9 Intermittent Explosive Disorder

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Since intermittent explosive disorder (IED) became a diagnostic category in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III; American Psychiatric Association [APA], 1980) the exclusionary criteria combined with the vague operational definitions within the IED category made diagnosis and research difficult (Coccaro, 2003b). More recently, DSM-5 (APA, 2013) included a criterion for verbal aggression (rather than just physical aggression), allowing for inclusion of additional individuals into the diagnostic category (Coccaro, 2013).

Specifically, IED is the DSM-5 diagnostic category utilized to classify individuals who engage in repetitive patterns of impulsive aggression that are markedly disproportionate to stimuli that provoke the reaction and cannot be better accounted for by substances, medical conditions, or other psychological disorders (McCloskey et al., 2012). Additionally, IED is the sole disorder in the DSM-5 that puts affective aggressive behavior at the forefront of the diagnosis.

Diagnostic Considerations

A full medical examination should precede any diagnosis of IED, including physical and neurological examinations as well as a thorough review of one's medical record (Olvera, 2002). In addition, consultation with a neurologist is essential in many cases, because it is necessary to assist with exclusionary diagnoses such as head injury, memory loss, or seizures. A structured or semistructured diagnostic interview ensuring that comorbid and preexisting conditions will be given central consideration should also be employed. Robins and Navaco (1999) suggest that individuals with severe anger may not be accurate representatives of their actual behavioral patterns of aggression. Therefore it is recommended that clients' families and other corroborating resource persons be an integral part of the diagnostic process.

Because there is a high level of comorbidity between IED and other psychiatric disorders, one of the greatest challenges facing clinicians is

clinically determining whether another mental health diagnosis better accounts for the aggression. Because the DSM contains many diagnoses that contain an element of aggression, concerns about limitations of the DSM diagnostic criteria for IED influenced the development of a set of alternative integrated research IED (IED-IR) criteria (McCloskey et al., 2012). The IED-IR criteria provide an objective definition of minimal aggression frequency as either twice-weekly verbal aggression for four consecutive weeks or three acts of physical aggression within a one-year period (Coccaro, 2003a). The IED-IR criteria also require the aggressive acts to be primarily affective in nature (acting out anger), and to result in clinically significant distress or impairment. In addition, the IED-IR criteria exclude borderline and antisocial personality disorders from this group of disorders, because IED is believed to more effectively explain aggressive behavior. In sum, the IED-IR was created in an attempt to more accurately assess and diagnose IED and to help differentiate it from other mental disorders that might better account for the affective explosiveness.

No published diagnostic assessment tools have been designed specifically to diagnose IED, perhaps because of diagnostic challenges, the use of multiple criteria to diagnose the disorder, and the relative absence of IED research (as compared to most other disruptive disorders). However, two unpublished instruments have been created to help diagnose IED.

The Intermittent Explosive Disorder Module (IED-M; Coccaro, unpublished instrument, as cited in Olvera, 2002; Olvera et al., 2001) is a 20- to 30-minute structured diagnostic interview created to acquire comprehensive information needed to arrive at a diagnosis of IED by using both DSM-5 and IED-IR criteria. The IED-M includes quantitative information about lifetime and current verbal aggression, aggression against property, and physical aggression (McCloskey et al., 2012). Descriptions of the three most serious instances of each type of aggression during the one-year period in which the aggression occurred most frequently (e.g., "What were the consequences of this outburst?") provide information about how proportionate the aggressive response is to the situation at hand. Additional information about aggressive acts is also obtained, including—but not limited to—age of onset, each type of aggression, the effects of aggressive behaviors on relationships with family and friends, subjective level of distress, emotions, physical symptoms before and after an outburst, and substance use during aggressive outbursts. The IED-M has been utilized in at least one published study (Coccaro et al., 2004), providing evidence of the instrument's construct validity. In particular, individuals diagnosed as having IED were more aggressive on both self-report and behavioral measures than comparison groups within this study. This study also provided evidence that the IED group reported higher levels of lifetime verbal and physical aggression than community control groups (Olvera et al., 2001).

