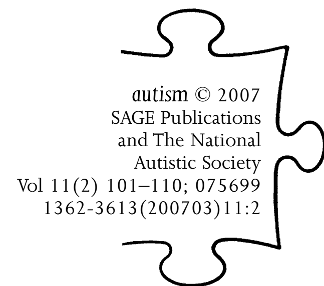
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An autistic dimension

A proposed subtype of obsessive-compulsive disorder

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ABSTRACT This article focuses on the possibility that autism spectrum disorder (ASD: Asperger syndrome, autism and atypical autism) in its milder forms may be clinically important among a substantial proportion of patients with obsessive-compulsive disorder (OCD) and discusses OCD subtypes based on this proposition. The hypothesis derives from extensive clinical experience of OCD and ASD, and literature searches on MEDLINE. Neuropsychological deficits are more common in OCD than in panic disorder and depression. Moreover, obsessive-compulsive and schizotypal personality disorders are overrepresented in OCD. This may constitute misperceived clinical manifestations of ASD. Furthermore, repetitive behaviours and hoarding are common in Asperger syndrome. It is suggested that the comorbidity results in a more severe and treatment resistant form of OCD. OCD with comorbid ASD should be recognized as a valid OCD subtype, analogous to OCD with comorbid tics. An odd personality, with paranoid, schizotypal, avoidant or obsessive-compulsive traits, may indicate dimensions of ASD in OCD patients.

KEYWORDS *Asperger syndrome; autistic disorder; obsessive-compulsive disorder; schizotypal personality disorder*

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Present subtyping of OCD

Obsessive-compulsive disorder (OCD) is thought to be nosologically heterogeneous, but no consensus has been reached on the delineation of valid subtypes (Lochner and Stein, 2003). A number of ways of subtyping OCD patients has been proposed. The International Classification of Diseases (ICD-10: World Health Organization, 1993) indicates three subordinate categories: OCD with predominantly obsessions, with predominantly compulsions, or with mixed obsessions and compulsions. According to DSM-IV (American Psychiatric Association, 1994), the clinician may specify whether the patient has poor insight or not. It is well known that behaviour therapy is more successful with some compulsions than with most obsessions, and patients with poor insight are obviously less motivated for treatment, so these subdivisions do have clinical relevance. There is little

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research, however, to validate these diagnostic subdivisions as homogeneous subtypes.

The suggested subtype most acknowledged as clinically relevant is probably OCD with comorbid tic disorder. A history of tics is present in at least 25 percent of OCD patients (Leonard et al., 1992; Mataix-Cols et al., 1999). Tics have repeatedly been shown to indicate a distinct form of OCD (Holzer et al., 1994; Leckman et al., 1994), are strongly inherited, and are also common in OCD associated with streptococcal infection (Snider et al., 2004). Presence of tics has been associated with specific OCD symptoms such as symmetry, ordering, blinking, tapping, touching, rubbing and staring rituals (Mataix-Cols et al., 1999), but also with checking, counting and hoarding, at least among adolescents (Leckman et al., 1994). Conversely, OCD is frequent among persons with tic disorders (Kurlan et al., 2002), thus indicating some common mechanisms for these seemingly distinct disorders. Accordingly, a tic-related OCD subtype seems reasonably validated, even if its treatment implications remain unclear.

Based on factor analysis of the symptom checklist from the Yale–Brown Obsessive-Compulsive Scale (Y–BOCS: Goodman et al., 1989), Leckman and co-workers (1997) suggested four 'symptom dimensions': (1) obsessions and checking, (2) symmetry and ordering, (3) cleanliness and washing and (4) hoarding. A similar factor analysis by Mataix-Cols et al. (1999) yielded five subtypes where obsessions are further separated into aggressive/checking and sexual/religious obsessions. Some of these subtypes have also been validated by different brain region activation (Mataix-Cols et al., 2004). However, we still have insufficient clinical evidence that these categories based on OCD symptoms represent valid subtypes, except for the group with hoarding, which repeatedly has been associated with non-response to treatment (Black et al., 1998), schizotypal personality and odd features (Frost et al., 2000). Hoarders have earlier age at onset, more severe obsessive-compulsive symptoms, more comorbidity and heavier family loading than non-hoarders (Samuels et al., 2002), and hoarding is strongly related to the presence of, and the number of, any personality disorder (Mataix-Cols et al., 2000). Furthermore, hoarding is typically ego-syntonic, as opposed to most other compulsions.

Autism and OCD

Essential features of autism spectrum disorder (ASD) are markedly abnormal or impaired development in social interaction and communication, and a markedly restricted repertoire of interests and activities. Repetitive routines and rituals are frequent in autism (Kobayashi and Murata, 1998) and many of these behaviours are identical to those seen in OCD. McDougle et al.

