significant sampling bias. Sampling bias, the absence of placebo-controlled double-blind studies, halo effects, and uneven response raise concern about its use in paraphilic offenders (Saleh, 2009).

Other Drugs Used for Treating Paraphilic Disorders and Sexual Offending Behavior

A number of psychotropic drugs have been tried with this population. The published data is mostly anecdotal, with small sample size or single case reports with inadequate control of selection criteria and comorbidities of non-paraphilic disorders. It is not clear, for example, if the symptomatic relief in paraphilic symptoms is the result of treating comorbid conditions that help general self-regulation (e.g., by decreasing depression, irritability) or if there may be other underlying processes that directly affect the paraphilic disorder.

Lithium, a mood stabilizer, has been used for treating autoerotic asphyxia and other paraphilic behaviors (Cesnik & Coleman, 1989; Zourkova, 2000). Anticonvulsant drugs such as carbamazepine and topiramate for pedophilia and fetishism, especially in brain-damaged individuals (Goldberg & Buongiomo, 1983; Shiah, Chao, Mao, & Chuang, 2006; Varela & Black, 2002); neuroleptics such as haloperidol, thioridazine, and clozapine have been used to control sexually deviant behavior (Bartholomew, 1968); buspirone, an antianxiety medication, for transvestic fetishism (Fedoroff, 1992).

The Role of Medications in Treating Comorbid Axis I and Axis II Conditions

The assessment of sexual offenders requires that underlying mental disorders that may be a factor in the offending be carefully considered and appropriate treatment provided.

Both Axis I and Axis II mental disorders may be relevant in criminal and sexual offending. Sexual deviancy (i.e., the presence of active symptoms and severity of a paraphilic disorder) and criminality are the two basic independent variables that determine risk of offending. Other than paraphilic disorders, Axis I disorders include psychotic, mood, anxiety, impulse control, cognitive, and sleep disorders. Serious mental illness such as schizophrenia and bipolar disorder may increase the risk for violence especially when coupled with substance abuse disorders (Elbogen & Johnson, 2009; Fazel, Grann, Carlström, Lichtenstein, & Långström, 2009). Tourette's disorder has been associated, albeit rarely, with sexual offending behavior, including, but not limited to, indecent exposure and public masturbation (Jankovic, Kwak, & Frankoff, 2006).

Axis II disorders are enduring conditions such as personality disorders and mental retardation. Hanson and Morton-Bourgon (2005) identified individuals with Cluster B personality disorders (i.e., antisocial, narcissistic, and borderline) to be at higher risk of sexual re-offense. Individuals who feel hostile, victimized, and resentful and those who are vulnerable to "emotional collapse" when stressed are at higher risk of sexual re-offense. In addition to antisocial personality disorder, narcissistic, sadistic, borderline, and schizoid spectrum personality disorders also tend to be associated with paraphilic individuals. Paraphiliacs with comorbid autistic spectrum disorders may have impaired emotional appreciation and volitional problems. Self-absorbed and "odd" individuals are overrepresented among sexual offenders and the sexually deviant (Ahlmeyer, Kleinsasser, Stoner, & Retzlaff, 2003; Bogaerts, Daalder, Vanheule, Desmet, & Leeuw, 2008; Herkov, Gynther, Thomas, & Myers, 1996; Silva et al., 2004; Worling, 2001).

Medications such as SSRIs, anticonvulsants, and atypical antipsychotics have shown to be helpful in treating personality disorders, especially borderline personality disorders (Simeon & Hollander, 2009). Anticonvulsants and atypical

antipsychotics may be helpful in treating impulsive behavior in the intellectually disabled. Some studies suggest antiandrogens help in the management of intellectually disabled sexual offenders (Sajith, Morgan, & Clarke, 2008).

In an individual with multiple Axis I and II disorders, a sexual offense may involve varying levels of contribution from some or all of the coexisting conditions; for example, a pedophile or sexual sadist with antisocial personality disorder whose offenses occur only when they are off their mood stabilizer or when actively using cocaine or methamphetamine. Only a careful examination by a clinician knowledgeable in psychiatric differential diagnosis and phenomenology may recognize the possible contributions of hypomania or delusional psychoses in a sexual offense.