Similarly, the Intermittent Explosive Disorder Diagnostic Questionnaire (IED-DQ; McCloskey, unpublished instrument, as cited in Coccaro & McCloskey, 2010) is a seven-item self-report measure that is designed to diagnose IED according to either the DSM-5 or the IED-IR diagnostic criteria. The IED-DQ includes items that assess aggression frequency and severity, distress associated with aggressive behavior, and mental health or medical diagnoses that must be excluded in order to diagnose IED (McCloskey et al., 2012). Results from an initial developmental study utilizing the IED-DQ indicate that the instrument has satisfactory psychometric properties with sufficient interrater reliability, test-retest reliability, and construct validity in differentiating subjects with IED from controls on self-report measures of anger and aggression (McCloskey et al., 2012).

Prevalence and Course

Historically, IED was thought to be quite rare, but recent clinical and epidemiological findings have pointed to the notion that it is an underdiagnosed disorder with lifetime prevalence rates ranging from 4% to 7% (Coccaro & McCloskey, 2006). Coccaro (2012) summarizes worldwide prevalence rates and places North America at the top, followed by South America, Europe, Asia, the Middle East, and Africa. But there is a great deal of variation in reported prevalence rates; for example, Fincham et al. (2009) places Africa at the top, reporting a 9.5% prevalence rate.

Intermittent explosive disorder usually begins during childhood (Coccaro, 2000) and is linked to significant impairments in interpersonal and occupational functioning, which are related to workplace difficulties, problematic relationships, and involvement with legal systems (McElroy et al., 1998). These components are further heightened when this chronic disorder is left untreated (Kessler et al., 2006). Finally, IED is associated with medical problems that include coronary artery disease, hypertension, and stroke (McCloskey et al., 2010).

Pharmacological Solitary Treatments

Though there are numerous medications utilized to treat aggression associated with IED, currently there are no medications that carry the specific indication for IED treatment. In reviewing the available research, readers will find that medications are often classified according to their usefulness in treating impulse control disorders (ICDs) in general (Schreiber et al., 2011), resistant or refractory IED (Coccaro, 2013), impulsive repetitive aggression (Jones et al., 2011), and agitation and violence (McElroy, 1999). Medication choice may also reflect the presumed neurobiological origins of symptoms or IED as a disorder. Coccaro (2012), for example,

described "neurobiological support for the presence of serotonergic abnormalities globally and specifically in areas of the limbic system (the anterior cingulate) and in the orbitofrontal cortex" (p. 585). With this in mind, the medications are utilized to treat these dysfunctions within the neurotransmitter systems and the brain regions involved.

Of the medications prescribed to treat IED and symptoms associated with IED, antidepressants (especially antidepressants such as selective serotonin reuptake inhibitors, or SSRIs), mood stabilizers (anticonvulsants, atypical antipsychotics, and lithium), and antihypertensives (beta blockers and alpha-2 agonists) are among the most researched and utilized.

Selective Serotonin Reuptake Inhibitors

Dysfunction within the serotonin system (lower levels of serotonin) is associated with impulsivity and aggressiveness. An SSRI selectively prevents the reuptake of serotonin by the presynaptic neuron, thus allowing it to remain in the synapse and produces its effect. Utilizing a SSRI therefore allows more serotonin to remain in the synapse, increasing its effect on control over aggressive impulses.

Of the SSRIs, fluoxetine has been researched most frequently. Two studies provide evidence that fluoxetine is beneficial in treating IED. In a small study of patients with IED and personality disorders, Coccaro and Kavoussi (1997) noted a reduction of aggressive symptoms in those taking fluoxetine as compare to those taking a placebo. Likewise and more recently, in a larger 14-week double-blind study, Coccaro et al. (2009) reported a significant reduction in the frequency and severity of impulsive aggression as well as a reduction in irritability. Since 2009, other studies have replicated the findings of these two studies.

Coccaro (2013) notes that lower doses of fluoxetine are used for first-line treatment and higher doses for resistant IED. Coccaro and Kavoussi (1997) recommend a three-month minimum trial to produce desired effects. Side effects may include sleep disturbances, sexual dysfunction, and headache (Ferguson, 2001).

