Doi: 10.4274/npa.y6173

Otizm ve Zekâ Geriliği olan Bir Ergende Uygunsuz Cinsel Davranışlar için Risperidone ve Paroxetine Birlikte Kullanımı

Combination of Risperidone and Paroxetine for Inappropriate Sexual Behaviors in an Adolescent with Autism and Mental Retardation

Sabri HERGÜNER[1], Arzu HERGÜNER[1], Erdinç ÇİÇEK[2]

[1]Necmettin Erbakan Üniversitesi Meram Tıp Fakültesi, Çocuk ve Ergen Psikiyatri Anabilim Dalı, Konya, Türkiye

[2]Necmettin Erbakan Üniversitesi Meram Tıp Fakültesi, Psikiyatri Anabilim Dalı, Konya, Türkiye

ABSTRACT

Inappropriate hypersexual behaviors have been frequently reported in subjects with autism, however, literature on management of such behaviors in this group is very limited. In this paper, we describe an adolescent with autistic disorder and mental retardation who developed severe inappropriate sexual behaviors and has been treated successfully with risperidone-paroxetine combination. As presence of hypersexual behaviors in individuals with autism is a distressing factor for their family and social environment, appropriate management seems to be essential. *(Archives of Neuropsychiatry 2012; 49: 311-313)*

Key words: Autistic disorder, hypersexuality, selective serotonin reuptake inhibitors, paroxetine, risperidone

Conflict of interest: The authors reported no conflict of interest related to this article.

ÖZET

Uygunsuz hiperseksüel davranışlar otizmi olan bireylerde sıklıkla bildirilmesine rağmen, yazında bu davranışların kontrol altına alınması ile ilgili yeterli bilgi bulunmamaktadır. Bu yazıda otistik bozukluğu ve zekâ geriliği olan bir ergen olguda aşırı uygunsuz cinsel davranışların risperidon–paroksetin kombinasyonu ile tedavisi sunulmuştur. Otizmi olan kişilerde aşırı cinsel uğraşlar aile ve çevre için stres kaynağı oluşturabilir, bu nedenle uygun tedavi yaklaşımları önemlidir. *(Nöropsikiyatri Arşivi 2012; 49: 311-313)*

Anahtar kelimeler: Otistik bozukluk, hiperseksüalite, seçici serotonin geri alım inhibitörleri, paroksetin, risperidon

Çıkar çatışması: Yazarlar bu makale ile ilgili olarak herhangi bir çıkar çatışması bildirmemişlerdir.

Introduction

Autistic disorder (AD) is characterized by qualitative impairment in social interaction and communication, along with restricted, repetitive, and stereotyped patterns of behaviors, interests and activities (1). In addition to these core features, individuals with autism frequently exhibit interfering behavioral symptoms, including self-injury, irritability, aggression, severe tantrums, and hyperactivity. Over the past ten years, psychopharmacological studies have demonstrated moderate success on management of these behavioral problems (2). Inappropriate sexual behaviors (ISB), such as undressing and masturbating in public, touching his/her own private body areas in public, and touching others inappropriately have also been reported in individuals with AD (3,4). However, information on the treatment of ISB is very limited.

Several researchers recommend beginning with behavioral, psychological and environmental interventions for the management of ISB (5). However, in many cases, pharmacotherapy is often the preferred first-line treatment because of its ease to administration, perceived efficacy and decreased use of staff time (6). Several drugs including leuprolide (a gonadotropin-releasing hormone analogue) (7), oral estrogen (8) and mirtazapine (4) are reported to be effective for the treatment of ISB in subjects with AD.

Some reports indicate that selective serotonin reuptake inhibitors (SSRIs), such as paroxetine (9), sertraline (10) and citalopram (11) might be an alternative in controlling hypersexual behaviors. Several authors have suggested that the efficacy of SSRIs might be due to their anti-libidinal, anti-depressant, and/or anti-obsessional effects. Antipsychotic drugs are also thought to decrease ISB by their dopamine-

Correspondence Address/Yazışma Adresi: Dr. Sabri Hergüner, Necmettin Erbakan Üniversitesi Meram Tıp Fakültesi, Çocuk ve Ergen Psikiyatri Anabilim Dalı, Konya, Türkiye
Gsm: +90 533 742 81 50 E-mail: cocukergen@yahoo.com **Received/Geliş tarihi:** 15.05.2011 **Accepted/Kabul tarihi:** 05.08.2011

blocking effects and possibly by increasing prolactin levels, thereby decreasing sexual urges (12).

