



Case Report

A clinically significant response to endoxifen in compulsive buying behavior emerging in a patient with long-standing obsessive-compulsive disorder

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ABSTRACT

Compulsive buying behavior (CBB) is increasingly recognized as a disabling impulse-control pathology often underdiagnosed in clinical psychiatry. Although commonly associated with mood disorders and behavioral addictions, its occurrence as a secondary symptom in long-standing obsessive-compulsive disorder (OCD) presents diagnostic and therapeutic challenges. We describe a 45-year-old male with a 20-year history of OCD who developed persistent, distressing online compulsive buying over the past year, causing substantial financial strain despite belonging to an upper socioeconomic background. Conventional strategies, including sodium valproate and oxcarbazepine, yielded no clinical benefit. Introduction of endoxifen 8 mg/day led to a rapid and marked reduction in buying urges within 10 days. Objective improvement was captured using the modified compulsive buying scale (MCBS), which decreased from 42 at baseline to 14 after 1 month of treatment. This report highlights a novel therapeutic response to endoxifen in CBB co-morbid with OCD, suggesting a potential serotonergic-modulating role for endoxifen in impulse-control phenomena. Further systematic research is warranted.

Keywords: Behavioral addiction, Compulsive buying, Endoxifen, Impulse control, Obsessive-compulsive disorder

INTRODUCTION

Compulsive buying behavior (CBB) is characterized by repetitive, uncontrollable purchasing leading to distress or functional impairment. Although once conceptualized primarily as an impulse-control disorder, contemporary frameworks consider it within the obsessive-compulsive and related disorders spectrum due to overlapping phenomenology such as anxiety-driven urges and relief-seeking behaviors.^{1,2} CBB has been linked to serotonergic, dopaminergic, and reward-processing dysregulations.³

Comorbidity of CBB with obsessive-compulsive disorder (OCD) adds diagnostic complexity, as clinicians may misinterpret the behavior as a variant of compulsions, impulse-control dysfunction, or behavioral addiction. Evidence-based pharmacological options remain limited. Mood stabilizers, selective serotonin reuptake inhibitors (SSRIs), and cognitive-behavioral interventions have produced variable outcomes.⁴

Endoxifen, an active metabolite of tamoxifen, has emerged as a potential agent targeting protein kinase C (PKC) pathways and serotonergic modulation, showing benefits in impulsivity-related symptoms in emerging literature.⁵ However, reports of its use in compulsive buying remain scarce.

We present a case demonstrating significant improvement in treatment-resistant compulsive buying in an OCD patient following the introduction of endoxifen. The case is intended to add to the sparse therapeutic evidence and offer clinical insights for psychiatrists encountering similar challenges.

CASE REPORT

A 45-year-old male with a documented 20-year history of OCD presented with a new-onset pattern of compulsive buying over the past year. His primary OCD symptoms included intrusive contamination fears, repetitive washing, prolonged bathing rituals, and frequent checking for correctness. The patient remained stable for several years on fluoxetine 80 mg/day and clomipramine 75 mg/day, with adequate functioning and no prior history of behavioral addiction.

Onset of CBB

Over the last year, the patient developed persistent urges to buy items online after browsing shopping websites and mobile applications. He reported escalating inner restlessness and discomfort if unable to make a purchase. Buying temporarily relieved his tension. The behavior intensified gradually, with his average monthly expenditure rising from ~₹5,000 to ₹20,000-₹25,000, often on unnecessary or redundant items. Many purchases were unused, returned, or given away to relatives.

Despite being from an upper socioeconomic background, the financial burden began impacting family functioning and interpersonal relationships. No mood symptoms, substance use, or psychotic features were noted.

Previous therapeutic attempts

A clinical impression of compulsive buying behavior co-morbid with OCD was made. Pharmacological augmentation strategies were attempted.

Sodium valproate was titrated up to 1000 mg/day over a period of three months, followed by oxcarbazepine up to 750 mg/day over another three months. Subsequently, a one-month combination trial of both medications was attempted. However, there was no subjective or objective improvement in buying urges or spending behavior.

