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Personality Disorders (M Goodman, Section Editor)

The Treatment of Antisocial Personality Disorder

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Opinion statement

Purpose of Review Antisocial personality disorder (ASPD) is defined by its pattern of socially irresponsible, exploitative, and guiltless behavior. The disorder is common and costly to society. ASPD starts in childhood or early adolescence when it is diagnosed as conduct disorder. If the symptoms persist past age 18, the diagnosis changes to ASPD. The disorder moderates with advancing age and many individuals will no longer meet criteria for the disorder as older adults.
Recent Findings The treatment of ASPD is challenging and complicated by a dearth of research evidence. There are no medications approved by the US Food and Drug Administration for treatment of the disorder, nor are there proven psychological treatments. Medications can be prescribed to treat comorbid disorders (e.g., panic disorder, major depression), or "off-label" to target aggression and impulsivity associated with ASPD. Treatment models employing cognitive-behavioral therapy have been developed, and some reports suggest benefit.
Summary Patients with ASPD should not routinely be treated with psychotropic medication. Medications may be helpful in treating comorbid psychiatric disorders such as major depression, or aggressive symptoms common in these patients. Cognitive-behavior therapy may be helpful for those with milder syndromes.

Introduction

The hallmark of antisocial personality disorder (ASPD) is socially irresponsible, exploitative, and guiltless behavior [1]. Problematic behaviors include failure to conform to social norms, deceitfulness, impulsivity and failure to plan ahead, irritability and aggressiveness, reckless disregard for the rights of others, consistent irresponsibility, and lack of remorse [2]. ASPD occurs along a spectrum of severity with some persons having mild syndromes and others being more severely affected [3]. The disorder is common and affects 2–5% of the general adult population [4–6]. The rate in men is 2–8 times that for women, although is more frequent in

younger persons [4–6]. The prevalence of ASPD is higher in psychiatric settings, correctional facilities, and in those who abuse alcohol or other substances [7–9]. ASPD runs in families and twin and adoption studies suggest that it has a significant heritable component [10–12]. People with ASPD are at risk for early death from accidents, suicide, and homicide [13, 14]. Chronic and lifelong for most, the disorder moderates with advancing age and many individuals will no longer meet criteria for the disorder as older adults [15•]. ASPD is associated with poor response to psychotropic medication and substance use disorder treatment [16, 17].

Comorbid psychiatric and substance use disorders are common. These include major depression, bipolar disorder, anxiety disorders, somatic symptom disorders, attention deficit/hyperactivity disorder (ADHD), borderline personality disorder, and the substance use disorders (including gambling disorder) [4–6, 18]. The risk for a current alcohol disorder was nearly five times expected in people with ASPD, whereas risk for a current drug use disorder was nearly 12 times expected [19, 20].

Imaging studies have suggested that ASPD is associated with subtle structural and functional deficits in the prefrontal and anterior cingulate cortices that may contribute to impulsive and irresponsible behavior [21, 22]. Functional abnormalities in temporal regions (amygdala-hippocampal and superior temporal cortex) may contribute to deficient moral judgment. Disturbances in serotonin function may contribute to the antisocial person's impulsive and aggressive behavior [23].

ASPD is diagnosed on the basis of the individual's history of chronic and repetitive behavioral problems with an onset in childhood or early adolescence, usually by age 8 [7]. ASPD should be distinguished from normal behavior. Many individuals have isolated acts of misbehavior or criminality, but these problems are inconsistent with the diagnosis of ASPD, a disorder that results in recurrent misbehavior. Adults without a history of childhood conduct disorder but who have criminal or antisocial behavior receive the DSM-5 *Z*-code diagnosis of *adult antisocial behavior* [2].

Informants may be helpful in diagnosing ASPD and research shows that relatives can be more accurate in describing the antisocial person's antisocial behavior than the individual himself [24]. Prior hospital or clinic records can aid in the diagnostic process and should be gathered whenever possible. There are several structured interviews and paper-and-pencil questionnaires can be useful, although they are mainly used in research settings. These include the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II) [25] and the Structured interview for DSM-IV Personality (SIDP-IV) [26]. Of note, the criteria set for ASPD did not change from DSM-IV to DSM-5, which is important to understand if one is using these instruments. The PCL-R is another questionnaire that can be helpful in diagnosis of the extent of "psychopathy" present within the individual [27]. This tool will be helpful in forensic settings and can be used to help predict recidivism, parole violations, and violence.