Anticonvulsant Mood Stabilizers

In the antiepileptic or anticonvulsant class, valproate/divalproex, carbamazepine oxcarbazepine, and phenytoin have been studied frequently. Carbamazepine, oxcarbazepine, and phenytoin produce their effect by blocking sodium channels and thus stabilizing neuronal membrane excitation, while valproate/divalproex stabilizes neuronal membranes through gamma-aminobutyric acid (GABA). Simplistically, anticonvulsants reduce neuronal excitability, thus improving mood stability.

Two studies provide evidence for the effectiveness of valproate/divalproex in patients exhibiting aggressive behaviors. In a small double-blind placebo-controlled study of children and adolescents with explosive tempers and mood liability, Donovan et al. (2000) reported significant improvements in mood stability and a reduction in outbursts. Similarly, Hollander et al. (2003), in a large multicenter randomized double-blind placebo-controlled study demonstrated a reduction in impulsive aggression, irritability, and overall severity in a group of cluster B personality disorder patients with comorbid IED.

Thirty years ago, Mattes (1984) reported that carbamazepine reduced aggressiveness in individuals with rage outbursts. In this study, although all patients had multiple diagnoses, almost half had been diagnosed with IED. More recently, Stanford et al. (2005), in a double-blind placebo-controlled parallel-group-design study of men with impulsive aggression, showed significant reduction in impulsive aggression for those taking carbamazepine, phenytoin, or valproate.

Oxcarbazepine has been the recent focus of aggression treatment studies as well. Mattes (2012) provided a rational for its use in the prison population and in a 10-week double-blind placebo-controlled study. Mattes (2005) demonstrated that oxcarbazepine significantly reduced impulsive aggressiveness when compared to placebo.

Stanford et al. (2001), in a six-week double-blind placebo-controlled crossover study, explored the effects of phenytoin on individuals with impulsive aggression. The authors reported a significant reduction in impulsive-aggressive behaviors for those taking phenytoin. Also, as noted earlier, Stanford et al. (2005), in a study comparing the effectiveness of carbamazepine, phenytoin, and valproate in men with impulsive aggression, showed a significant reduction in impulsive aggression for those on either of the medications.

According to Coccaro (2013), phenytoin, oxcarbazepine, and carbamazepine may be used in conjunction with an SSRI in resistant IED. Refractory IED may be treated with valproate/divalproex and newer antiepileptics such as lamotrigine (see Tritt et al., 2005) or topirimate (see Nickel et al., 2005). Side effects may include sedation, decreased cognition, lethargy, and weight gain (Swann, 2001).

Atypical Antipsychotics

Atypical antipsychotics are a newer addition to the treatment spectrum of IED. Atypical antipsychotics have a multipronged mechanism of action affecting numerous neurotransmitters (viz., serotonin, norepinephrine, dopamine, etc.), thus improving multiple dysfunctional neurotransmitter systems and stabilizing mood. Side effects include sedation, cognitive deficits, lethargy, and weight gain (Sharif, 2003).

Of those studied, risperidone was explored most often. To a lesser extent, clozapine and olanzapine have also been studied. Buitelaar et al. (2001), in a predominantly male group, studied the effectiveness and safety of risperidone in a six-week double-blind randomized parallel-group-design study. All participants had subaverage intelligence and were hospitalized for various disorders that included aggressiveness. The authors reported that risperidone use was associated with a reduction in severe aggression.

Lithium

Lithium has been utilized for decades to treat aggression. According to a recent meta-analytic review, "There was evidence for significant reductions in aggression for those taking phenytoin, lithium, carbamazepine/oxcarbazepine, but not for valproate or levetiracetam" (Jones et al., 2011, p. 96). In an older study exploring the usefulness of lithium to treat impulsive aggression, Sheard et al. (1976) conducted a double-blind placebo-controlled trial with prisoners who were nonpsychotic. The authors noted a significant reduction in aggressiveness and made the recommendation that lithium be a viable option for nonpsychotic impulsive-aggressive individuals. Other studies have supported the efficacy of lithium in aggressive clients; however, many are specific to clients diagnosed with conduct disorder (see Campbell et al., 1995).

