Repetitive Behaviors in Pervasive Developmental Disorders
Distinguishing Core Features From Compulsions

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Given the common occurrence of restricted, repetitive and stereotyped patterns of behavior in individuals who have a pervasive developmental disorder (PDD), objective monitoring systems are imperative in the evaluation of the response to behavioral or pharmacological treatment. To consistently collect empirical data regarding specific behaviors, consensus must first be developed regarding the terminology defining individual patterns of repetitive behaviors. Through a case study, the following article illustrates the complexities involved in using accurate definitions of observed behavior to optimize the outcome of treatment recommendations in this population.

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Restricted, repetitive and stereotyped patterns of behavior and interest in activities are an essential feature of pervasive developmental disorders (PDD). These may manifest as one of the following:

1. An encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal, either in intensity or focus;
2. An apparently inflexible adherence to specific, non-functional routines or rituals;
3. Stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole body movements); and
4. Persistent preoccupation with parts of objects.2

Little consensus, however, has developed regarding specific terminology to describe the phenomenology of these criteria in individuals with PDD. This has hindered systemic research efforts and challenges clinicians providing, in particular, pharmacological support to individuals with PDD.13 Reviews of the course of behavioral change in individuals with PDD have documented change in social and communication, but not repetitive/ritualistic domains over time, suggesting that behaviors in the latter domain may play a more fundamental role in PDD.16 These authors have suggested that social and communication deficits, which are less enduring over time, may be secondary phenomena of this disorder.

Repetitive behaviors observed in individuals with PDD may include the following:
1. Stereotypies
2. Insistence on sameness
3. Obsessions
4. Compulsions

Descriptive Features of Repetitive Behaviors

1. Stereotypies: These have been defined as repetitive and apparently purposeless body movements (e.g., body rocking), body part movements (e.g., hand flapping) or use of the body to generate object movements (e.g. string twirling).12 These movements are usually, but not always, rhythmic with no obvious antecedent.12 Lovaas13 has stressed the functional autonomy of this class of behaviors (they appear in near identical form across several members of a species). Nijof et al.15 in describing stereotypies, have stressed the consistency and invariance of this class of behaviors.

The term stereotypy is often used in clinical contexts to describe repetitive patterns and behaviors that others would term insistence on sameness, self-stimulatory or compulsive behavior. This semantic confusion complicates an evaluation of the outcome of pharmacological
trials, particularly those in which a positive response to treatment leads to hypotheses regarding the correlation between the mechanism of action of the prescribed medication and the underlying pathophysiology of the target symptom. This confusion is compounded by Epstein’s assertion that the phenomenology of “self-stimulatory behavior” in individuals with PDD may evolve over time. He suggested that in the life course of an individual with PDD, it may appear that simple behaviors (e.g., body rocking, hand flapping) may evolve to more complex “obsessions” (e.g., perseveration on numbers). Observations such as these can alternatively be explained by the hypothesis that for some reason, stereotypic behavior may decrease over time and there may be the emergence in some individuals with PDD of a co-morbid obsessive compulsive disorder (OCD). Whether or not there is a pathophysiological correlation between the initial and subsequent repetitive behaviors observed in the individual’s life remains unanswered.

2. **Insistence on sameness:** The DSM-IV lists “an apparent inflexible adherence to specific, non-functional routines or rituals,” as one of the exemplars under the core PDD criteria of restricted, repetitive or stereotyped patterns of behavior, interests and/or activities. Individuals with PDD have been described as being resistant to small insignificant changes in their environments and prefer routines with little or often no functional value. Rigid application of this criteria in a clinical context, therefore, requires an inference that specific repetitive patterns of behavior in individuals with PDD do not serve a specific function in their lives. However, a number of authors, including Baron-Cohen and Wheelwright, have suggested that a need for sameness in the life of an individual with PDD represents “a sign of the child conducting mini-experiments in his or her surroundings, an attempt to identify laws governing events” (p.487). This hypothesis has arisen from the work of these authors and others regarding potential differences in core cognitive domains between children with PDD and children without PDD. This concept will be discussed further below.

3. **Obsessions:** The DSM-IV lists the following criteria for obsessions:

   a. recurrent and persistent thoughts, impulses or images that are experienced, as sometime during the disturbance, as

   intrusive and inappropriate and that cause marked anxiety or distress;

   b. the thoughts, impulses or images are not simply excessive worries about real life problems;

   c. the person attempts to ignore or suppress such thoughts, impulses or images, or can neutralize them with some other thought or action;

   d. the person recognizes that the obsessional thoughts, impulses or images are a product of his or her own mind (not imposed from without as in thought insertion).

