Clinical Features of Obsessive-Compulsive Disorder

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ABSTRACT

Obsessive-Compulsive Disorder (OCD) is an anxiety disorder featuring intrusive and troubling symptoms, which are perceived as the products of one’s own mind unlike schizophrenia. Obsessive-Compulsive Disorder (OCD) is characterized by absurd, recurrent and persistent thoughts (obsessions) followed by certain stereotyped actions (compulsions). The OCD patients realize the irrational nature of thoughts and rituals but feel helpless and hopeless about controlling them. The obsessive thoughts about cleanliness, exactness and household tasks responsible for anxiety are apparently neutralized by repetitive rituals such as excessive and repetitive cleaning, arranging, checking and rechecking. Numerous genes modulating the serotonin and dopaminergic systems are thought to participate in the pathophysiology of OCD. There have been positive results with the association between polymorphism in the gene coding for D4 dopamine receptor and OCD. Obsessive-Compulsive Disorder can impair all areas of brain functioning and produce devastating effects on patients and their families. Selective serotonin reuptake inhibitors (SSRIs) and to some extent tricyclic antidepressants form the main stay in the symptomatic treatment of OCD. However, none of these drugs provide complete relief and permanent cure.

Background:

Obsessive-Compulsive Disorder (OCD) is characterized by absurd, recurrent and persistent thoughts (obsessions). The Patient affected by OCD feels compelled to carry out certain stereotyped actions, although he recognizes that his behavior is at times irrational. OCD may be looked upon as a condition in which the affected person frequently experiences irresistible urges to perform repetitive rituals (compulsions). OCD may be defined as the irritation in the mind of uncontrollable, egodystonic and recurrent thoughts, impuls or images. In OCD, repetitive rituals serve to counteract the anxiety precipitated by obsessions. The OCD patients realize the irrational nature of thoughts and rituals but feel helpless and hopeless about controlling them. Obsessive-Compulsive Disorder can impair all areas of brain functioning and produce devastating effects on patients and their families.

Classic psychoanalysis, as pioneered by Freud, interpreted obsessive-compulsive disorder as unconscious conflicts, which were defensive and punitive (Rapoport et al., 1993). In modern psychoanalysis, obsessive-compulsive disorder is described as a portrayal of ambivalence, with confusion of thoughts and actions that are paradoxically manifested by rigidity and abnormal behaviors. Dynamic psychiatry interprets obsessive-compulsive symptoms as a reflection of feelings and thoughts that provoke aggressive or sexual actions that might produce shame, weakness or loss of pride (Baer, 1993). The thoughts and behaviors associated with OCD are viewed as senseless and egodystonic and they stand contradictory to the individual’s motives, goals, identity and self-perception thereby creating significant subjective distress. The excessive nature of the compulsion, however, creates its own distress and it appears that the individual may be caught up in a kind of negative reinforcement loop (David et al., 2004). The obsessive-compulsive spectrum disorders are Tourette’s disorder, Body dysmorphic disorder, Hypochondriasis, Pathological jealousy, Trichotillomania, Skin picking, Nail biting, Compulsive buying, Kleptomania, Pathological gambling, Nonparaphilic sexual disorders, Obsessive compulsive personality disorder.

Clinical feature:

The OCD is clinically manifested by a wide range of symptoms. The most common types of obsessions are related to contamination, pathological doubts, somatic dysfunctions, need for symmetry, aggression and hyper sexual drive. The classical forms of compulsions include checking, washing, counting, need to ask, precision and hoarding. In OCD, senseless,
repetitive rituals (such as counting, washing etc.) serve to counteract the anxiety precipitated by obsessive thoughts e.g. Symmetry and exactness preoccupations. Fears of contamination and illness produce washing and cleaning compulsions (Leckman et al., 1997). Some symptoms get stable over a time period i.e. sexual/religious obsessions. The symptoms that is more likely to change are aggressive and contamination obsessions. Changes usually occur within rather than between individual symptom dimensions (Mataix-Cols et al., 2002). Patients with OCD may report only one or, more typically, multiple symptoms that cut across dimensions (Stein et al., 1997).

