

Obsessive-Compulsive Disorder (OCD) — Clinical Features and Treatment

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Obsessive-compulsive disorder (OCD) is a disorder in which patients experience either obsessions (intrusive, senseless and anxiety-provoking thoughts) alone or a combination of obsessions and compulsions (anxiety releasing rituals) due to which an individual's level of functioning is affected. Genetic factors, a proposed biological model, and a proposed cognitive-behavioral model are seen to play a role in the pathogenesis of OCD. The diagnosis of OCD is purely clinical and no investigations are needed. A thorough history of the patient's obsessions and compulsions and their comparison with certain 'identifiable themes' will aid in the diagnosis. The management of OCD can be done with a combination of cognitive behavior therapy and physical treatments (tricyclic anti-depressants, selective serotonin reuptake inhibitors, anti-glutamatergic agents, deep brain stimulation and psychosurgery) and OCD is related to a number of medical comorbidities.



Definition of Obsessive-Compulsive Disorder

Obsessions

Obsessions are defined as thoughts that are intrusive, senseless and distressing to the patient, thereby increasing anxiety; for example, thinking whatever a person touches will contaminate his hands.

Compulsions

Compulsions are defined as rituals that are performed to neutralize obsessive thoughts. For instance, in response to the obsession in our example above, a person washes his hands again and again. Compulsions tend to lower anxiety and are time-consuming and affect an individual's level of functioning.

Obsessive-compulsive disorder

Obsessive-compulsive disorder is a disorder in which patients experience either obsessions alone or a combination of obsessions and compulsions due to which an individual's level of functioning is affected. A combination of obsessions and compulsions is more commonly seen than 'obsessions alone' and obsessions alone are even more difficult to treat. It is also important to note that everyone may have some minor obsessions and compulsions, but only if they are so intense that they affect an individual's social life, work, and family life, it becomes a disorder.

Diagnostic Criteria for Obsessive-Compulsive Disorder

The diagnostic criteria for obsessive-compulsive disorder are as follows:

1. The presence of obsessions or compulsions or both.
2. The obsessions and/or compulsions are time-consuming and affect an individual's functioning (social life, work, and family life). For example, checking that the stove is off repeatedly in the morning may make a person late for work. Another example would be that if a patient has obsessions of hitting people, he may fear to go to social gatherings and may avoid them altogether.
3. The patient is not on medicine or a drug of abuse or has some other medical condition whose symptoms resemble that of OCD.
4. The symptoms are not better explained by another psychiatric disorder like generalized anxiety disorder, body dysmorphic disorder, hoarding disorder or a stereotypic movement disorder, etc.

Pathogenesis of Obsessive-Compulsive Disorder

Genetic

It is found that a small percentage of patients with OCD have first-degree relatives with the same. Studies have also shown that if one monozygotic twin has OCD, there is about a 90% chance that the other twin will also have it, and if one dizygotic twin has OCD, there is about a 50% chance that the other twin will also have it; therefore, it is found that genetic factors place a role in the etiology. Genetic factors account for more of the variance in childhood-onset cases than in those who develop it as an adult.

Biological model

Neuroimaging studies suggest dysfunction in the orbitofrontal area (including the caudate nucleus) and dorsolateral prefrontal cortex combined with abnormalities in serotonergic (underactive) and glutamatergic (overactive) neurotransmission. Further evidence of this model comes from an association of OCD with a number of neurological disorders involving dysfunction of the striatum, including [Parkinson's disease](#), [Huntington's disease](#), and Sydenham's chorea. The latter has also been associated with OCD and tic disorders in the pediatric autoimmune neuropsychiatric disorder associated with streptococcal infection (PANDAS). This is a rare condition in children following group A hemolytic streptococcal infection. Obsessive-compulsive disorder can also follow head trauma.

Cognitive-behavioral model

Most people have the occasional intrusive thoughts, but would ordinarily dismiss these as meaningless and not focus on them further. These develop into an obsession when they assume great significance to the individual, causing greater anxiety. This anxiety motivates the suppression of these thoughts and ritual behaviors are developed to further reduce anxiety.