   In contrast, Charlop-Christy and Haymes, in exploring the value of obsessions as token reinforcers in children with autistic disorder (AD), defined the term obsession as “intense preoccupations with objects or concepts that children continually seek out, talk to others about or write about” (p.190). These authors have demonstrated that the use of “objects of obsessions” as token reinforcers both increases on task behavior and decreases inappropriate behavior in children with autism. This result is counterintuitive to the outcome one would expect if the “obsessional” thought content of children with PDD was egodystonic as described in DSM-IV defined OCD.

   The concept of core cognitive domains, areas of knowledge acquired rapidly early and universally, has been applied to an elucidation of the content of “obsessions” experienced in autism spectrum conditions. In comparison to children with Tourette’s syndrome in which co-morbidity with DSM-IV defined OCD is common, children with autism spectrum disorder conditions were demonstrated to have greater interest in folk physics (a basic knowledge of how the physical world of object works) and less interest in folk psychology (a basic knowledge of how the social world works). Using the Cambridge University Obsessions Questionnaire (p. 489), these authors specifically state that “there was no attempt to define obsession for the parents, since this is obviously difficult” (p. 485). Reviewing previous theories which hypothesized (1) that obsessions and repetitive behaviors in autism are secondary to frontal lobe damage—mediated executive function, and (2) that obsessions represent “the children’s attempt to impose control or order in a world where social behavior appears
unpredictable and confusing” (p. 487), these authors alternatively proposed that the interests of children with AD “reflect the child’s intact or even superior folk physics knowledge” (p. 487).

4. **Compulsions:** The DSM-IV lists the following criteria for compulsions:

   a. repetitive behaviors (e.g., handwashing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly;

   b. the behaviors and mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation, however, these behaviors or mental acts are not connected in a realistic way with what they are designed to neutralize or prevent, or are clearly excessive.

McBride and Panksepp, in addressing the challenge of distinguishing compulsions from stereotypies, attempted to clarify the nature of compulsive behavior in individuals with AD. By asking primary caregivers to complete the Childhood Autism Rating Scale and Quantitative and Qualitative Compulsive Behaviour Scales (p. 392) regarding seventeen young adults with AD, these authors demonstrated that: (1) descriptions of observed rituals by caregivers “often deferred from the constellations typically seen in OCD” (p. 385). They also noted, however, that behaviors selected by caregivers as being representative compulsions were generally more complex and goal-focused than simple stereotypies, (2) there was a lack of consistent agreement between staff as to whether or not a behavior was a stereotypy or a compulsive behavior, (3) there was no clear pattern of antecedents to repetitive behaviors, (4) there was no clear response to an interruption or a correlation between the completion of a behavior and anxiety reduction, and (5) there was a frequent association between effects of excitement and happiness, rather than anxiety or anger in the performance of repetitive behaviors. These observations again are clinically counterintuitive to what one would expect if the individuals observed in this study had a AD and co-morbid OCD (as defined by the DSM-IV).²

Extensive observation of the behavior of individuals with PDD, particularly children, has demonstrated the presence of concrete play lacking in re-enactment and spontaneous composition, preoccupation with parts of objects, intense interest in unusual activities or objects, a need for sameness and routine, and perseveration, in addition to stereotypies, repetitive SIB and complex compulsive-like routines and rituals. Attempts have been made to understand these observations from a developmental perspective. In addition, a variety of other functions have been attributed to these behaviors. These include:

1. communicative functions;
2. the hypothesis that some of these behaviors arise as a function of hypothesized core cognitive and perceptual deficits in PDD addressing the attachment needs of individuals with PDD;
3. serving to provide sensory arousal or de-arousal;
4. the expression of felt emotion (in particular, frustration, disappointment, anger, anxiety and fear).

The challenge in clinically establishing a semantic differentiation between the above repetitive phenomena is compounded by the occurrence of echolalia, repetitive self-injurious behavior (SIB), tics, perseveration and medication-induced dyskinesia and akathisia in individuals with PDD. A call has been made for comprehensive studies of the phenomenology of the full range of repetitive behaviors seen in PDD, using standardized and independent measurement instruments. The clinical distinction between core features of PDD and the symptoms of co-morbid mental health concerns (e.g., OCD) and treatment-induced adverse effects has direct implications regarding pharmacological treatment recommendations. Aman et al. have reviewed a number of studies, largely case reports or uncontrolled case series, which suggest beneficial effects on perseverative behavior, in individuals with DD, in response to serotonergic agents. These authors emphasize the need for properly controlled studies in this area.