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Obsessions</th>
<th>Compulsions</th>
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<tbody>
<tr>
<td>1</td>
<td>Concern with cleanliness (dirts, germs, contamination)</td>
<td>Excessive and ritualized bathing, washing and cleaning</td>
</tr>
<tr>
<td>2</td>
<td>Concern with exactness (symmetry and order)</td>
<td>Ritualized arranging and rearranging</td>
</tr>
<tr>
<td>3</td>
<td>Concern with household tools (dishes, spoons, soap)</td>
<td>Checking, rechecking and keeping inventory with detailed description of tools, objects, and appliances</td>
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<tr>
<td>4</td>
<td>Concern about body secretions (saliva, urine, stool)</td>
<td>Rituals to remove body secretions</td>
</tr>
<tr>
<td>5</td>
<td>Sexual obsessions (aggressive sexual actions)</td>
<td>Ritualized and rigid sexual relationship</td>
</tr>
</tbody>
</table>

**Genetics of OCD:**

Numerous genes modulating the serotonin and dopaminergic systems are thought to play a role in the pathophysiology of OCD (Pato et al., 2002). The serotonin (5HT) hypothesis of OCD is primarily derived from pharmacological challenge studies using the 5HT agonist m-chlorophenylpiperazine (m-CPP), which produces an exacerbation of OCD symptoms (Zohar et al., 1987). Serotonergic dysfunction in OCD is also illustrated by the well-established therapeutic efficacy of antidepressants, which are potent serotonin reuptake blockers (Goodman et al., 1997). Association studies have ruled out the role of tryptophan hydroxylase (Rate limiting enzyme in the synthesis of 5HT) or the 5HT2C receptor gene variants in the expression of OCD (Han et al., 1999). An association has been reported between the diagnosis of OCD and polymorphisms in the genes encoding the 5HT1A and 5HT2A reported subtypes, the 5HT transporter or the monoamine oxidase A (enzyme of metabolic inactivation of the two neurotransmitters serotonin and norepinephrine) (Mundo et al., 2000; Enoch et al., 1998).

The dopaminergic system may also be involved in the etiology of OCD (McDougle et al., 1994). This is suggested by pharmacological data showing that administration of dopamine antagonists is effective in certain forms of OCD, with and without comorbid tics resistant to serotonin-reuptake inhibitors (SRIs) alone (McDougle et al., 2000). The dopamine system includes five subtypes of dopamine receptors (D1–D5). There have been positive results with the association between polymorphisms in the gene coding for D4 dopamine receptor and OCD but no significant role of D2 and D3 receptors has been found (Cruz et al., 1997; Millet et al., 2003). Catechol-O-methyltransferase (COMT) is known to be an enzymatic mode of terminating the actions of circulating catecholamines, including dopamine. It has been shown that a common functional allele of the gene for COMT, which results in a reduction in enzymatic activity, is associated with a higher risk for developing OCD. A trend for homozygosity at the COMT gene locus in OCD has also been reported (Schindler et al., 2000).

**Current therapeutic agents employed for the treatment of OCD**

Long-term pharmacological interventions provide significant improvements in OCD symptoms with low relapse rate. A substantial evidence suggests that SSRIs and tricyclic antidepressants (TCAs) that enhance the levels of serotonin are effective anti-OCD agents (Greist et al., 1995). OCD symptoms become worse by a 5HT1B receptor agonist, metachlorophenyl-piperazine (m-cpp). There are a range of SSRIs now available, the most common being sertraline, fluoxetine, paroxetine, fluvoxamine and citalopram. The SSRIs have milder side effects such as dry mouth, constipation, blurred vision, dizziness, weight gain and sedation compared to the TCAs, so neurophysicians prefer sertraline and other SSRIs (Greist et al., 1995). The anti-obessional effects of potent SSRIs seem to be due to a progressive desensitization of the presynaptic autoreceptors present on 5HT neurons and their nerve terminals, thereby increasing synaptic 5HT release in specific brain areas, especially the orbitofrontal cortex (Bergqvist et al., 1999). Clomipramine was the first to show beneficial effects on OCD symptoms. The newer generation of antidepressant drugs viz., fluvoxamine, fluoxetine, paroxetine, sertraline have also been found useful in the management of OCD.

**Concluding remarks:**

OCD is an anxiety disorder featuring intrusive and troubling thoughts, which are perceived as the products of one’s own mind unlike schizophrenia. The patient
affected by OCD feels compelled to carry out certain stereotyped behaviors, although he recognizes that his behavior is at times irrational. Obsessive-Compulsive disorder can impair all areas of brain functioning and produce devastating effects on patients and their families. Selective serotonin reuptake inhibitors (SSRIs) and to some extent tricyclic antidepressants form the main stay in the symptomatic treatment of OCD. However, none of the above medicines provide complete relief and permanent cure from OCD. Furthermore, there is no suitable laboratory model for screening new anti-OCD agents. Therefore, there is a great challenge before neurobiologists to discover new strategies for the management of OCD.

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REFERENCES