We report an adolescent with autism and mental retardation who had severe ISB and has been treated successfully with paroxetine and risperidone combination.

Case

SK, a 17-year-old boy with AD and moderate mental retardation, was referred to our outpatient clinic for his aggressive, overactive and self-injurious behaviors, and insomnia. The main complaint of his parents was his ISB. He was masturbating manually and/or rubbing himself everyday for nearly two hours and ejaculating afterwards. He was touching breasts of his mother and kissing her on her lips. When his mother tried to prevent him he was becoming angry and irritable. Because he was doing same behaviors towards his female teacher, his education program was discontinued. These behaviors began nearly six months ago and increased within the past two months. He had no sexual acts toward males including his father and other family members.

We initiated risperidone and increased the dose up to 2 mg/day. His hyperactivity, irritability and self-injurious behaviors decreased and his sleep disturbance diminished during the treatment with risperidone. Although he was on this medication for two months, his ISB showed no improvement and we subsequently added paroxetine 20 mg/day to his treatment regimen. Two weeks after the initiation of paroxetine, his ISB disappeared totally. This improvement was maintained during the six-month period when he was on risperidone–paroxetine treatment and his parents reported no substantial side effect.

Discussion

We described treatment of ISB in an adolescent with AD and mental retardation. It is not possible to attribute the improvement in ISB directly to paroxetine, as he was receiving both risperidone and paroxetine. However, there was no change in his sexual acts when he was on risperidone monotherapy. Here, we discuss the probable mechanisms to explain the mode of action of risperidone–paroxetine combination in the treatment of ISB.

The mesolimbic system was found to have a substantial role in sexual interest, and dopamine has been suggested as an important neurotransmitter required for maintaining sexual desire. Selective serotonin reuptake blockade was found to reduce dopamine activity in the mesolimbic system through the 5-HT2 receptors, suggesting a possible mechanism of action for SSRI - induced desire dysfunction. Arousal dysfunction can also be explained by the inhibition of peripheral spinal reflexes of the sympathetic and parasympathetic systems (13,14). Paroxetine is the most potent serotonin reuptake inhibitor of the antidepressants and has dopamine (D2) blocking properties. It also inhibits nitric oxide synthase activity which is required for penile vasodilatation and erection. Sexual dysfunction, such as erectile dysfunction, delayed ejaculation, delayed orgasm, anorgasmia and diminished libido, is a common side effect of SSRIs that occurs in at least one third of patients (15). In this subject, efficacy of paroxetine on ISB might be due to its direct anti-libidinal properties.

Risperidone has been reported to be effective for the treatment of irritability, aggression or self-injurious behavior in children and adolescents with autism (16). It binds with high affinity to 5-HT2, dopamine D2, and α1-adrenergic receptors. Ejaculatory disturbances, diminished sexual desire, and erectile dysfunction associated with risperidone have been reported and several mechanisms including central dopaminergic receptor blockade, α-adrenergic antagonism, and prolactin elevation have been proposed (17,18,19,20). However, in our case, ISB were decreased after the addition of paroxetine to risperidone. One explanation for this may be that paroxetine increased the plasma risperidone concentration (21).

A relationship between depressive symptoms and ISB was suggested (14,22). Because the diagnosis of depression depends primarily on communication skills, assessment of depression in non-verbal subjects with autism depends more on the presence of vegetative signs than depressed mood. These signs include aggression, irritability, and sleep and appetite disturbances (23). Along with overactivity, irritability, and insomnia, ISB might be a manifestation of depression in this case and paroxetine might be effective in controlling ISB through its antidepressant effect.

Finally, at a neurobiological and phenomenological level, a significant relationship between hypersexual behaviors and obsessive-compulsive disorder was suggested. The beneficial effects of SSRIs on ISB can be explained by the effectiveness of this class of medications in obsessive-compulsive spectrum disorders (24). Several studies on subjects with AD reported that SSRIs might be an effective choice of treatment for repetitive, compulsive, and stereotypic behaviors (25). Paroxetine might be beneficial in ameliorating ISB in the reported case by its anti-obsessional effect.

Presence of ISBs in individuals with autism is a distressing factor for their family and social environment. Therefore, appropriate management seems to be essential. Further studies are needed to establish the efficacy and safety of pharmacological approaches in treating such behaviors.

