Inositol in the Treatment of Trichotillomania and Compulsive Skin Picking

Sir: Medication treatments for trichotillomania and skin picking are less well defined than those for obsessive-compulsive disorder (OCD).[1-3] Although in trichotillomania, neurobiological investigation has found evidence of serotonergic dysregulation similar to that in OCD,[3] anecdotal reports and results of controlled trials of serotonin reuptake inhibitors (SRIs) in the treatment of trichotillomania and skin picking have not always demonstrated efficacy.[4-6]

Inositol, a simple isomer of glucose, is an important dietary and cellular constituent and a key precursor in the phosphatidylinositol second-messenger cycle. Although inositol has long been used as a natural remedy for anxiety and depression, its effects first received systematic evaluation in 2 separate double-blind controlled trials which showed that daily administration of 12 g of inositol over 4 weeks had antidepressant[7] and antipanic[8] effects. Inositol was subsequently found to significantly reduce symptoms in OCD patients,[9] although its efficacy as an augmentation strategy in treatment-refractory OCD patients is questionable.[10] To date, however, little research has been done on inositol in putative obsessive-compulsive spectrum disorders.

Although the mechanism of action of inositol in anxiety and depression is not clear, it might be suggested that some patients with OCD and OCD-related behaviors (such as hair pulling and compulsive skin picking) have a relative deficiency of brain inositol that may be reversed by supplementation with dietary inositol. Considering, too, that important subtypes of serotonergic and noradrenergic receptors use the phosphatidylinositol cycle as their second messenger, another mechanism of action of inositol might be through its attenuation of serotonin-2 receptor desensitization.[11]

We report on the possible benefits of inositol in 3 cases: as a primary treatment for trichotillomania in 1 case and as an augmentation of an SRI for compulsive skin picking in 2 cases. Inositol was administered in white powder form, in a daily dose of 18 g (6 g dissolved in water or juice, 3 times a day). None of the 3 patients reported received concurrent behavior therapy or other psychotherapeutic intervention. This is, to our knowledge, the first report on inositol as a treatment for trichotillomania and skin picking.

Case 1. Ms. A, a 43-year-old married woman who worked as a school secretary, presented with compulsive skin picking (face), which began when she was 17 years old. Ms. A picked her skin daily, resulting in scarring and scab formation, and she engaged in repetitive "mirror checking." She reported a pattern of premenstrual exacerbation of skin picking. Ms. A consulted several dermatologists, who confirmed no underlying dermatologic disorder. Over the years, she was prescribed various topical creams and/or ointments, and she also attempted to camouflage the damage with makeup. She met DSM-IV criteria for body dysmorphic disorder. On psychiatric interview, Ms. A did not appear to have other self-injurious behaviors or OCD symptoms. She described mild depressive symptoms that met criteria for an additional DSM-IV diagnosis of major depression.

Ms. A was treated with citalopram (20 mg/day), but after 4 weeks, she reported no improvement. Citalopram was increased to 40 mg/day. After 6 weeks on this dose, she experienced noticeable improvement in mood, but not in skin-picking behavior. In addition, she complained of a decrease in libido on citalopram treatment, and she was unwilling that the dose be increased further. Inositol (18 g/day) was then started in addition to the citalopram (40 mg/day). Side effects experienced included flatulence and diarrhea, but these remitted in the first week. After 4 weeks of inositol augmentation, there was noticeable improvement in skin picking. From picking for hours every day and avoiding social activity, Ms. A progressed to picking her skin only once or twice a week (10 minutes at a

time). Mirror-checking behavior lessened, and she also began socializing again. Her libido returned, and there was a further improvement in mood. This response was sustained at 8 weeks of treatment. At week 8, she was clinically assessed to be "very much improved" (Clinical Global Impressions-Improvement scale [CGI-I] score of 1).[12]

Case 2. Ms. B, a 21-year-old single woman employed as a massage therapist, was seen for evaluation of chronic, repeated hair pulling (scalp, pubic, and leg hair), which began when she was 12 years old. Her hair pulling had become worse in the previous 2 years. She used tweezers to pull out ingrown pubic and leg hair. She developed bald patches on her scalp and had begun wearing a hat or a wig in public at all times. She had never ingested her hair. Ms. B had not responded to a course of paroxetine (20-40 mg daily for 6 months) 5 years previously.