Treatment of ASPD

The treatment of ASPD is widely viewed as unsatisfactory and vexing, and is complicated by a dearth of research evidence. Nonetheless, antisocial persons seek mental health care at rates higher than persons without the disorder [16, 28]. Their turbulent lifestyles, domestic problems, co-occurring disorders, and recurrent substance abuse, lead antisocial persons to seek care, and not their ASPD [29]. For those who seek care, it typically occurs in an outpatient setting. Psychiatric hospitalization has a limited role, and because antisocial persons can be disruptive, it is best to avoid hospital admission unless there is an immediate need to protect the patient from himself or to protect others if he has homicidal thoughts or plans [30]. Some experts have asserted that psychiatric treatment only makes the antisocial person worse, but there is no evidence to support this assertion [31].

Pharmacologic Treatment

There are no medications approved by the US Food and Drug Administration for the treatment of ASPD. For that reason, any medication used to treat ASPD or its symptoms is prescribed "off-label." There has been only one study in which people with ASPD and controls were randomly assigned to medication (phenytoin) or placebo. The target symptom was aggressive behavior and the trial was negative [32].

Because of the lack of approved medications, psychiatrists must rely on other strategies to treat their antisocial patients. One strategy is to target the patient's co-occurring disorder(s), for example prescribing an antidepressant to a depressed antisocial patient, or treating the bipolar antisocial with a mood stabilizer. This strategy makes inherent sense, and while the ASPD is not targeted, improvement in the accompanying depression, ADHD, or bipolar disorder, may have a salutary effect on the ASPD.

Another strategy is to target the patient's aggression and impulsivity, symptoms that are perhaps those most likely to contribute to conflict between the patient and family members, coworkers, or society at large. Many clinical trials and case reports suggest that several medications have an anti-aggressive effect in other patient populations, such as those with dementia or brain injuries, those with intellectual disability, those with psychoses, those with "impulsive" personalities (e.g., borderline personality disorder), prisoners, and children and adolescents with conduct disorder [33–39]. Medications studied in these diverse populations include carbamazepine, valproate, lithium carbonate, propranolol, buspirone, trazodone, and serotonin reuptake inhibitor antidepressants. Additionally, first and second generation antipsychotics have been shown to deter aggression and impulsive behaviors. While there are no trials of these agents in people with ASPD, case reports suggest they may be helpful [40, 41]. In one report [40], four antisocial men with aggressive behavior received quetiapine. Following treatment, the men were less irritable, impulsive, and aggressive. In a single case report [41], a man with ASPD was given risperidone for violent behavior and improved.

Antipsychotic medications have side effects that may complicate their use such as tardive dyskinesia with first generation antipsychotics and metabolic problems (e.g., weight gain, glucose intolerance) with second generation antipsychotics. These medications do not target the antisocial syndrome, nor do they change its natural history.

Benzodiazepine tranquilizers have been shown to increase aggressive outbursts in patients with borderline personality disorder (BPD), and for that reason should probably be avoided in antisocial persons [42]. Further, they should be avoided in those prone to addiction, and many people with ASPD have comorbid substance use disorders. Stimulants should be avoided as well, even though ADHD or its symptoms are common in antisocial persons. Use of these medications should probably be limited to antisocial persons without a history of a comorbid substance use disorder who have failed trials of non-addicting alternatives such as bupropion, clonidine, or atomoxetine [43].

Response to psychotropic medication to target aggression or impulsivity is highly variable. While the patient may have fewer episodes of

aggressive outbursts, it is unlikely that the outbursts will fully resolve. Further, even when the psychiatrist recommends medication, there is no guarantee that the antisocial person will take it, nor is it likely that the individual could be compelled to do so. The National Institute for Health and Clinical Excellence in the UK concluded in a comprehensive report released in 2009 [44] that the limited evidence did not support the routine use of medication to treat ASPD, but that medication for co-occurring disorders should be used according to guidelines for the disorder in question (e.g., major depressive disorder). The guideline cautioned clinicians to be mindful of the poor compliance, high attrition, and potential for misuse of prescription medication. A Cochrane Database review [45] found that evidence was insufficient to allow conclusions about the use of medication for ASPD.

Psychotherapy

According to NICE and the Cochrane Database reviews, there are insufficient data to assess the value of psychotherapy in persons with ASPD [44, 46]. Complicating these reviews is the fact that most studies reviewed involved participants other than those with ASPD. Nonetheless, the main use of psychotherapy in antisocial persons has been to treat co-occurring disorders for which the treatment is known to be effective, for example, cognitive-behavioral therapy (CBT) for panic disorder or major depression. Psychotherapy is also used to provide general support. CBT has been used to treat ASPD, and Beck and coworkers have developed a model that aims to improve the patient's "moral and social behavior through enhancement of cognitive functioning" (p. 152) [47]. The therapist attempts to challenge the patient's maladaptive cognitions and behaviors, while helping the patient gain insight into the ASPD and its consequences. Guidelines are set for the individual's involvement, including regular attendance, active participation, and completion of homework.