To reiterate, the critical need for an improved consensus regarding clinical descriptions of repetitive behaviors in individuals with PDD, is emphasized by current divergent hypotheses regarding the etiologies of these behaviors. If certain aspects of observed repetitive motor
movements and behavior in individuals with PDD serve positive need-fulfilling functions despite their lack of fit with the surrounding environment, attempts to diminish their frequency, intensity and duration pharmacologically may be a disservice to the individual. Alternatively, if aspects of these movements and behaviors are compulsions which serve to diminish felt anxiety arising in the context of OCD, anticommpulsive medication may well be of benefit.

The following case report was reviewed from the files of the Developmental Disabilities Program (DDP) of the North Bay Psychiatric Hospital (NBPH) in North Bay, Ontario, Canada. The NBPH DDP is an outreach program providing psychiatric assessment and care to individuals with DD living in a largely rural geographical area in Northern Canada. The program’s service model is based upon biopsychosocial principles, utilizing interdisciplinary teams employing objective monitoring of operationalized definitions of signs and symptoms of mental illness, to support or refute diagnostic hypotheses and assess the efficacy of treatment recommendations.

This case example illustrates:

1. the complexity of the interplay between different types of repetitive behaviors in the presentation of an individual with an autistic disorder and challenging behaviors and/or mental health concerns;
2. the manner in which response to prescribed medication can both heighten and diminish confidence in diagnostic hypotheses; and
3. the challenges in distinguishing a co-morbid OCD in an individual with PDD from core features of this neurodevelopmental syndrome.

**CASE ILLUSTRATION**

Mr. R is a 31-year-old non-verbal male with AD currently living in a group home. At two years of age, his mother noted a significant delay in speech, accompanied by observations of isolation, poor social relationships and repetitive movements. A diagnosis of AD and mental retardation was assigned in his third year. Early assessments include references to:

1. repetitive play, with his favorite occupation being twirling a piece of string;
2. a tendency to perseverate in repetitive activities; and
3. during a play session, spent first half walking around the room shaking a crepe paper ornament and moving his head up and down...made repetitive noises and clicking noises with his tongue.

Mr. R resided in a private group home from the age of 4 to 24 years. A battery of psychometric tests were performed at age 16 years, with results indicating a mental age of 18-20 months at that time. Assessments and reports cite a history of intermittent difficulties with aggression and self-injurious behaviors (SIB). Various diagnoses were proposed, including seizure disorder, mania, schizophrenia, and “compulsive” eating and drinking. He was admitted to a psychiatric hospital on two occasions. Medications prescribed included the following: sodium valproate, phenobarbital, haloperidol, thioridazine, lithium carbonate, diazepam, lorazepam, and chlorpromazine. His last two years in this group home appeared to be fairly stable, with behavior interventions in place (including scheduled routines for hygiene, walks, toys) and a medication regimen including chlorpromazine, benztrapine mesylate, and lorazepam.

A precipitous change in home and community at 24 years of age correlated with an increase in frequency and intensity of aggression and SIB. Mr. R was referred to the DDP and was prescribed a combination of propranolol and loxapine and assigned a diagnosis of an adjustment disorder with mixed emotional features. An inpatient period of evaluation followed a period of significant interpersonal aggression.

During this admission neither stereotypical nor compulsive behaviors were observed. Mr. R was prescribed a combination of carbamazepine, propranolol, and clonidine, with a PRN of loxapine. A period of relative stability followed, with PRN’s being administered for infrequent episodes of SIB and socially intrusive behavior. Three grand mal seizures were linked to possible water intoxication. A multidisciplinary team consisting of a consulting psychiatrist, primary nurse, speech language pathologist, behavior therapist and advocate met regularly in order to identify possible environmental antecedents to SIB, plan to incorporate routine recreational opportunities in which sign language teaching and reinforcement would be embedded, monitor medication effectiveness and plan for alternative living arrangements for Mr. R. It is noted that a temporary decrease in clonidine was followed by
an increase in masturbatory behavior by Mr. R, to the extent that his enjoyment of previously enjoyed social/recreational activities was interrupted and with an intensity that precluded the use of redirection by staff. It was hypothesized that this increase was precipitated by an increase in Mr. R’s level of anxiety. An increase in clonidine to previous dosage levels alleviated these behaviors. Although periodic observations of excessive water drinking were followed up with metabolic workups, hyponatremia was not initially documented. The alleviation of this behavior during a trial where Mr. R slept and used as “quiet area” his own bedroom rather than living on the ward suggested it may have been a response to a sense of anxiety and insecurity.