(1995), on the other hand, reported that specific symptoms such as repetitive ordering, hoarding, touching, tapping, rubbing and self-damaging or self-mutilating behaviours were significantly more frequent among persons with autism (many of whom also had mental retardation) than among persons with OCD (without tics or mental retardation). OCD is more common than expected among relatives of subjects with autism (Bolton et al., 1998; Micali et al., 2004). Moreover, OCD was more common in parents of those children with autism that scored high on repetitive behaviour and stereotypies (Hollander et al., 2003). This connection is also supported by a genetic study linking treatment resistant OCD with Asperger syndrome and autism (Ozaki et al., 2003). Furthermore, hoarding is commonly reported in ASD (McDougle et al., 1995) and frequently seen in clinical practice in adults with ASD. Whereas in a Japanese study only 6 percent of young adults with autism were hoarders according to their caregivers (Kobayashi and Murata, 1998), in a recent study (Russell et al., 2005) 10 out of 40 subjects with ASD and normal intelligence had OCD and 12 were hoarders. Another similarity between OCD and ASD is neuropsychological deficits: patients with OCD are more likely to have neuropsychological deficits as compared to patients with panic disorder or unipolar depression (Purcell et al., 1998). Bejerot et al. (2001) described 'autistic traits' and ASD among 64 OCD patients; however, to our knowledge, no other studies have focused on this. After the completion of this study we were informed by coincidence that three of the participants had received a diagnosis of Asperger syndrome from other clinicians. Moreover, another one without autistic traits herself had a sister with autism and mental retardation; and, finally, one man had two children now diagnosed with Asperger syndrome although he did not present 'autistic traits' himself. In total, at least five of the 64 subjects had ASD themselves or in their first-degree relatives. For a review of the interface between ASD and OCD, see Bejerot (2006).

Clinical disguises of autistic traits

ASD is often disguised by depression or anorexia nervosa, or erroneously diagnosed as paranoid psychosis, schizophrenia or catatonia (Wing, 1981); however catatonia is common in ASD (Wing and Shah, 2000). Moreover, obsessional slowness, a treatment resistant form of OCD, could be viewed as a form of catatonia. A considerable comorbidity between tics and ASD is noteworthy (Ringman and Jankovic, 2000). ASD may also be interpreted as social phobia, generalized anxiety disorder, delusional disorder or dysthymia (Gillberg and Billstedt, 2000) or even more often as personality disorders. Accordingly, ASD risks being misunderstood and receiving inadequate treatments. In the autism literature, it is generally supposed that

01 075699 Bejerot 17/1/07 11:51 pm Page 104

rituals in Asperger syndrome are ego-syntonic (Wing, 1981) and hence differ in nature from those of bona fide OCD. According to Wing (personal communication, 2003): 'Rituals have a positive function for people with autism in many cases; however, the most able may try to stop them or confine them to times when they are alone, because they have become aware that their rituals are not socially acceptable, but the rituals themselves do not distress them.' Although this may often be true, attitudes towards rituals vary considerably among persons with ASD (Bejerot et al., 2001; Howlin, 2004; Russell et al., 2005).

Personality, autistic traits and autism spectrum disorders

Personality and personality disorders have been used for subtyping axis I disorders. Examples are eating disorders (Herzog et al., 1992) and substance abuse (Brooner et al., 1993). In OCD, the reported prevalence of categorical personality disorders ranges between 33 and 87 percent. Even if the most common are avoidant, dependent and obsessive-compulsive personality disorders (Baer et al., 1992), cluster A (the odd and eccentric cluster) disorders are more prevalent in OCD patients than in other non-psychotic patients (Rossi and Daneluzzo, 2002). For example, Stanley et al. (1990) reported schizotypal features in 28 percent of his OCD cases. Since schizotypal personality disorder, at least as defined by Westen and Shedler (1999), is an exact description of autistic traits, and Rutter (1987) has suggested that the schizoid personality pattern in childhood is really Asperger syndrome, the presence of these personality traits supports a link between OCD and ASD. In addition, the resemblances between obsessive-compulsive personality disorder and ASD, especially Asperger syndrome, were pointed out by Gillberg and Billstedt (2000).