Individuals taking lithium are required to monitor their diet in order to prevent toxicity. Specifically, patients should limit their sodium intake and be sure to drink plenty of water. With the development of newer medications that are free of dietary restrictions and provide a better safety profile, lithium is not considered a typical first-line treatment for IED. Coccaro (2013) recommends that lithium be utilized only for adult individuals with refractory IED.

Beta Blockers

Beta blockers are antihypertensives that have shown usefulness in treating IED. Propranolol and pindolol have been studied and utilized most frequently. These medications produce their effect through blockade of beta receptors, possibly in the brainstem, thus affecting norepinephrine and reducing sympathetic nervous system stimulation. Side effects include depression, hypotension, lethargy, and sexual dysfunction (Muzyk & Gagliardi, 2010).

Greendyke et al. (1986) explored the efficacy of propranolol in a small double-blind placebo-controlled crossover study of individuals with organic brain disease and violent behavior. The authors reported a significant reduction in assaultive behaviors. Similarly, in a small double-blind

placebo-controlled crossover study of individuals with organic brain disease, Greendyke and Kanter (1986) researched the use of pindolol for impulsive-explosive behaviors. Pindolol produced significant behavioral benefits.

Alpha-2 Agonists

Alpha-2 agonists are another class of antihypertensives that may be useful in treating IED aggression. Of these medications, clonidine is the most used; however, guanfacine is often interchanged. Many research studies simply refer to the use of alpha-2 agonists rather than differentiate between the two. The mechanism of action of alpha-2 agonists is believed to arise from the inhibitory nature (i.e., inhibits norepinephrine release) of alpha-2 receptors in the brainstem. Norepinephrine is associated with stress and arousal; therefore, by inhibiting norepinephrine, aggressiveness and impulsivity may be reduced. Side effects include sedation, hypotension, lethargy, and mild depression (Ming et al., 2008).

Ming et al. (2008), in an open-label retrospective study, explored the efficacy of clonidine in children diagnosed with autism spectrum disorder who exhibited, among other things, mood disorder and aggressive behaviors. Participants were predominantly boys. The outcome showed that clonidine was effective at reducing mood instability and aggressiveness.

Benefits and Limitations of Pharmacotherapy as Sole Treatment

Ample neuroscience research has highlighted the neurotransmitters and brain regions involved in IED. Therefore, when medications are utilized to improve the function of dysfunctional neurotransmitter systems or brain regions, clients experience a reduction of symptoms. Pharmacological management of IED may also be a more cost-effective method for treating IED and any comorbid symptom.

As a solitary approach, pharmacological management of IED is limited by the overall efficacy of medications in ameliorating all symptoms of IED. Some symptoms may improve or remiss; however, others remain relatively unchanged. With all things considered, there is a need for continued research in the area of pharmacotherapy for treatment of IED, especially randomized controlled clinical trials that focus specifically on the symptoms cluster within IED.

Psychological Solitary Treatments

Although multiple interventions (both pharmacological and psychological) have been utilized to treat anger and aggression with differing efficacy, little research has specifically examined the effectiveness of

treating IED. However, the effectiveness of psychological interventions in treating anger dysregulation has been the subject of extensive research (Beck & Fernandez, 1998). Cognitive-behavioral therapy (CBT) interventions such as relaxation training, social skill training, and multicomponent treatments have been shown to have moderate to large effects in the treatment of anger. CBT has also been shown to reduce aggression (McCloskey et al., 2012), especially when specific CBT treatment manuals are utilized. Individual compliance and adherence to CBT treatment were monitored, and results revealed increases in positive behaviors as well as consistent decreases in aggression. Consequently, it is suggested that clinicians choose structured interventions that are delivered in an individualized format (McCloskey et al., 2012).

Two published studies examined treatments of individuals diagnosed with IED. The first revealed efficacy of a brief (four 90-minute sessions) CBT program for aggressive drivers. Additional analyses revealed that drivers who had been diagnosed with IED tended to improve less than drivers not diagnosed with IED; thus, implying that individuals diagnosed with IED may require a longer, more intensive therapy schedule than those without IED (Galovski & Blanchard, 2002). Therefore it is essential to recognize that, although CBT has been shown to work with anger dysregulation, those diagnosed with IED may require a longer course of CBT treatment.