An observation that at least some of Mr. R’s episodes of distress were the result of being interrupted while engaging in compulsive-like behaviors such as ordering, arranging or touching objects was brought forward by his primary nurse near the end of his stay at the hospital. The Compulsive Behavior Checklist for Clients with Mental Retardation was completed. His primary nurse reported the presence of the following:

1. ordering compulsions (arranges objects in a certain pattern, arranges certain items in one spot, insists on doing a certain activity/chore at the same time each day);
2. cleaning/tidiness compulsions (picking at grass/shrubs, insists on certain activities being done in a precise manner);
3. checking/touching compulsions (touches/taps items repeatedly, does unusual sniffing); and
4. deviant grooming compulsions (picks at face/hands/legs to point of gouging skin).

Mr. R was noted to insist that his peers place utensils properly in the box provided following meals. He also repeatedly turned sheets in the medication book when this act was delayed by the nurse dispensing the medication. He did not appear to have any specific compulsive rituals related to his personal hygiene.

A trial with fluvoxamine was initiated during the latter part of his stay at the hospital to address compulsive ordering and checking behaviors.

Mr. R eventually moved from the hospital to a local group home affiliated with an Association for Community Living. A careful transition plan was put in place to optimize his comfort during this time. Medication on discharge included:

- clonidine 0.1mg p.o. b.i.d. and 0.15mg p.o. b.i.d.
- propranolol 120mg p.o. t.i.d.
- carbamazepine (Tegretol) 200mg p.o. t.i.d.
- fluvoxamine (Luvox) 50mg p.o. b.i.d.
- loxapine 50mg q2h PRN for agitation or sleep (maximum of four doses in twenty-four hours)

Mr. R adjusted remarkably well, requiring few PRN’s for episodes of agitation/SIB. Clonidine was briefly decreased, but increased to original dosages when an increase in episodes of agitation/SIB resulted. Periodic episodes of excessive water drinking were responded to with daily weight measurements, fluid schedule, and PRN as needed.

An observation that several episodes of distress requiring a PRN were linked with redirection, especially from the kitchen in his home environment, where he demonstrated a number of compulsive-like behaviors (ordering, a need for symmetry such as replacing dishcloth in the basket, ensuring cutlery on table is in position, ensuring plug in sink is positioned upside down, ensuring dishes are put in dishwasher, wanting to start dishwasher, placing garbage in any open cupboard, ensuring the kitchen counter is clear of objects), prompted a suggestion to increase the dose of fluvoxamine from 50mg b.i.d. to 50mg q.a.m. and 100mg q.h.s. The Compulsive Behavior Checklist was completed during this time by residential and vocational staff with the following results:

1. ordering compulsions (arranging certain items in one spot, wants chairs in a fixed arrangement);
2. completeness/incompleteness compulsions (insists on closing open doors/open cupboards, puts garment on then off over and over);
3. cleaning/tidiness compulsions (insists that a certain activity be done);
4. checking/touching compulsions (opens and closes cupboard doors repeatedly, touching/tapping items repeatedly, does unusual sniffing); and
5. deviant grooming compulsions (picks at face/hands/legs to point of gouging skin).

The effectiveness of the increased dose of fluvoxamine was monitored by reviewing the number of PRN’s he required while engaging in compulsive ordering and a need for symmetry. In the one month time period prior to the increase in
fluvoxamine, 30 PRN’s were required for agitation including self-injury, with 8 or 27% of these episodes involving possible “compulsive-like” behaviors in the kitchen environment. In a one month sample commencing several weeks after the medication increase, the number of PRN’s required for agitation involving self-injury decreased to 12, with 5 or 42% of these episodes involving possible “compulsive-like” behaviors in the kitchen environment.

