The Pharmacotherapy of Borderline Personality Disorder

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Summary

Pharmacotherapy is used increasingly as a helpful adjunct to psychotherapeutic interventions in the treatment of borderline personality disorder. Clinical trials have been performed to investigate drug treatment of the 3 symptom clusters associated with borderline personality disorder – impulsivity, affective lability and psychotic-like symptoms. Although no single agent ameliorates all the symptoms of this diagnosis, and patients vary considerably in their response to medication, pharmacological strategies for each symptom can be delineated.

Impulsivity and aggression can be treated with selective serotonin (5-hydroxytryptamine; 5-HT) reuptake inhibitors (SSRIs), monoamine oxidase inhibitors (MAOIs), lithium, β-adrenerceptor blockers or antipsychotics. Affective symptomology has also been found to respond to MAOIs, SSRIs and lithium. Interestingly, patients with borderline personality disorder do not seem to respond to tricyclic antidepressants. As would be expected, antipsychotics are the most effective medications for the treatment of the psychotic symptoms of borderline personality disorder.

Various techniques to improve compliance and enhance the treatment alliance with the patient can be suggested, including patient education about the role of the pharmacologist (and therapist) in treatment and about the nature of agents prescribed. In addition, if possible, patients should be allowed to play an active part in the selection of drugs.
1. Clinical Features

The core symptoms of borderline personality disorder fall into 3 categories: (i) impulsivity, manifested by aggressive and self-damaging acts, eating disorders and sensation seeking (e.g. substance abuse); (ii) affective symptoms (including mood lability and depressive symptoms); and (iii) quasi-psychotic experiences. Patients may have symptoms in each of these categories with varied severity.

2. Pharmacological Treatment

The pharmacological treatment of patients with borderline personality disorder is a challenge for both the physician and the patient. This stems, in part, from the fact that patients meeting DSM-III-R criteria for borderline personality disorder are a heterogeneous group, and no pharmacological approach has been discovered that treats the entire syndrome. Instead, pharmacological strategies have been explored to treat symptom clusters. However, as yet, this approach has been only partially successful in alleviating the distress that this group of patients experiences.

Many pharmacological strategies have been employed in borderline personality disorder (see table I). One approach has been to treat a symptom, such as depressed mood, with drugs known to target the symptom in other populations. Another approach, employed more recently, has been to utilise information from research findings to design treatment strategies. For example, evidence of the presence of a central serotonergic disturbance in impulsive patients (see section 2.1) has suggested that agents that target the serotonergic system might be useful. These 2 approaches will be addressed separately for each of the symptom clusters described in section 1. Evidence for biological models that underlie the pharmacological treatment approaches will be discussed when appropriate.

It is important to note a caveat in the interpretation of treatment studies in borderline personality disorder. Many studies are of short duration, while a feature of the disorder is that symptoms are very episodic. Long term studies may be required to assess meaningful changes in these patients.

| Table I. Agents that have been assessed for the treatment of different symptoms associated with borderline personality disorder |
|-----------------|-----------------|-----------------|-----------------|
| Agent/drug class | Symptom          | impulsivity/ aggression | affective disorder | psychoses |
| SSRIs           | ?               | ?                |                  |
| Tricyclic antidepressants | x       |                  |                  |
| Lithium         | ✓               | ?                |                  |
| MAOIs           | ✓               | ✓                |                  |
| β-Adrenoceptor blockers | ?     |                  |                  |
| Carbamazepine   | ✓               | ?                |                  |
| Antipsychotics  | ✓               |                  | ✓                |
| Benzodiazepines | x               |                  |                  |

Abbreviations and symbols: MAOIs = monoamine oxidase inhibitors; SSRIs = selective serotonin (5-hydroxytryptamine; 5-HT) reuptake inhibitors; ✓ indicates efficacy; ? indicates that efficacy has been shown, but further data are required; x indicates inactivity or contraindication.

2.1 Impulsivity and Aggression

Perhaps the most clinically troubling aspect of borderline personality disorder is impulsivity. Impulsive behaviours (self-injury, suicidal gestures, assaultiveness and drug abuse) account for much of the morbidity and mortality associated with the diagnosis. In spite of its clinical importance, few effective pharmacological treatments of impulsivity are available.

Abnormalities in serotonin (5-hydroxytryptamine; 5-HT) function have been reported in patients with borderline personality disorder, particularly in relation to impulsive and aggressive behaviours. A central hyposerotonergic state has been hypothesised to be associated with impulsive behaviour.[2] The evidence for this hypothesis comes from studies of:

- cerebrospinal fluid levels of 5-hydroxyindoleacetic acid (5-HIAA; a metabolite of serotonin)[3-6]
- platelet [3H]imipramine binding (a peripheral marker for serotonin reuptake sites)[7,8]
- serotonin metabolite (decrease in brain levels of 5-HIAA) and receptors (increases in frontal 5-HT2 binding sites) levels in postmortem brain tissue[9,10]