The second study compared a 12-week multicomponent CBT intervention delivered in an individual format to those meeting IED diagnostic criteria. The counseling intervention, based upon the Cognitive, Relaxation, and Coping Skills Training (CRCST) anger management manual (Deffenbacher & McKay, 2000), was composed of three primary components. The primary focus of the first two sessions consisted of increasing awareness of physiological cues and teaching relaxation (e.g., progressive muscle relaxation, guided imagery). During the third session, clients were provided a rationale for the application of time-outs to prevent impulsive-aggressive behaviors. During the fourth and fifth sessions, the rationale for cognitive restructuring was introduced through the A-B-C cognitive model. Six types of cognitive distortions were introduced and explicated (e.g., misattribution, overgeneralization, labeling, blaming, demanding/commanding, and magnifying/catastrophizing), with examples and strategies for assisting in reduction of each cognitive distortion. The second half of the treatment focused on implementing and generalizing previously learned relaxation and cognitive skills through practice and imagined exposure. The final session also consisted of relapse prevention strategies (McCloskey et al., 2012). The treatment was delivered in individual or group sessions. The participants demonstrated a higher reduction in anger and aggressive behaviors when compared to subjects in the wait-list, control group. Specifically, clients diagnosed with IED

decreased their aggressive behavior from pretreatment to posttreatment by over 55% in the group CBT assignment and by over 75% in the individual CBT assignment (McCloskey et al., 2012). In addition, the treatment gains were maintained at a three-month follow-up. Clients in the individual CBT assignment also reported a greater decrease in hostile thoughts and a larger improvement in quality of life as compared to waitlist clients. In sum, almost half (7 of 15) of the clients in the individual CBT condition achieved remission status (e.g., no physical aggression in the past two weeks) at the end of treatment. Comparatively, only two of the subjects in the group CBT condition and one of the subjects in the waitlist condition met the remission criteria.

Behavioral management therapy, social skills training, cognitive-behavioral therapy (with an emphasis on anger management), group therapy, and family therapy have also been shown to be useful for controlling aggressive behavior (Olvera, 2002). Because anger is a multidimensional concept, clinicians must consider the antecedents, behavioral response dimensions, cognitive dimensions, physiological responses, and subjective experience of the emotion. An example of a therapeutic modality that addresses the multidimensional aspects of anger is social skills interventions (Olvera, 2002). This treatment includes social skills training with a cognitive-behavioral element using both individual and group formats. The sessions begin with a primary focus on social problem solving, such as identifying and defining key anger issues. In therapy, clients learn increased awareness of anger and physiological arousal as cues with which to begin problem solving. Additional training focuses on reducing impulsive reactions, considering consequences, and implementing alternative behaviors. Cognitive techniques include the use of self-statements and reframing perceptions of stressful situations. Additional behaviorally based training focuses on adjusting body language in social settings and learning how to negotiate interpersonal wants and needs. Controlled studies of this treatment used with aggressive children have reported improvement on a variety of measures (Olvera, 2002), but decreases in aggression as an outcome variable were solely found in aggressive socially rejected children.

Benefits and Limitations of Psychotherapy as Sole Treatment

Psychosocial treatment has been shown to improve many of the core features and symptoms of IED. As a treatment approach, CBT-based treatment, regardless of the disorder, can lead to improvements in both the thinking patterns and exhibited behaviors of individuals. As a part of a CBT-based approach, teaching clients to act rather than react produces noticeable effects. Also, as clients develop new coping skills and implement these skills, they improve.

As a solitary approach, psychosocial treatment may not produce improvements quickly enough to address the severity of IED symptoms. Many clients need rapid stabilization, with medication, before they can benefit from psychotherapy.

Overall, research findings suggest that CBT-based treatment shows promise in treating symptoms for IED, but some of the obtained results have been inconsistent, and further research is needed to outline the process that leads to aggression reduction in clients with IED. Randomized clinical trial studies have not been conducted, yet they have been recommended. Future research needs to focus upon the layered nature of the symptoms and their outward behavioral manifestations in order to apply accurate differential diagnoses.