References

1. American Psychiatric Association: Diagnostic and Statistical Handbook and Mental Disorders, 4th edition (DSM-IV). Washington (DC): American Psychiatric Association, 1994.
2. Matson JL, Dempsey T. Autism spectrum disorders: Pharmacotherapy for challenging behaviors. J Dev Phys Disabil 2008; 20:175-191.
3. Stokes MA, Kaur A. High-functioning autism and sexuality: A parental perspective. Autism 2005; 9:266-289.
4. Coskun M, Karakoc S, Kircelli F, Mukaddes NM. Effectiveness of mirtazapine in the treatment of inappropriate sexual behaviors in individuals with autistic disorder. J Child Adolesc Psychopharmacol 2009; 19:203-206.
5. Koller R. Sexuality and adolescents with autism. Sexuality and Disability 2000; 18:125-135.
6. Harris L, Wier M. Inappropriate sexual behavior in dementia: a review of the treatment literature. Sex Disabil 1998; 16:205-217.
7. Realmuto GM, Ruble LA. Sexual behaviors in autism: Problems of definition and management. J Autism Dev Disord 1999; 29:121-127.
8. Jones MC, Okere K. Treatment of hypersexual behavior with oral estrogen in an autistic male. South Med J 2008; 101:959-960.

9. Stewart JT, Shin KJ. Paroxetine treatment of sexual disinhibition in dementia. Am J Psychiatry 1997; 154:1474.
10. Anneser JM, Jox RJ, Borasio GD. Inappropriate sexual behavior in a case of ALS and FTD: successful treatment with sertraline. Amyotroph Lateral Scler 2007; 8:189-190.
11. Tosto G, Talarico G, Lenzi GL, Bruno G. Effect of citalopram in treating hypersexuality in an Alzheimer's disease case. Neurol Sci 2008; 29(4):269-270.
12. Wirshing DA, Pierre JM, Marder SR, Saunders CS, Wirshing WC. Sexual side effects of novel antipsychotic medications. Schizophr Res 2002; 56:25-30.
13. Serretti A, Chiesa A. Treatment-emergent sexual dysfunction related to antidepressants: a meta-analysis. J Clin Psychopharmacol. 2009; 29:259-266.
14. Kafka M. Psychopharmacologic treatments for nonparaphilic compulsive sexual behaviors. CNS Spectr 2000; 5:49-59.
15. Werneke U, Northey S, Bhugra D. Antidepressants and sexual dysfunction. Acta Psychiatr Scand 2006; 114:384-397.
16. West L, Waldrop J. Risperidone use in the treatment of behavioral symptoms in children with autism. Pediatr Nurs 2006; 32:545-549.
17. Yılmazer EE, Güler J, İncesu C. Sexual side effects caused by psychotropic medications. Archives of Neuropsychiatry 2011; 48(Suppl)1: 7-15 .
18. Doğu B, Kocabıyık A, Karson F, Çıtak S, İncesu C. The intersexual differences of sexual functions and prolactin levels in schizophrenia patients under antipsychotic medication. Archives of Neuropsychiatry 2011; 48 (Suppl 1): 35-38.
19. Cutler AJ. Sexual dysfunction and antipsychotic treatment. Psychoneuroendocrinology 2003; 28 (Suppl) 1: 69-82.
20. Wadoo O, Chalhoub N. Risperidone-induced sexual dysfunction in a prepubertal child - a case report. J Psychopharmacol 2009; 23: 727-728.
21. Saito M, Yasui-Furukori N, Nakagami T, Furukori H, Kaneko S. Dose-dependent interaction of paroxetine with risperidone in schizophrenic patients. J Clin Psychopharmacol 2005; 25:527-532.
22. Kafka MP. Sertraline pharmacotherapy for paraphilias and paraphilia-related disorders: an open trial. Ann Clin Psychiatry 1994; 6:189-195.
23. Ghaziuddin M, Ghaziuddin N, Greden J. Depression in persons with autism: Implications for research and clinical care. J Autism Dev Disord 2002; 32:299-306.
24. Bradford JM. The neurobiology, neuropharmacology, and pharmacological treatment of the paraphilias and compulsive sexual behavior. Can J Psychiatry 2001; 46:26-34.
25. West L, Brunssen SH, Waldrop J. Review of the evidence for treatment of children with autism with selective serotonin reuptake inhibitors. J Spec Pediatr Nurs 2009; 14:183-191.