Clinical Features of Obsessive-Compulsive Disorder

Obsessions are unpleasurable, involuntary repetitive and persistent thoughts (for example, to check locks again and again (compulsion) in response to the thought that a thief may enter the house), images (for example, to check locks again and again (compulsion) in response to an image of murder), or urges (for example thinking that someone has a rock). Obsessions are unwanted and cause great anxiety in patients. In order to overcome the anxiety, the patient either tries to ignore or suppress the obsession or performs a compulsion.

Compulsions are repetitive physical behaviors (for example washing hands again and again) or mental behaviors (for example praying or calculating in the mind) performed in order to neutralize obsessions. The patient may try to suppress the obsession at first but eventually be compelled to do the compulsion. The goal of compulsion behavior is to decrease the anxiety caused by the obsession or to prevent an unrealistic anticipated feared event (for example, death) or doing it 'just to be perfect.'

The obsessions and compulsions are time-consuming and intrusive so that they affect functioning and cause considerable distress.

The type of obsessions and compulsions vary greatly between different patients; however, they are specific identifiable themes, for example:

1. The obsession of fear of contamination and resultant compulsion of cleaning body parts or other things again and again.
2. Violent urges, sexual obsessions, and religious obsessions and their resultant compulsions.
3. The obsession of being a 'perfectionist' and the resultant compulsion of arranging and counting items again and again.
4. Obsessions (thoughts or images) about harm befalling oneself or others and their resultant compulsions like checking that the locks of doors are closed, again and again.

The frequency and intensity of symptoms vary among patients with the obsessive-compulsive disorder. Some patients have mild to moderate symptoms (occurring a few hours in a day) while others have very severe obsessions and compulsions (occurring throughout the day).

Studies show that there is a strong association between suicidal thoughts and obsessive-compulsive disorder.

Patients with OCD tend to avoid people and situations that trigger their obsessions. For example, patients who have obsessions to hit people may avoid going to social gatherings or even outside the home. Avoidance behavior can become very severe and affect an individual's functioning.

Obsessions and compulsions are associated with many emotions like anxiety leading to panic attacks, distress, depression, emptiness, and uneasiness.

Many patients with obsessive-compulsive disorder hold unreasonable beliefs. For example:

1. A tendency to overestimate threat.
2. Perfectionism and intolerance to slight imperfections.
3. Exaggerating the value of thoughts (for example, believing that a religiously wrong thought is as sinful as implementing on it).

Patients vary in the degree to which they believe that their obsessions and compulsions are unreasonable. Some people are completely convinced that their obsessions are correct, while others (the majority of the patients) have some sense that their obsessions and compulsions are dysfunctional or unreasonable.

Investigations for Obsessive-Compulsive Disorder

Obsessive-compulsive disorder needs no investigations and diagnosis is purely clinical.

Differential Diagnosis of Obsessive-Compulsive Disorder

Generalized anxiety disorder	In generalized anxiety disorder, the <i>anxiety-causing worries</i> are realistic, unlike obsessions. Also, in generalized anxiety disorder, there are no compulsions.
Phobias	Fears in <i>phobias</i> are usually more specific than that in obsessions. Again in phobias, there are no compulsions.
Social anxiety disorder	In social anxiety disorder, specific symptoms like fear of going to social gatherings and poor social skills are seen.
Hoarding disorder	In hoarding disorder, the patient has difficulty discarding or parting with possessions. Extreme sadness on discarding items and excessive accumulation of objects are common clinical features.
Depression	Depressive thoughts should be distinguished from obsessions and there are no compulsions in depression.
Schizophrenia, schizoaffective disorder, and other psychotic disorders	Delusions, hallucinations and disorganized thinking are symptoms of psychotic disorders and they have no obsessions and compulsions.
Obsessive-compulsive personality disorder (OCPD)	Patients with obsessive-compulsive personality disorder have the tendency of perfectionism and rigid control which leads to compulsive behavior. Compulsions in OCPD, unlike OCD, are not performed in response to obsessions.
Other differentials	Tic disorder, body dysmorphic disorder , trichotillomania (hair-pulling disorder), excoriation (skin picking disorder) and eating disorders such as anorexia nervosa and bulimia nervosa.

Management of Obsessive-Compulsive Disorder

Psychological treatment

Cognitive behavior therapy

[Cognitive behavior therapy](#) in obsessive-compulsive disorder is done by exposure and response prevention. In this technique, patients are made to refrain from carrying out compulsions despite their strong urges to do so. This is called response prevention. If the restraint continues for long enough (usually at least an hour), the urge diminishes.