Combined Treatments

There is a paucity of research on combined treatment of IED; this section reviews research that suggests these treatments may be effective although benefits have not yet been confirmed through controlled studies. The majority of that literature is extrapolated from the more widely researched comparable area of impulsive aggression.

Adolescents and Adults

Coccaro (2013) suggests that a comprehensive approach to treating patients with IED may combine pharmacotherapy with CBT. He reported that evidence exists that each treatment alone provides benefits, but he cautions that to date the literature is lacking research comparing a combined approach to CBT or pharmacotherapy alone. In a combined treatment paradigm, therapists should begin with a thorough biopsychosocial intake interview with the client and preferably outside observers. Olvera (2002) recommends that therapists interview several observants, especially those closest to the individual, because IED clients struggle with objectivity regarding their symptoms. The goal of the interview is to determine the potential of underlying or comorbid disorders or organic causes leading to appropriate psychiatric or neurological referrals (Olvera, 2002). To determine if the client's aggression is better explained by another diagnostic category, Olvera suggests utilizing a diagnostic timeline to differentiate the sequential course of aggressive and comorbid symptoms.

Working with IED clients can be challenging for therapists who struggle with maintaining empathy during limit setting (Ng & Mejia, 2011). Another challenge for therapists that might occur is transference or countertransference during the client's angry outburst (Ng & Mejia, 2011). But combining CBT and medication reduces the frequency of angry

outbursts by raising the triggering threshold and teaching the client to anticipate and manage triggering stimuli in a healthier fashion (Coccaro, 2013). Coccaro suggests that clients may be resistant to drug therapy or CBT, making them poor candidates for these therapies. For resistant clients, he suggests reassessing motivation and working with these clients if they return for assistance. If the client is resistant but remains in the therapeutic environment, therapists might want to consider motivational interviewing strategies. McCloskey et al. (2008), for example, conducted a randomized clinical trial (pilot study) comparing individual and group CBT to a waitlist control group. Overall, they found that clients within the individual and group treatments experienced a decrease in aggression and anger in comparison to the control group. Additionally, clients who engaged in individual therapy experienced less hostility. Coccaro recommends that CBT therapy includes cognitive restructuring, relaxation training, coping skills training, and relapse prevention, all of which are therapeutically sound techniques to consider as part of a combined approach. So CBT may be a good first step to IED treatment for clients initially resistant to medications, and it may be beneficial when combined with an appropriate medication (for clients who may benefit from it and become more receptive to this treatment modality).

Children

While working with IED adults might be challenging, working with children can be even more so. Children can receive an IED diagnosis as early as age 6, and children with severe impulsivity or aggression may be medicated in order to improve symptoms and address safety concerns. Sweeney and Tatum (1995) note that antipsychotics have been found to be effective in children in lowering aggression, but caution that because of their side effects they should only be considered after exploring all other treatment options.

Combining pharmacology and play therapy is beneficial when the alternative of not medicating the child limits the chances for a successful therapeutic outcome (Sweeney & Tatum, 1995). The play therapy setting is conducive to countering some of the negative aspects of taking medications. For example, children often experience self-concept or self-esteem issues related to the stigma of having to take medication. Play therapy offers medicated children the opportunity to process the above issues to regain a sense of control and mastery over their immediate environment.

Beyond the therapeutic benefits of play therapy for the medicated child, therapists also play a central role in advocacy for their clients and monitoring treatment response (both desired and adverse effects). Child therapists must know how to obtain information about treatment response from children who have not yet developed significant verbal

skills, and must work in concert with the prescribing physicians to inform them about the children's response to the medications. In addition, therapists are able to differentiate children who legitimately need psychiatric care from those currently medicated for "biologically-based symptoms when in fact the child is behaviorally responding to an emotional trauma or inappropriate parenting" (Sweeney & Tatum, 1995, p. 55). For these reasons, psychotherapists and play therapists working with children have "an obligation to his or her child clients to be educated on issues of child psychopharmacology" (Sweeney & Tatum, 1995, p. 55).