Alternative explanations for compulsive-like behavior were also examined. An observed increase in need for PRN’s in the month of December was hypothesized to reflect Mr. R’s heightened anxiety in response to environmental changes (staff changes due to holidays, changes to regular routine associated with Christmas decorations and get-togethers). Physical restlessness, insomnia, and signs of polydipsia were other identified precursors to the use of PRN’s. Increased opportunities for stress reduction through daily walks, minimizing changes in routine, increased snacks during the day, sleep hygiene measures, and the creation of a quiet area in his day program were additional supportive measures put in place for Mr. R.

In addition, carbamazepine was substituted with divalproex sodium. This substitution acknowledged the fact that carbamazepine can produce a syndrome of inappropriate anti-diuretic hormone, leading to polydipsia and water intoxication. As it was hypothesized that fluvoxamine may have been contributing to chronic diarrhea, a tapering schedule over a period of one month was recommended. (mid-April to mid-May).

Shortly after fluvoxamine was discontinued, a significant increase in the number of episodes of agitation requiring a PRN, a decreased need for sleep, and an increase in repetitive behaviors was noted. Compulsive behaviors were relatively absent with the exception of situations involving food (e.g., waiting for meals, end of meals). During these times, Mr. R was observed to open and close cupboard doors and dishwasher, position dishes in and out of the kitchen sink, empty spice jars, and play with water taps, all in a forceful manner not easily amenable to redirection. Within 24 hours of initiation of citalopram 20mg q.h.s., these symptoms were resolved, supporting the hypothesis that they were occurring in the context of a selective serotonin reuptake inhibitor discontinuation syndrome as opposed to representing a relapse with respect to his OCD.

An improvement with respect to his diarrhea with the discontinuation of fluvoxamine was also noted.

A recent examination of Mr. R’s repetitive behaviors suggested that for the majority of time, compulsive-like behavior (ordering, checking, and completeness) was not correlated with other signs of anxiety (69% vs. 31%). However, during the times Mr. R was showing signs of anxiety (squealing, restlessness, pinching his cheeks), compulsive behaviors occurred more frequently (60% of interval samples included compulsions during the anxious condition, vs. 24% of interval samples included compulsions during the non-anxious condition). Anecdotal reports from primary staff indicated that allowing Mr. R to perform compulsions when he was anxious served to heighten his anxiety and more likely necessitate the use of PRN medication. They reported that interrupting compulsions early on during an anxiety episode and redirecting Mr. R. was a more successful intervention. Pharmacologically, he continues to be maintained on propranolol 120mg t.i.d., clonidine 0.1mg b.i.d. (0800 and 1630 hrs), and 0.15mg b.i.d. (noon and 1630 hrs), divalproex sodium 250mg q.a.m. and 500mg q.h.s. and citalopram 20mg q.h.s.

**DISCUSSION**

This case study illustrates the range of repetitive behaviors in an individual with an autistic disorder and the challenges inherent in distinguishing amongst these behaviors (which topographically may appear quite similar) in order to make optimal treatment decisions.

1. **Stereotypies** (repetitive and apparently purposeless body movements, body part movements, or use of the body to generate object movements) were noted early in Mr. R’s developmental history.

2. **Insistence on sameness** (an apparent inflexible adherence to specific, non-functional routines or rituals) or, as more recently hypothesized, a sign that the person with autism is “conducting mini-experiments in his or her surroundings, an attempt to identify laws governing events,” (p. 487) was observed during Mr. R’s stay at the hospital, when he insisted that his peers place utensils properly in the provided box following meals, repeatedly turned sheets in the medication book when this act was delayed by the nurse dispensing the medication, and when he was observed to touch and tap items...
repeatedly. Note that these same behaviors could be classified as ordering, cleaning/tidiness and checking compulsions. Later on while living at the group home, a variety of behaviors involving positioning of objects in the kitchen environment could also fit either category.

3. **Obsessions**, as defined in the DSM-IV, were not only impossible to elicit due to Mr. R's inability to self-report, but the inferred link with his “compulsive-like behaviors” was not reflective of the typical expression of OCD. To illustrate, the expression of compulsive-like behaviors in this young man (ordering, checking, completeness) was only temporarily correlated with signs of anxiety (squealing, pinching of cheeks, restlessness) in 31% of the time samples taken over a one month period. The absence of marked anxiety or distress in 69% of the samples begs an alternative explanation of the etiology of the majority of the compulsive-like behaviors.

