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Intermittent Explosive Disorder (IED)

Van R. Silka, M.D.(1) & Anne Desnoyers Hurley, Ph.D. (2)

Q. Dr. Silka, it is my opinion that the diagnosis of Intermittent Explosive Disorder (IED) is overused and misused with respect to people with mental retardation and developmental disabilities (MR/DD). Do you agree?

A. Yes, most emphatically. IED falls in the realm of "Impulse Control Disorders" in the DSM IV.[1] The disorder is characterized by one or more discrete episodes of being unable to resist impulses that result in destructive acts. The explosive acts are grossly out of proportion to the event, and they are not better accounted for by another condition (such as Attention Deficit Hyperactivity Disorder), and are not due to a substance or medical condition. Thus, it is meant to describe disorders of severe aggression presumably related to the inability to control impulses. These acts must be episodic, rather than frequent.

The DSM IV suggests that IED could be due to an underlying neurologic cause. There may be so-called "soft signs" on neurologic evaluation such as reflex asymmetries, nonspecific EEG findings such as slowing, or evidence of abnormalities on neuropsychiatric testing. There may be a small percentage of people for whom there is a frontal lobe disinhibition or some such neurological dysfunction. In contrast, true rage attacks result from a sudden burst of neurological activity, but that are not related to a precipitating event. In rage attacks, the person is subsequently remorseful and unable to explain their behavior.

Q. Who is the diagnosis of IED meant for?

A. A person who has no other mental condition and has intermittent severe aggressive episodes in response to slight provocation. Signs of generalized impulsivity and aggressiveness may be present between episodes. The episodes may result in job loss, difficulties with interpersonal relationships, and hospitalizations or incarcerations.

Q. Could you describe the "typical patient?"

A. First, I must emphasize that the evidence that supports this diagnosis and all of the Impulse Control Disorders is not as well researched and categorized as are some other conditions, such as the Mood Disorders and Schizophrenia. The next DSM may show very significant changes in this area. That being said, the typical patient would be a male who has occasional very serious aggressive outbursts in response to minor situations.

Q. If the speculation that the underlying pathology resides in a neurologic abnormality is true, then we might expect that patients with MR/DD would be more likely to have poor regulation of stress responses. Would you consider this a reasonable hypothesis?

A. It may be quite possible, and developmental disability is listed as one of the associated features and disorders for IED. Almost everyone with a developmental disability by definition has some central nervous system abnormality. However, I have seen very few patients in my career whose aggression could not be better explained by other factors. Having a major severe aggressive episode is not diagnostic of this disorder. People have severe aggressive episodes for many, many reasons; learned and reinforced behavior, reaction to stressors, response to pain or another medical problem, etc. Furthermore, many other treatable psychiatric and neurologic disorders are associated with severe aggression. However, among intellectually normal patients, the diagnosis of IED is rarely made. Even more rarely is another psychiatric disorder missed–unless the patient has a developmental disability. Then, the majority of psychiatric clinicians who are not specialized will not make a correct diagnosis, and may default to this particular category. It does a disservice to misdiagnose someone with this condition because it then explains any unwanted behavior, and leads to inappropriate interventions.

Q. Why is IED diagnosed so frequently in the DD population?

A. IED is too easily and conveniently used because of a lack of critical thinking about the patient, leading to not being able to determine the cause of the aggressive episodes. Because aggression is such a common precipitant for psychiatric appointments for people with DD, and because psychiatric clinicians are typically untrained in any understanding of this population, IED is grossly overused. For example, if an individual is brought to an outpatient appointment by a staff person who does not know the individual well, and this individual has aggressive episodes, if the psychiatrist asks if there are any precipitants or environmental stressors, the staff person may respond that there are none without proper knowledge or thought.

In my clinical experience, there have been literally dozens of cases like this where I discover, after receiving old records, talking with staff and managers, family members, and other supporters, that there were clear environmental precipitants, such as major stressors, aggression by roommates, deaths of family members, or other obviously stressful situations. I have concluded that many people who support individuals with DD can fail to appreciate the impact of the stressors in their lives. I will directly ask if there have been any changes in the person's life, and staff will typically respond in the negative. Then, if I inquire more specifically giving examples, they will relate such things as that three staff resigned, a roommate is targeting the person, and so on. Deaths of a parent or loved one are sometimes not mentioned, because staff sometimes assume that the individual's level of retardation is too severe for them to notice or have a significant reaction to this. There is a widespread lack of appreciation of stressors in the lives of persons with MR/DD. Major stressors are not well recognized or appreciated by many professional staff and families alike. Given this

situation, it is very difficult for the psychiatric clinician to arrive at a solid diagnosis or rule out inappropriate diagnoses.

Q. How is IED treated?

A. Treatments offered would typically include anger management, and sometimes treatment with a pharmacologic agent as well. Many people use *beta blockers* in quite high doses. These medications were developed for the treatment of hypertension. They work on the beta adrenergic receptors. The beta blockers block the beta adrenergic receptors in the peripheral vasculature, which affects blood pressure and pulse. Some beta blockers cross the blood brain barrier and affect the beta adrenergic receptors in the brain. The general and oversimplified theory is that they are involved in the fight or flight response to stress, so therefore this is blocked, and the person does not react as much to the stimuli, and therefore is calm and less aroused.