Benefits and Limitations of Combined Treatments

A combined approach to treating IED offers synergy between psychotherapy and medication. For the most part, medications set the stage for improvement as psychotherapy provides the tools for success. Medications thus provide initial stabilization, improving clients' engagement in their psychotherapy. In a combined approach, therapists can process with their clients the potential costs versus benefits of pharmacotherapy, leading to more positive treatment outcomes and improved medication compliance. Also, therapists are a first line of defense for identifying deleterious side effects that may have gone unnoticed if a client was solely receiving pharmacotherapy.

It is important for therapists to understand that a combined treatment approach for IED clients, while potentially beneficial, also complicates the therapist's job, for it adds additional goals that must be addressed in therapy. Therapists must also become familiar with the potential side effects of medication and be capable of differentiating the manifestation of pharmacotherapy side effects from other symptoms. Finally, coordinating treatment between two providers may be a challenge, and it is likely to require more time and effort by the therapist, the prescriber, and the client.

Summary and Recommendations

Although IED has been a DSM diagnosis for over 20 years, there is relatively scarce research about treating clients diagnosed with IED. This dearth may be due in part to limitations inherent in the DSM diagnostic criteria. Although there are no specific IED treatments that meet the criteria for empirically validated treatments (McCloskey et al., 2012), evidence from some studies reveals that behavioral and cognitive-behavioral interventions have been effective in reducing anger and aggression and in improving social skills. Research exploring IED treatment with medication is limited as well; however, there is evidence of medication efficacy for many of the symptoms associated with IED. Although it can be

expected that combined treatments may offer the benefits of each modality, research on combined treatment for IED is almost nonexistent, and further study is required in this area. All in all, however, it is reasonable to expect that unless symptoms are severe and the clients exhibit danger to themselves or others, psychotherapy (especially cognitive and behavioral interventions) should be utilized as first-line approaches, and when improvement is not sufficient or symptoms are severe enough to require faster stabilization, a combined approach seems most sensible.

This case vignette demonstrates the course of treatment for an adolescent client. The client's treatment began with a solitary psychosocial approach that proved helpful but failed to remiss some symptoms. As a result, the client's psychosocial treatment was supplemented with pharmacological treatment. The resulting combined approach proved to remiss more symptoms and support better outcomes.

Brian, a 16-year-old white male, was referred to the local community mental health agency through the family court system. His case plan required him to engage in (1) individual counseling for a minimum of 10 weeks, (2) family counseling for 10 weeks, (3) individual anger management classes for 12 weeks, and (4) anger management group for 12 sessions.

In his intake session, Brian's mother explained that the first time Brian "exploded" was after playing a video game with his stepfather. When Brian's stepfather began celebrating that he won the game, Brian stood up, began yelling obscenities at his stepfather, and then punched him in the jaw. Brian then proceeded to pick up lamps, tables, a chair, and throw them at his stepfather, younger brother, and mother. Brian's mother reported that this incident occurred when he was 12, and that the family attributed this outburst to his frustration about his mother recently giving birth to his youngest sister.

The second incident occurred at age 13, when Brian lost a basketball game in their backyard. Brian hurled the basketball through the family room window, breaking it. Brian then wrestled one of his friends to the ground and began punching him repeatedly. When two of Brian's friends attempted to pull Brian off, he began punching them as well. When Brian's stepfather attempted to pull him off the other boy, he began punching his stepfather as well. The stepfather reported that he needed physical assistance from a neighbor to pull Brian off the victim. No charges were pressed at this time,

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but the boy's father threatened to press assault charges if anything remotely similar reoccurred. Brian stated that he did not remember throwing the objects, but did remember becoming extremely angry, and believed he could have killed the boy who taunted him about not making the game-winning shot. He stated that he could not remember how he found himself on the ground punching the other teen, but did remember that his anger came on suddenly and that he wanted to hurt someone. He also shared that during this sudden onset he believed he could have taken down the other five teen boys who were there. Once he started punching and hitting, he explained, it became a situation he could not stop.