Clinical experiences

For more than a decade, I worked clinically with OCD in children and adults, and experienced patients with OCD as more emotionally detached than other anxiety patients. Initially I believed this was related to the poor ability in OCD patients to trust their own perceptions, which may contribute to a paranoid flavour in their social interaction. However, having gained insight into the clinics of Asperger syndrome, I realized that the symptoms of ASD were relevant for a substantial proportion of my OCD patients. In summary, certain personality disorders, relatively common in OCD patients, seem closely related to ASD. According to the DSM-IV algorithm, a personality disorder should not be diagnosed if the patient's disorder is better understood as an autistic disorder. Since, according to my experience, ASD

01 075699 Bejerot 17/1/07 11:51 pm Page 105

diagnoses often go unrecognized, these patients run a great risk of being misdiagnosed as suffering from personality disorders.

Outcome prediction in OCD

In a drug treatment study of OCD patients (Humble et al., 2001), those with autistic traits responded worse, and the genetic finding by Ozaki et al. (2003) further supports a link between ASD and poor outcome in OCD. All hitherto reported negative predictors for outcome in OCD, i.e. presence of a cluster A personality disorder, obsessive-compulsive personality disorder, multiple personality disorders (Baer et al., 1992; Cavedini et al., 1997), being a single male, childlessness, difficulties in interpersonal relations (Fals-Stewart and Schafer, 1993) and hoarding (Black et al., 1998; Frost et al., 2000), seem related to ASD.

Hypothesis: autistic dimension in OCD

I propose that OCD is related not only to tic disorders but also to ASD. OCD with tics remains a valid subtype as well as the descriptive symptom dimensions described by Leckman et al. (1997), but OCD with an autistic dimension is equally important. I suggest that Asperger syndrome and HFA are frequently obscured by an ego-dystonic OCD, and that symptoms of Asperger and HFA in these cases often are somewhat inappropriately referred to as comorbid personality disorders. An odd personality, with either paranoid, schizoid, schizotypal, avoidant or obsessive-compulsive traits, may actually serve as a sensitive indicator, identifying an autistic dimension in OCD patients. The discussion about the OCD–schizophrenia interface (Poyurovsky and Koran, 2005) would greatly benefit by considering ASD.

OCD patients supposedly constitute a continuum, ranging from 'almost normal personality' at one end to severely autistic personality at the other. For practical purposes, this dimension could be divided into subjects with a more normal personality and those with prominent autistic traits. This may be clinically important since, in clinical praxis, familiarity with and experience of autism are often confined to child and adolescent psychiatry. OCD with autistic traits may belong to the most common presentations of HFA in current adult psychiatry. It should be emphasized that OCD patients with autistic traits will need special approaches and assistance to achieve social functioning. Cognitive behavioural therapy and drug treatment directed against their OCD may improve obsessions and compulsions but never 'cure' the patient. Accordingly, the goals for the treatment should be set at a realistic level. Table 1 summarizes the postulated differences between 'pure OCD', OCD with autistic traits and OCD with tics.

01 075699 Bejerot 17/1/07 11:51 pm Page 106

***Table 1* Proposed subtyping of obsessive-compulsive disorder (OCD) based on published and unpublished data by the author**

Characteristics	*OCD subtypes*		
	'Pure' OCD	*OCD with autistic traits*	*OCD with tics*
Symmetry ordering (Mataix-Cols et al., 1999; McDougle et al., 1995)	+	+++	+++
Counting compulsions (Mataix-Cols et al., 1999; McDougle et al., 1995)	–	++	+++
Hoarding (Mataix-Cols et al., 1999; McDougle et al., 1995; Russell et al., 2005)	+	+++	+
Washing as the main compulsion (Mataix-Cols et al., 1999; McDougle et al., 1995)	++	+	+
Self-mutilating (Mathews et al., 2004; McDougle et al., 1995)	–	+	+
Pathological grooming behaviours (McDougle et al., 1999)	–	++	++
Social skills	++	–	++
Aloof (Bejerot et al., 2001)	+	+++	–
Been bullied (Little, 2002; McCabe et al., 2003)	+	+++	–
Sexually active (Singer, 2005)	+	–	++
Nicotine dependent (Bejerot et al., 1999; 2003; Comings and Blum, 2000)	–	–	+
Personality features: avoidant + obsessional + cluster A (Bejerot et al., 2001; Gillberg and Billstedt, 2000)	+	+++	–
Tics (Mataix-Cols et al., 1999; Ringman and Jankovic, 2000)	–	+	+++
Impulsive/hyperactive (Samuels et al., 2000; Söderström et al., 2002; Spencer et al., 1998)	–	–	+
Response to treatment (Humble et al., 2001; Mataix-Cols et al., 1999; McDougle et al., 1993; Ozaki et al., 2003)	+++	+	++
Neurological soft signs (Hollander et al., 1990; Jones and Prior, 1985)	++	+++	+

– = rarely present, + = present to a limited extent, ++ = often present, +++ = very often present.

01 075699 Bejerot 17/1/07 11:51 pm Page 107

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