Axis III medical disorders such as traumatic brain injury, temporal lobe epilepsy, frontotemporal dementia, strokes, and brain tumors have been associated with sexual offending behavior.

Antipsychotic medications, anticonvulsants, mood stabilizers, and psychostimulants have been reported as being helpful in case reports (Guay, 2009).

Choice of Treatments

As noted above, the ultimate choice of which medications are used to treat a specific offender depends on the unique history of the offender. Treatment must be individualized to address the offender's underlying diagnosis, history of offending, risk of recidivism, and current medical condition. For paraphilic offenders with low risk of sexual violence, treatments might start with psychotherapy, SSRI medications, and oral antiandrogens. For those paraphilic offenders with more serious, violent offenses, treatments would more likely include psychotherapy, combination therapy of SSRI, and antiandrogen medications, with consideration given to injected antiandrogen medication where treatment adherence may be at issue. For increasingly severe risk profiles and paraphilic symptoms, treatments might include long-acting GnRH agonist medication, in combination with psychotherapy. An algorithm for the treatment of paraphilic disorders that designate different levels of treatment, based on severity of symptoms and behaviors, with the use of more aggressive and invasive therapies for those patients with the most severe paraphilic symptoms who are at highest risk for violence.

Psychotherapy is recommended for all offenders; typically, cognitive behavioral therapy has been recommended or utilized as the therapy of choice. Combination psychotherapy and medication therapy for paraphilic offenders have produced better outcomes than medication therapy alone (Hall & Hall, 2007). Per systematic reviews, cognitive behavioral therapy has been correlated with reducing rates of recidivism in some populations of offenders (Alexander, 1999; Gallagher, Wilson, Hirschfield, Coggeshall, & MacKenzie, 1999), although random controlled studies have failed to show differential effects between such treatment and control groups (e.g., Hanson et al., 2002). Current psychotherapies utilize both individual and group modalities, with an emphasis on relapse prevention. Treatment should also include therapies to address substance use disorders.

Psychiatric and Psychological Evaluation for Pharmacotherapy

As indicated earlier, individuals may engage in sexual offending behavior for a variety of reasons. A detailed psychiatric history, including family history, history of psychiatric treatment and hospitalizations, substance abuse history, criminal history, sexual developmental history, and sexual behaviors and relationships, should be obtained. The presence of comorbid Axis I, Axis II personality disorders, intellectual disability, and medical/neurological conditions should be thoroughly investigated and documented by both through an examination of the patient and thorough review of collateral data, particularly available records. Such collateral data should be as comprehensive as possible since the self-reports of sexual offenders cannot be relied upon exclusively. Where available, additional data should include victim statements, police/probation/parole reports, prior mental health and medical records, juvenile and adult criminal records including violent and sexually violent behavior while in custody, and forensic reports.

Formal assessment tools may include the Multiphasic Sexual Inventory (Nichols & Molinder, 1984), the Multiphasic Sexual Inventory II (Nichols & Molinder, 2000), Greenberg Sexual Preference Visual Analogue Scale (Greenberg, 1991), Sexual Interest and the Sexual Activity Rating Scale (Bancroft, Tennent, Loucas, & Cass, 1974), the Wilson Sex Fantasy Questionnaire (Baumgartner, Scalora, & Huss, 2002; Wilson, 1988), penile plethysmography (Blanchard, Klassen, Dickey, Kuban, & Blak, 2001; Freund, 1991), and the sexual history polygraph. A detailed substance abuse history should be obtained, including using formal screening tools, such as the Michigan Alcohol Screening Test (Seltzer, Vinokur, & Van Rooijan, 1975). It is critical to be mindful about the limitations of any assessment tool, particularly their transparency in the face of impression management and denial/minimization on the part of the sexual offender.

Failure to recognize and treat comorbid psychiatric disorders, particularly personality disorders, ADHD and cognitive limitations, may result in poor self-control or even sexual offending behavior. Psychological testing, and in some instances neuropsychological testing, may be warranted to identify the presence and severity of such conditions.