In the most recent episode, at the age of 15, Brian attacked his younger brother. He and his younger brother were discussing an upcoming vacation, and Brian's younger brother reminded Brian that if he did not improve his grades, he would not be able to go. Brian began verbally attacking his younger brother, suddenly punched him in the face, and continued to punch him in the face and broke his nose. At this point, the stepfather entered the room and attempted to break up the fight. Brian then began punching the stepfather in the face. Brian's mother called the police as the stepfather struggled to pull Brian off of his 11-year-old brother. When the police arrived, Brian's mother decided that she needed to take action, so she reported prior destruction of property (Brian had been punching holes in the walls of the home for about one year) and pointed out that she believed her younger son's nose had been broken. The paramedics confirmed that her son's nose was broken, and they were concerned about a broken jaw as well. The stepfather did not have any broken bones but had suffered significant bruising.

As a result of the police being called, Brian entered the juvenile justice system. He was not sentenced to serve any juvenile jail time, but he was placed on probation for one year. Part of his probation was to undergo a psychiatric evaluation and engage in the previously mentioned case plan. He also was required to complete 100 hours of community service. Because of his angry outbursts at his mother, threatening her with physical harm when she attempted to send him to school, he missed a considerable amount of schoolwork. As a result, Brian was required to repeat the tenth grade.

Brian admitted that he was becoming angrier every day, and that everything and everyone around him feared him. He shared that he found himself increasingly fascinated with weapons, namely, rifles. Brian reported that he had been studying various guns on the Internet and expressed an interest in joining a local gun club in

his community, as he wanted to meet others with shared interests. Brian also found himself missing more school and having issues with maintaining sleep. He admitted to having vivid, violent dreams that would awaken him.

At the time of his intake interview, he looked his stated age and was dressed casually in jeans and a t-shirt. His mood was angry, which appeared congruent with his affect. His thoughts were focused upon his preoccupation with physical violence, and how using a gun would show that he could not be threatened. Despite these thoughts, he demonstrated a high level of insight into his condition. He had never hurt animals, and expressed remorse about unintentionally hurting his brother when he punched him in the nose. His suicide risk appeared low.

Although Brian was initially resistant to counseling, he agreed to keep a "thinking, feeling, doing" journal. In this journal, he was asked to record his thoughts, feelings, and behaviors before he began to engage in acts that would involve yelling, hitting, throwing, and the like. He was assigned this journaling exercise in between sessions to arrive at a baseline. Between the second and third sessions, he claimed to forget about the assignment. But between the third and fourth session he did complete a daily journal. The journal revealed that when he perceived that others were verbally attacking him, he automatically began to engage in physical violence. Therapy also involved utilizing "thought-stopping" techniques to cue him visually to environmental factors that would precipitate or encourage him to yell, hit, scream, or throw objects. Brian created a "stop sign" to hold in front of himself before he began to yell, hit, or scream. He created this visual cue in session so that he could create it the way he wanted it to look. He was required to share each week how well this visual cue worked for him, and if it did not work, to create a visual cue that would be effective in visually directing him to refrain from violent behaviors. Because Brian appeared to be a visual learner, the journal assignment and thought-stopping stop sign appeared to work well for him.

At the end of Brian's tenth individual session, the therapist met with his mother to discuss his progress. The mother noted positive changes yet was concerned that he remained "easy to set off." It seemed evident that therapy alone was not enough, and so the therapist referred Brian to a local child psychiatrist for a medication consult. After seeking consent, the therapist prepared a summary report, to send to the child psychiatrist, describing her concerns. Based on the therapist's report and his clinical judgment, the child psychiatrist prescribed 20 mg of fluoxetine daily.

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(continued)

Brian continued in therapy, and his therapist proceeded with CBT techniques and activities to continue to change his negative interpretations of triggering situations and utilize thought- and behavior-stopping techniques to improve self-control. After a few weeks, Brian's mother reported he became less irritable and less reactive. But Brian reported having more vivid dreams and continued sleep disturbances that caused him to wake up suddenly. Subsequently, Brian made another visit to the child psychiatrist. Because of his vivid dreams, Brain was tapered off of the fluoxetine and was prescribed 150 mg of oxcarbazepine daily.

Therapy continued as before, and Brian tolerated the new medication better. Over time, he reported a decrease in sleep disturbance, irritability, and reactiveness. His mother corroborated the improvement, and Brian's violent outbursts stopped. It is at this point that the therapy was terminated, but Brian and the family were encouraged to continue utilizing the techniques that were learned during the course of therapy.

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