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How to treat OCD in patients with Tourette syndrome

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Abstract

Obsessive-compulsive disorder (OCD) constitutes an etiologically heterogeneous set of conditions, including a subtype that seems etiologically related to Tourette syndrome (TS). In order to treat OCD patients optimally, the clinician needs to integrate educational, psychological and pharmacological approaches. The most effective psychological intervention is cognitive-behavior therapy (CBT). Drug treatment includes clomipramine and all selective serotonin reuptake inhibitors (SSRIs). A subgroup of OCD patients, however, shows no significant improvement. Few studies suggest that the presence of tics is associated to a worse treatment response to SSRIs and that such patients benefit from combined therapy of serotonin-reuptake inhibitors plus neuroleptics. Independently of the presence of tics, there are several different augmentation strategies for resistant cases with drugs that interfere in the dopamine, serotonin, opioid and gonadal hormone systems. In addition, new therapies are now being tested against presumed postinfectious autoimmune processes. Finally, new developments are promising in neural circuit-based therapies, including neurosurgery for refractory patients.

Keywords: Obsessive-compulsive disorder; Tourette syndrome; Tic-related OCD; Treatment

Introduction

Obsessive-compulsive disorder (OCD) is an heterogeneous disorder of unknown etiology, characterized by the presence of upsetting, persistent worries, images or impulses, that are experienced as intrusive and senseless (obsessions) and/or excessive repetitive behaviors performed in response to these obsessions, or according to rigid rules (compulsions) [1]. Several lines of research suggest that OCD and Tourette syndrome (TS) are related, with overlapping clinical features. For instance, there is a high frequency of OCD and subthreshold OCD in TS patients [2] as well as a high rate of comorbid tics in OCD patients [3]. Genetic studies give additional support for this relationship, showing not only higher rates of OCD and obsessive-compulsive symptoms (OCS) in the relatives of TS patients [4–6], but also higher rates of tics or TS in first-degree relatives of OCD patients [7]. These findings strengthen the idea that at least some forms of OCD are etiologically related to TS and might therefore be a variant expression of the same etiologic factors that are important for the expression of tics [7].

This particular OCD phenotypic expression also seems to have some clinical implications. For instance, McDougle et al. [8,9] have recently reported a distinct pattern of treatment response in patients with OCD plus tics not responsive to a selective serotonin reuptake inhibitor (SSRI). The vast majority of these patients responded after the addition of a neuroleptic.

This paper will discuss the principles of OCD treatment in general and in the context of comorbid tics. Since patients with OCD plus tics or TS may not respond to the traditional approaches, possible strategies in resistant or refractory cases will also be mentioned.

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General principles of OCD treatment

OCD is usually a chronic and disabling disorder. Often, patients hide their symptoms and feel guilty about performing their compulsions. Our current treatments, most of the time, only alleviate the symptoms but do not cure. Therefore, any treatment should include psychosocial interventions, including an important investment in education. Since family members frequently engage in the patient's rituals, which might be associated with a poorer outcome, family intervention should also be considered [10]. Family and patient organizations can help greatly in the task of providing education and support groups to OCD patients and family members.

Cognitive-behavior therapy (CBT) is the psychological treatment of choice [11], mainly through the techniques of exposure and response prevention (ERP). During exposure the patient is placed in contact with feared objects or situations in order to elicit anxiety or distress. Response prevention consists in not allowing the patient to engage in any rituals or other anxiety reducing behaviors in response to exposure. With repetitive ERP, anxiety decreases through the process of physiologic habituation. SSRIs are the first line pharmacological treatment for OCD [12]. However, because some patients do not respond to SSRIs monotherapy, various augmentation strategies are currently recommended. Other somatic approaches such as immunologic treatments and neural-circuit-based therapies [13–15] have been developed more recently. These treatment strategies will be discussed bellow.

Psychological approach

Cognitive-behavioral therapy

Behavior therapy includes various techniques. The most widely used is ERP, with the addition of cognitive therapy when necessary. This technique has a success rate in OCD ranging from 60% to 85% [16–18]; however, compliance rate is only about 50%. It must be noted that, for some patients, ERP corrects their thoughts or belief distortions only modestly [19]. One study suggests that group behavior therapy may also be effective for OCD, and it has the advantage of being less costly [20]. The cognitive approach can, then, be very helpful in managing overestimation of danger and overvalued ideas, pathological doubting, family and interpersonal problems resulting from OCD, or when the patient is too anxious to engage in behavior therapy [21].

The technique of habit-reversal training may be auspicious for patients with OCD and TS whose repetitive behaviors are triggered by sensory phenomena [22]. Through this technique, the subject learns to identify the urge preceding the behavior and to produce a physical response opposite to the tic or compulsion, which should be socially inconspicuous and compatible with normal activity [23].

Traditional psychodynamic psychotherapy does not seem to be effective in treating OCD symptoms, but may be helpful in promoting a better understanding and management of the patient's condition and its impact on various aspects of their lives. It may be of help to patients with obsessive-compulsive personality disorder [24].

Drug treatment

Agents with initial actions on 5-HT systems, particularly the serotonin reuptake inhibitors (SRIs), have shown the greatest clinical effects in OCD. Today, a number of placebo-controlled studies have demonstrated the efficacy of clomipramine [25] and eventually all SSRIs in the treatment of OCD, such as fluvoxamine [26,27], sertraline [28,29], fluoxetine [30,31], paroxetine [32] and citalopram [33] (Table 1). The therapeutic effects of SRIs in OCD are in marked contrast to those of non-SRI antidepressants, such as norepinephrine uptake inhibitors (e.g., nortriptilyne and desipramine), which are not effective [34].

Although meta-analytic studies [12,35] support the superiority of clomipramine over the SSRIs, head to head comparisons developed so far have not confirmed these results [36–40]. Therefore, considering their better side effect profile, the SSRIs should be the first choice in the treatment of OCD, independently of the presence of tics or TS (see Table 1). Monoamine oxidase inhibitors may be effective in some cases of OCD, but due to their dietary restrictions, should be considered only for severe resistant cases [41,42].

Tics and treatment response in OCD

Although treatment with SSRIs is effective for most patients with OCD, few patients become totally asymptomatic and about 30–40% show no significant improvement after adequate trials with such treatments [43,44]. These findings generated several studies looking for predictors of treatment response. In Table 2, we summarize some of these results.

Table 1
Effective drugs for OCD in patients with TS (best studied, first line)

	Daily doses (mg)		
Drug	Usual starting	Average target	Usual maximum
Clomipramine [25]	25–50	200	250
Fluoxetine [30,31]	20	40–60	80
Fluvoxamine [26,27]	50	200	300
Sertraline [28,29]	50	150	225
Paroxetine [32]	20	50	60
Citalopram [33]	20	40	60