As treatment progresses, these urges are deliberately increased by encouraging the patient to enter obsession provoking situations that have been previously avoided by the patient (exposure).

At first, patients are accompanied by the therapist and reassured while they strive to prevent their obsessions, but with practice, they are able to do this on their own. Sometimes, the therapist reassures the patient on the first few occasions by carrying out the exposure procedure himself, a procedure called 'modeling.'

The therapist begins by explaining the aim of treatment and agreeing on targets for exposure with the patient. If the obsession is to wash hands, again and again, a target might be to touch a contaminated object such as a door handle and not to wash the hands during the next hour. A more advanced target might be to do all the household dusting without washing the hands until the task is completed.

Patients need to feel confident that every task will be agreed in advance and that they will never be faced with the unexpected. Response prevention generates substantial anxiety at first, but patients usually tolerate this as they know that it will decline eventually. Obsessional thoughts accompanying compulsions improve as the compulsions are brought under control. Obsessional thoughts without compulsions are more difficult to treat. They can be treated by habituation training or thought to stop.

Habituation training

It is a form of mental exposure treatment. Patients dwell on the obsessional thoughts for long periods or repeatedly listen to a tape recording of the thoughts spoken aloud for an hour or more.

Thought stopping

It is a type of distraction technique in which a sudden sensory stimulus is produced (for example, snapping a rubber band on the wrist of the patient) to distract the patient from the obsessional thought.

Physical Treatment of Obsessive-Compulsive Disorder

Tricyclic anti-depressants and selective serotonin reuptake inhibitors

Clomipramine (a tricyclic anti-depressant) and the selective serotonin reuptake inhibitors (SSRIs) are the mainstays of drug treatment. Their efficacy is independent of their

antidepressant action but the doses required are usually higher than that effective in depression. Although many patients respond, relapse rates discontinuation is high.

Three months of treatment with the maximum tolerated doses may be necessary for a positive response and in those who fail to respond, the addition of an antipsychotic significantly improves outcome, especially when tics occur comorbidly. Positive correlations between reduced the severity of OCD and decreased orbitofrontal and caudate metabolism following behavioral and SSRIs treatments have been demonstrated in a number of studies.

Anti-glutamatergic agents

Recent studies have suggested that riluzole; an anti-glutamatergic agent may be effective. Studies also suggest that D-cycloserine (an N-methyl-D-aspartic acid (NMDA) receptor agonist) administered in combination with cognitive behavioral therapy, prior to sessions, may speed treatment response time.

Deep brain stimulation

This is a non-ablative, and therefore potentially reversible, a surgical technique that involves the electrical stimulation of the basal ganglia by implanted electrodes, creating a 'functional lesion'. Although this has had success, often impressively so in refractory cases, issues still remain regarding subject selection and the optimum anatomical targets.

Psychosurgery

This is very occasionally recommended in cases of chronic and severe OCD that has not responded to other treatments. Surgical interventions such as subcaudal tractotomy and cingulotomy, with small yttrium radioactive implants, which induce lesions in the cingulate area or the ventromedial quadrant of the frontal lobe, have shown to be effective.

Medical comorbidities

The most common psychiatric comorbidities found in adults with obsessive-compulsive disorder are as follows:

- Anxiety disorder (e.g., [panic disorder](#), social anxiety disorder, generalized anxiety disorder, specific phobia).
- Mood disorder, most commonly [major depressive disorder](#).
- Obsessive-compulsive personality disorder.
- Tic disorder (tic disorder has been most commonly seen in males who had an onset of OCD in childhood).

Disorders that occur more frequently in individuals with the obsessive-compulsive disorder than in those without the disorder are as follows:

- [Body dysmorphic disorder](#).
- Trichotillomania (hair-pulling disorder).
- The excoriation (skin picking) disorder.

Obsessive-compulsive disorder is more common in people with certain other disorders as compared to the general population. These disorders are as follows:

- [Eating disorders](#) such as anorexia nervosa and bulimia nervosa.
- Tourette's disorder.
- Schizophrenia.
- Bipolar disorder.

References

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