Medical Workup

A complete medical psychiatric workup is essential, both to rule out any medical conditions that might impact the use of medications and to rule in or rule out comorbid medical conditions.

The laboratory workup should include a complete blood count, serum electrolytes, lipid profile, liver function tests, blood urea nitrogen (BUN), creatinine and thyroid levels, urinalysis, and urine drug screen. A lipid profile should be obtained since several of the drugs used with hormonal and nonhormonal treatments may cause weight gain and elevated lipids. All medications that the patient is taking should be assessed for potential drug-drug interactions. Hormone levels obtained may include thyroid stimulating hormone (TSH), parathyroid hormone (PTH), free and total serum testosterone, progesterone, estradiol, follicle-stimulating hormone (FSH), luteinizing hormone (LH), and prolactin. Osteoporosis is a serious concern with androgen-lowering medications; therefore, baseline bone densitometry should be obtained. Electrocardiogram and vital signs should be recorded for all patients receiving psychiatric medications with cardiovascular side effect profiles. Tests should be repeated as often as clinically indicated. Electroencephalogram (EEG) and neuroimaging studies may be warranted in some instances.

Informed Consent

All psychiatric medications can have serious and potentially life-threatening side effects. Many medications considered for sexual offenders treatment may involve "off-label" use (i.e., use of a medication in a manner that is not specifically approved by the Food and Drug Administration) so risk-benefit advisement with the patient should be thorough and well documented (Giltay & Gooren 2009). The process of informed consent requires that patients be competent, that they give consent voluntarily and that they not be coerced, and that they be informed of both the benefits and risks involved. Consent obtained from substituted decision makers brings another level of complexity. A properly conducted and thorough informed consent should be obtained prior to treatment, outlining the full scope of the risks and benefits of the proposed treatment. The risks and benefits of alternative treatments and of no treatment should also be thoroughly reviewed. The second and third elements of the informed consent doctrine may be somewhat problematic in some settings. In order for consent to be considered valid, it has to be given "voluntarily" without undue influence or coercion. Important as that is, the majority of patients that require or are likely to benefit from it are typically under some form of judicial control and/or in the criminal justice system, raising concerns about the true voluntariness of their consent. Ethics guidelines have been provided by organizations such as the American Psychiatric Association and the American Academy of Psychiatry and the Law (AAPL; Zonana & Buchanan, 2009).

Legal and Ethical Issues in the Treatment of Sexual Offenders

Prescribing medications to help manage paraphilic disorders and other problematic sexual behavior among those who are not under judicial control and deemed to be competent should present no ethical or standard of care issues as long as a well-conducted informed consent process is followed. Prescribing medications, especially androgen-lowering medications, to individuals who are civilly committed or subject to outpatient commitment, incarcerated, or on probation/parole raises complex legal and ethical concerns (Ward et al., Mellela, Travin, & Cullen, 1989; Miller, 1998).

In the United States, at this writing, nine states authorize some form of mandated treatment (commonly referred to as "castration") as an adjunct to parole or probation supervision for certain sexual offenders for whom release to the community, from incarceration, is being contemplated. Texas (Tex. Gov't Code Ann., 2003) provides for voluntary surgical castration as the only treatment option. Four states allow for some provision of either chemical castration or voluntary surgical castration—California (Cal. Penal Code, 2003), Florida (Fla. Stat. Ann., 2002), Iowa (Iowa Code, 2003), and Louisiana (La. Rev. Stat. Ann., 2003). Four additional states permit the use of pharmacotherapy (chemical castration) only—Georgia (Ga. Code Ann, 2002), Montana (Mont. Code Ann., 2002), Oregon (Ore. Rev. Stat., 2001), and Wisconsin (Wis. Stat. Ann., 2002). In addition, numerous other states have either considered such laws or have judicial decisions addressing the process without legislative authority (see *State v. Brown* 1985 and *People v. Gauntlett* 1984). The practice of some form of physical or pharmacological castration has also been sanctioned in a number of European countries, including at various times, Denmark, Germany, Norway, Sweden, and Switzerland (Druhm, 1997).