Inderal (propranolol) and other beta blockers have been studied for the treatment of aggression, especially rage attacks, and many of the studies have shown evidence of efficacy. However, many of the studies do not address the form of aggression or separate rage as a target symptom. Many of the studies also do not list comorbid psychiatric disorders, many of which can be associated with increased irritability and increased likelihood of aggression in their own right. Some studies also do not list other medications prescribed, which can be another confounding variable. What this leads to is a mixed population in the sample that makes it difficult to interpret the results of the study. For example, beta blockers can be effective in reducing akathisia, a side effect of antipsychotic medications. If akathisia is driving agitation, and therefore aggression, then a beta blocker could help decrease aggression in this way.

Q. I have seen beta blockers prescribed quite frequently in the last decade for patients with DD. Typically, they come to me for an evaluation or second opinion, and they are being treated with 20, 40, or 60 mg, of Inderal (propranolol). This generally provides little change or apparent benefit, but often they stay on it for years.

A. For the treatment of aggression due to IED or rage attacks, beta blockers are typically used in much higher doses. Most of the studies have been done on Inderal (propranolol) and have had a dose range from a low of 60 mg/day to a high of 1600 mg/day. The typical dose range in the studies is 300 to 500 mg/day. Yudofsky recommended a protocol of starting with 20 mg three times a day and increasing by 60 mg every third day until a therapeutic effect is achieved or a maximum daily dose of 800 mg/day is achieved. It generally takes 4 to 8 weeks or longer to achieve a response. It doesn't make much sense to use Inderal (propranolol) at low doses long term for the treatment of IED, especially if there is no benefit. The dose should either be increased for a full therapeutic trial, or it should be discontinued. Also, if there has been a full trial and it has not been effective, it should be tapered off and the diagnosis reconsidered, rather than continuing it indefinitely.

Q. What are the most common side effects?

A. Patients on beta blockers should be monitored for side-effects such as low blood pressure and pulse. This can lead to such things as orthostatic hypotension, where

the blood pressure falls when a person stands up and they can feel faint and possibly fall. It is recommended that the dose be held or decreased if the systolic blood pressure is less than 80-90 and/or pulse is less than 50. Vital signs are generally monitored before each dose when treatment is initiated or when the dose is increased, but if they remain stable consistently, they can be monitored less frequently. Other significant side effects include muscle fatigue and peripheral coldness, problems concentrating, and an inability to respond metabolically to hypoglycemia. Beta blockers should not be used by people with asthma, COPD or bronchospasm, history of congestive heart failure or sinus bradycardia, history of reduced glucose tolerance, diabetes mellitus or hypoglycemia, or a history of allergy to beta blockers. They must be used carefully if at all in people with thyroid disease. They may raise blood levels of many other medications, including neuroleptics, tricyclic antidepressants and anticonvulsants. An EKG and thyroid function tests are recommended before beginning treatment. If treatment is discontinued, beta blockers should be tapered slowly to prevent rebound tachycardia and hypertension.

Beta blockers are also associated with depression, although the evidence of this is equivocal. It is important to remember that depression can cause increased irritability and aggression, which could then lead to a further increase in the dose, causing a vicious circle. Beta blockers can also cause sexual dysfunction, therefore leading to confusion and frustration in individuals with DD.

Q. Do you use beta blockers for the treatment of IED often?

A. I rarely diagnose IED anymore and therefore do not generally start beta blockers for this purpose very often. I do prescribe it frequently to treat akathisia. I have inherited many patients previously diagnosed with IED and on beta blockers, and I often change their diagnosis once I have completed my assessment. When I have attempted to reduce the medication, I have only had a few cases where the person became more aggressive, which suggests that the underlying diagnosis may not have been correct.

Q. What about the use of mood stabilizers? Are these medications useful in other causes of explosiveness?

A. Mood stabilizers (Tegretol (carbamazepine), Depakote (valproic acid), Neurontin (gabapentin), and perhaps Lithium are all excellent drugs for the treatment of mood instability, including explosive range, in a wide range of neurological and psychiatric disorders. They have, however, many side effects and must be monitored carefully. For this reason, one must carefully consider their use in suspected IED. Further, when you use mood stabilizer you have defined the problems and the patient's response rather than an environmental stressors. One has an obligation to remove or mitigate stressors before using drug therapy with such wide-ranging effects as mood stabilizers.

Q. Do you feel there is utility in the diagnosis of IED?

A. I think there is utility in a limited number of cases, but my opinion is that this should be a diagnosis of last resort. Aggression is a symptom and a behavior, and it is

multiply determined. It is critically important that professionals in our field advocate for a thorough and complex analysis of aggression when it occurs. Many interventions may help, and identifying stressors is essential. In addition, many treatable psychiatric disorders, such as depression, are missed because the person is irritable, has poor coping skills, and becomes aggressive on occasion. IED is by definition a diagnosis of exclusion and cannot be diagnosed if the aggressive episodes are better explained by another disorder.

Improper diagnosis of IED does a great disservice to individuals with DD and leads to poor treatment and support options. I would also suggest that it is likely to be the second most frequent misdiagnosis for people with DD, behind the psychotic disorders.

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