4. **Compulsions**, as defined in the DSM-IV, contain the components of repetitive behaviors that the person feels driven to perform in response to an obsession, which serve to prevent or reduce distress. Again, many of Mr. R's repetitive behaviors appeared to fit into descriptions of compulsions identified in the literature yet the hypothesized function of these behaviors did not seem to match closely the criteria for OCD. The anecdotal reports of primary staff actually indicated that rather than reducing distress, the performance of these “compulsive-like behaviors” served to heighten his anxiety (when already anxious) and more likely resulted in a need for PRN medication than if these behaviors were interrupted and he were redirected. (However, the increase in frequency of compulsive-like behaviors while he was showing signs of anxiety (from 24% of the time when calm compared to 60% of the time when anxious) does suggest a link with anxiety at least some of the time. These observations are congruent with those of McBride and Parksipp."

If Mr. R’s compulsive-like behaviors did not serve to diminish distress (as in OCD), perhaps an alternative explanation should centre around the role of anxiety in increasing the expression of these behaviors. The suggestion put forward by Baron-Cohen that this type of behavior in persons with AD may be an attempt to impose control or order in a world where social behavior appears unpredictable and confusing appears intuitively more meaningful in this example, and the manner of expression (ordering, checking, completing) may be more reflective of the person with autism’s preference for folk physics (how the physical world of objects works) rather than true compulsive behaviors.

A retrospective review of the treatment-induced adverse effect (discontinuation syndrome following the tapering of fluvoxamine) presented another example of the link between distress/anxiety and the presence of compulsive-like behaviors. Mr. R experienced a significant deterioration in sleep and mood following the withdrawal, and anecdotal reports suggested as well a significant increase in repetitive, compulsive-like behaviors. Once again, the presence of distress or anxiety as a setting event for the expression of compulsive-like behavior seems to have occurred.

This link connecting compulsive-like behaviors as expressions of anxiety, rather than as symptoms of an OCD, fits in with a hypothesis that Mr. R’s compulsive-like behaviors were an indication of felt emotion (anxiety, frustration, distress). Rather than attempting to reduce these behaviors pharmacologically (as would be treatment of choice with OCD, resulting in decreased anxiety), further attempts at understanding the etiology of the anxiety within the person’s environment or physiological state and alleviating identified anxiety-provoking factors would be the preferred course of treatment.

This conclusion contrasts with preliminary work suggesting a shared pathophysiology between OCD and PDD. The fact that the prevalence of OCD is increased in first degree relatives of individuals with AD has contributed to the hypothesis that repetitive behaviors in autism may be related to serotonergic dysfunction. PET studies and work involving D8/17 (a b-lymphocyte antigen) are supportive of this hypothesis. Using a pharmacological challenge with 5-HT₂ and fenfluramine, Hollander et al. demonstrated that the severity of repetitive behaviors in eleven adults with AD paralleled the sensitivity of 5-HT₁ D-receptors in a study measuring growth hormone response to sumatriptan (5-HT₁ D-receptor agonist). Much work, however, is required to more fully elucidate the specific pathophysiology of PDD.

Initial case reports and case series have demonstrated symptomatic reductions in the frequency and/or intensity of SIB, stereotypies and “apparent” compulsions in individuals with PDD in response to both selective serotonin
reuptake inhibitors (SSRI’s) and atypical antipsychotic medications. The positive benefits of SSRI’s (including clomipramine) in OCD have been well documented. Despite the fact that atypical antipsychotics combine serotonin 5-HT₂ antagonism with less, but still potent, dopamine D2 antagonism, they have been shown to be of benefit in the treatment of children with PDD. Risperidone has also been demonstrated to both augment the benefits of SSRI’s in OCD and to exacerbate symptoms in this disorder. The latter effect has also been demonstrated with the atypical antipsychotics olanzapine and clozapine. Hypotheses have been formulated to explain the changes in neurotransmitter levels and receptor function to explain these contradictory appearing clinical findings. Again, considerably more research is required in this respect.

This case study emphasizes the need to clearly define behaviors of concern and to be open to a variety of possible explanations as to etiology and respond accordingly, even with topographically similar behaviors. There is a need for further studies examining possible distinguishing features of the range of repetitive behaviors in persons with PDD (e.g., response to redirection, alleviation of anxiety with performance of behavior, co-presence of signs of anxiety or other potential mental health concerns), to increase our understanding of the etiology of these behaviors and to guide treatment recommendations.

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References


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