In a small case series, Davidson and Tyrer [48] reported the results of cognitive therapy in individuals with either ASPD or BPD. Of three antisocial men who completed the 10-week trial, two had improvement in antisocial symptoms. Davidson et al. [49] later conducted a trial in which 52 antisocial men who had acts of aggression in the prior 6 months were randomly assigned to CBT or "treatment as usual." At 12 months follow-up, both groups experienced a decrease in the occurrence of any acts of verbal or physical aggression. There was no evidence that CBT improved outcomes more than usual treatment. Nonetheless, Davidson et al. wrote that "The view from the ground … was that doing (CBT) was helpful in reducing antisocial behaviours and changing thinking" (p. 94) [50]. While this, and other early data, suggest that CBT has promise, only larger, and longer term studies will show its true effectiveness.

Antisocial patients can be especially challenging because of their tendency to manipulate others, to lie or dissimulate, or because of their impulsivity and aggression. Therapists may find the patient thoroughly disagreeable. For these reasons, and the general hopeless view toward treatment, many psychiatrists and therapists will refuse referral of antisocial patients [3, 51].

Antisocial Persons with Comorbid Substance Use Disorders

Treating the antisocial persons substance use disorder may lead to overall improvement in the antisocial syndrome itself. The psychiatrist should begin by withdrawing the patient from the substance(s), if necessary in an inpatient or outpatient addictions program. The patient should then be referred to an alcohol or drug rehabilitation program. One study of antisocial persons with a substance use disorder treated with methadone maintenance found that patients who abstained were less likely to engage in antisocial behaviors and had fewer family conflicts and emotional problems [52].

There have been two largely negative trials of contingency management for a substance use disorder with co-occurring ASPD. In one clinical trial, 40 patients with ASPD and co-occurring drug abuse were randomly assigned to receive either a structured contingency management intervention in addition to standard substance abuse treatment, or to standard substance abuse treatment alone [53]. Improvement was seen in both groups over 17 weeks of treatment, but there were no significant differences between groups. In another clinical trial, 100 patients with opioid dependence plus ASPD were randomly assigned to a contingency management intervention plus methadone maintenance or to methadone maintenance alone [54]. No differences were seen between the treatment groups in terms of drug abstinence. The group receiving the experimental intervention had better attendance than subjects receiving methadone maintenance alone.

A study of patients with ASPD who were in treatment for substance use disorders tested the impact of adding a brief psychoeducational program [55]. Those who were randomly assigned to receive the "Lifestyle Counseling" program were less likely to drop from treatment [56]. The patients also experienced a greater perception that they received help for their ASPD, and had more days abstinent and higher treatment satisfaction with regard to their substance use disorder.

Antisocial patients with a co-occurring substance use disorder should be encouraged to attend meetings of Alcoholics Anonymous or sister organizations (e.g., Narcotics Anonymous, Cocaine Addicts Anonymous). Gambling disorder is another addictive behavior that often occurs in antisocial persons; individuals with a gambling disorder should likewise be encouraged to attend Gamblers Anonymous.

ASPD and Borderline Personality Disorder

There is an emerging literature on the treatment of BPD comorbid with ASPD. A recent study found that the presence of comorbid ASPD did not interfere with improvement in persons with BPD who participated in Systems Training for Emotional Predictability and Problems Solving group therapy [57]. In another report, patients BPD and comorbid ASPD were randomly assigned to receive mentalization-based therapy or structured clinical management. At the end of the trial, both groups had improved, but those receiving mentalization-based therapy had greater improvement in anger, hostility, paranoia, and suicidal and self-harm behaviors [58].

Conclusions

There is no reason to routinely treat antisocial patients with medication. If the patient has a treatable comorbid psychiatric disorder, consideration should be given to using the first-line medication or psychotherapy for that disorder. Medications with potential for abuse should be avoided if possible. Those with severe impulsivity and aggression who are willing to take medication may benefit from a trial of medication, particularly a second generation antipsychotic. Alternatives include mood stabilizers such as lithium carbonate, valproate, or carbamazepine. Cognitive-behavioral therapy (CBT) may be helpful in persons with milder forms of ASPD who have insight and a reason to improve (e.g., may risk losing a spouse or job). Therapists treating patients with ASPD should understand the challenging nature of treating persons with ASPD.

Compliance with Ethical Standards

Conflict of Interest
Dr. Black declares that he has no conflict of interest.

Human and Animal Rights and Informed Consent
This article does not contain any studies with human or animal subjects performed by any of the authors.

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