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Initiation of endoxifen

Given persistent symptoms and recent evidence supporting endoxifen in impulsivity-related disorders, endoxifen 8 mg/day was initiated.

Within 10 days, the patient reported a substantial reduction in urges and completed only one purchase worth ₹200, described as “necessary and deliberate,” contrasting sharply with prior compulsive spending.

Objective assessment

The modified compulsive buying scale (MCBS) was used. Initially the score was 42 which shows severe compulsive buying and after 30 days of Endoxifen therapy the score fell to 14 which is suggesting mild severity. These values reflected marked improvement. The patient continued regular follow-ups for one month with sustained benefit, improved control over browsing behavior, and no adverse effects reported.

DISCUSSION

Compulsive buying is an underrecognized behavioral condition frequently overshadowed by more classical OCD symptoms, especially when both occur concurrently. Clinicians often debate whether such buying is a compulsion, an impulse, or a reward-driven addictive act. In this patient, the behavior clearly aligned with CBB, characterized by tension before purchases, transient relief afterward, and progressive functional impairment, consistent with previous descriptions in the literature.¹ Differential diagnostic considerations included antidepressant-induced bipolar spectrum disorder (Bipolar III), particularly in view of the patient’s long-term treatment with high-dose fluoxetine and clomipramine. However, the absence of lifetime hypomanic symptoms such as elevated or expansive mood, decreased need for sleep, increased energy, grandiosity, pressured speech, or episodic mood shifts argued against a bipolar spectrum diagnosis. The compulsive buying behavior was characterized by anxiety-driven urges, mounting inner tension, and transient relief following purchase rather than pleasure-seeking, euphoric mood, or goal-directed excess typically seen in hypomanic impulsivity. Furthermore, the patient had tolerated high-dose antidepressants for several years without affective switching, and the onset of compulsive buying behavior was insidious rather than temporally related to antidepressant initiation or dose escalation. These clinical features support the conceptualization of the behavior as compulsive buying within the obsessive-compulsive spectrum rather than bipolar impulsivity. Nevertheless, bipolar spectrum disorders remain an important differential diagnosis in patients presenting with new-onset impulsive behaviors, and careful longitudinal assessment is essential.²

Therapeutic challenges

Standard pharmacological approaches, such as mood stabilizers and SSRIs, have shown inconsistent efficacy in treating compulsive buying. The failure of valproate and oxcarbazepine in this case is consistent with mixed findings

reported in previous studies.⁴

Why endoxifen might have helped

Endoxifen, a potent PKC inhibitor, has been shown to modulate serotonergic signalling and reduce impulsivity and affective dysregulation in preliminary research.^{5,6} Its rapid onset of benefit in this patient suggests:

Endoxifen, a PKC inhibitor, has been shown to modulate serotonergic signaling and reduce impulsivity and affective dysregulation. Its rapid onset of benefit in this patient suggests a possible action on impulsivity-related circuits, improved regulation of urge - relief cycles, and a synergistic effect with ongoing SSRI and tricyclic antidepressant therapy.

Given the dramatic reduction in MCBS scores, this case provides early clinical support for exploring endoxifen in refractory compulsive buying, especially when embedded within OCD.

Clinical significance

This case is unique for several reasons:

1. CBB emerging after decades of stable OCD is uncommon.
2. Poor response to mood stabilizers highlights diagnostic and therapeutic ambiguity.
3. Rapid, substantial improvement with endoxifen suggests a potential therapeutic pathway that is not widely reported in the literature.
4. It underscores the importance of recognizing CBB as a distinct entity requiring targeted intervention rather than attributing it simply to classical compulsions.

CONCLUSION

This case illustrates the emergence of compulsive buying behavior as a distinct and impairing symptom in a long-standing OCD patient and highlights the potential role of endoxifen in its management. The significant and rapid improvement observed suggests that endoxifen may be a promising option for treatment-resistant compulsive buying.

Larger studies are needed to understand the mechanisms and establish evidence-based guidelines. Early identification of CBB and timely intervention can prevent financial, interpersonal, and psychosocial consequences.

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