On psychiatric evaluation, Ms. B reported that she usually pulled out her hair in a "focused" rather than an "automatic" way, and this typically occurred at home. She described mounting tension before hair pulling, followed by feelings of relief after pulling out her hair. She met DSM-IV criteria for trichotillomania. Ms. B also had moderate depressive symptoms at the initial interview and fulfilled DSM-IV criteria for a major depressive episode.

Ms. B was prescribed inositol (18 g/day). She experienced mild abdominal bloating, which resolved on day 10 of treatment. After 4 weeks on inositol treatment, she reported that her hair pulling was much reduced (from pulling hair daily, she was now pulling once a week). At week 4, she was rated clinically as "much improved" (CGI-I score of 2).[12] Her productivity at work and her low mood also improved. After 12 weeks on inositol treatment, she continued to make good progress.

Case 3. Ms. C, a 26-year-old single woman employed as a public relations consultant, had a history of hair pulling (scalp and pubic hair) for 10 years and compulsive nail biting since childhood. Recently, her hair pulling had started to interfere with her work (she was devoting about an hour of work time per day to pulling) and was drawing comments from her colleagues. On assessment, Ms. C fulfilled DSM-IV criteria for trichotillomania, but did not present with comorbid depressive or anxiety symptoms. She had received no previous treatment, and she was unwilling to take medication or be referred for therapy. She did agree to treatment with inositol (18 g/day). She complained of mild side effects with inositol (headaches and abdominal cramps) that persisted for 3 to 4 weeks. There was, however, a considerable reduction in both hair pulling and nail biting at week 8 of treatment, and Ms. C was rated as "much improved" (CGI-I score of 2).[12] Improvement persisted at follow-up 8 weeks later.

We report here on 3 cases in which inositol, a glucose isomer with notable effects on serotonin, was useful as primary treatment in 2 patients unwilling to take SRIs and as augmentation in 1 patient unable to tolerate high doses of an SRI. Inositol was reasonably well tolerated, and time to response in these patients varied between 4 and 8 weeks. Given that hair pulling can recur after initial improvement,[13] longer follow-up is needed to determine if initial treatment response is sustained for Ms. A and Ms. B. Two of the 3 patients had comorbid major depression, which also resolved on inositol treatment. Interestingly, 1 patient who complained of a decrease in libido on citalopram (Ms. A) reported improvement when inositol was added. Inositol's effects, if any, on sexual functioning have not been reported in the literature. Since 8 to 16 weeks is sometimes needed for skin picking to decrease, early improvement of Ms. A's skin picking might, in part, have been due to "carryover" effects of initial citalopram treatment.

Inositol has been shown to be effective in OCD and other psychiatric disorders (depression, panic disorder) responsive to SRIs, but not in disorders (e.g., schizophrenia, Alzheimer's disease) not responsive to SRIs.[14] In a placebo-controlled, crossover trial of inositol in OCD,[9] 10 of 13 patients entered responded favorably to inositol. All 10 responders were noted to have responded well or partially to SRIs in the past. The 3 nonresponders had been resistant to prior SRI treatment. A

recently published double-blind, randomized, crossover trial of inositol (18 g/day) versus placebo augmentation of SRIs in 10 OCD patients[15] showed no significant difference between the 2 treatment phases.

Open-label case reports such as these have obvious limitations. Nevertheless, the 3 cases described here suggest that inositol might be a treatment option in some patients with hair pulling and skin picking and could be considered in patients who tolerate SRIs poorly or who are unwilling to take them. Further research on inositol in other putative obsessive-compulsive spectrum disorders would be of interest.

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