The United States has a long history of the use of sanctioned castration to forward what were perceived as legitimate societal goals. The forced eugenics movement, ostensibly to prevent a new generation of incompetent children who would become a burden on the state, reached its zenith with approval of the process by the US Supreme Court

in *Buck v. Bell*. Although the Court subsequently found that imposed vasectomies on persons convicted of certain crimes violated the Fourteenth Amendment (*Skinner v. Oklahoma*, 1942), it never expressly overruled *Buck v. Bell* (Druhm, 1997). Challenges to the current "castration" statutes have not yet reached the US Supreme Court.

Although full consideration of the legal and ethical issues involved in this topic is far beyond the scope of this chapter, an overview of the issues is provided below. In the various state actions, and in numerous commentaries (see Scott & Holmberg, 2003; Miller, 1998; Rice & Harris, 2011; Winslade, Stone, Smith-Bell, & Webb, 1998), such challenges are usually organized on a variety of grounds. Arguments based on Eighth Amendment grounds (that the forced treatment is cruel and unusual punishment) are usually counterbalanced by the argument that such treatment has distinct therapeutic value. Arguments on Fourteenth Amendment grounds (that the process is not sufficiently spelled out to satisfy due process concerns) can in some states (such as California) pose a valid concern, while in others, the process to be followed seems to be sufficiently established to address a compelling state interest in public safety without violating fundamental liberty such as a right to refuse treatment or a right to procreate. In addition, since all of the statutes appear to apply equally to women as well as men, an equal protection argument has been raised claiming that the evidence that the medications discussed may not have a demonstrated efficacy at reducing offending behavior by women may lead to disparate treatment of offenders based solely on gender. The issue is further complicated by the fact that the medications have demonstrated efficacy only for offenders whose behavior is based on sexual drive and not for offenders whose behavior is based in anger, hostility, or other dispositional bases. These issues remain to be resolved. Challenges have also been raised on First Amendment grounds—that a person has the right to his/her own thoughts and to refuse treatment. This argument is usually countered by pointing out that, at least with respect to child victims, the US Supreme Court has already held (*New York v. Ferber*, 1982) that where children are victims, a clear and present danger is created and child pornography is therefore not protected by freedom of expression. An adequate informed consent process as outlined herein should help address the right to refuse issue.

Finally, the statutes mentioned do not all provide for discrimination among offenders to ensure that only those who would actually benefit from treatment are actually receiving the treatment. This is a flaw that will have to be resolved by the courts if mandated pharmacological treatment is to proceed within the dictates of Constitutional law as it currently is understood.

Conversely, the clinician has to consider withholding a medication that may (1) help decrease a person's subjective distress or out of control feelings or impulses, (2) lessen the intensity of paraphilic fantasies and urges to facilitate fuller participation in a psychotherapy program, and (3) help the patient better manage behavior that could possibly keep him in longer confinement or return him to prison or a forensic hospital.

Within the California Department of Mental Health sexual offender commitment facilities, there are a number of individuals who have obtained surgical castration on their own initiative. The US Supreme Court in *Kansas v. Hendricks* (1997) ruled that the state can civilly confine (sexual offenders) in secure mental health facilities for custody and treatment. Withholding medications that could be particularly helpful for some sexual offenders might be construed as promoting confinement without adequate treatment.

Conclusion

Evidence suggests that medications can help some sexual offenders. Androgen deprivation and other drug treatment for sex offenders have side effects, but they are comparable to other extensively used psychotropic drugs (Berlin, 2009). The human and financial cost of sexual crimes in society calls for the use of every effective strategy in dealing with it. Sexual offending behaviors motivated by an underlying paraphilic disorders, paraphilias, or paraphilic-related disorders are best understood in a biopsychosocial context. Thus, it is known that the remediation of depression can be helped by exercise, cognitive behavioral therapy, and medications alone or in combination. In a similar manner, medications should have an increasing and cost-effective role in the overall management of sexual offenders (Garcia, Delavenne, Assumpção, & Thibaut, 2013; Rosler & Witztum, 2000).

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