CASE REPORT

Managing Hypersexuality in Adolescents with Pituitary Microadenoma: A Case Report

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ABSTRACT

Hypersexuality is characterised by frequent and intense sexual impulses or behaviours that lead to psychological distress or impair social, or occupational functioning. Hypersexuality in pituitary microadenoma can arise from hormonal imbalances that influence behavioural functioning. This case report discusses a 14-year-old female diagnosed with both pituitary microadenoma, who exhibited symptoms of hypersexuality, including impulsivity and preoccupation, which led to significant distress for the patient. In terms of treatment, selective serotonin reuptake inhibitors (SSRIs) may provide a valuable therapeutic option, particularly for managing impulsivity and reducing obsessive thoughts related to sexual behaviour. Although SSRIs show promise in treating hypersexuality in such cases, further studies are essential to confirm their effectiveness in managing hypersexuality associated with pituitary microadenoma. This report highlights the need for a comprehensive approach that considers both medical and psychological factors in the management of hypersexuality in adolescents with endocrine disorders.
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INTRODUCTION

Children with precocious puberty due to pituitary microadenoma may present with hypersexuality. Existing literature generally reports the prevalence of hypersexual behaviour to range from approximately 8% to 13% among males and 5% to 7% among females (1). In this case report, we are discussing a case of a 14-year-old girl who presented with hypersexuality. This condition constitutes a significant clinical concern, often presenting alongside a spectrum of psychiatric conditions (2). This case demonstrates a rare but plausible neuroendocrine link between pituitary microadenoma-induced hormonal changes and the emergence of hypersexual behaviours. The patient's frequent masturbation and compulsive sexual urges may reflect an exaggerated behavioural response to early exposure to elevated sex hormones, modulated by underlying psychosocial stressors.

We aim to emphasise the need for combining pharmacological and psychological treatments within a culturally sensitive framework that prioritises safety and individual needs. Incorporating culturally sensitive practices is vital, particularly in cases involving sexual behaviour, to foster trust, improve communication, and deliver contextually appropriate care.

CASE REPORT

A 14-year-old girl, a known case of central precocious puberty secondary to pituitary microadenoma, presented with inappropriate sexual behaviour. She

engaged in frequent sexting behaviours, including exchanging sexually explicit messages and images with her boyfriend. Otherwise, no sexual intercourse was involved. The patient reported frequent difficulty in controlling sexual urges and described a strong urge to seek pleasurable sensations through masturbation, which she used as a primary means of managing these impulses. She engaged in masturbation multiple times daily, typically whenever she experienced sexual fantasies. However, these fantasies were not described as intrusive or distressing.

Being born in a conservative Muslim family with an authoritative mother, self-pleasure became a controversial issue for the family. The mother imposed strict behavioural restrictions, including confiscating the patient's mobile phone, limiting her social interactions and putting CCTV in the child's room. These restrictions led to psychological distress and oppositional behaviours, including conduct disturbances such as stealing money to buy a phone, lying, use others' phones in school to contact her boyfriend. Otherwise, she had no history of persistent low mood and anhedonia. She denied manic symptoms and a history of taking illicit drugs or alcohol. Although the patient was previously diagnosed with a pituitary microadenoma, she did not report symptoms typically associated with mass effects, such as headaches or visual disturbances. Her mental state assessment revealed a medium-built girl with good eye contact. Her speech was normal. Her mood was euthymic. There were no signs of obsessional thoughts or suicidal ideation.

The patient was diagnosed with pituitary microadenoma at age six. Serial brain MRIs have confirmed a stable pituitary microadenoma, with the most recent scan showing no change in size and no optic chiasm compression. Recent endocrine tests showed normal results, including estradiol (750 pmol/L), cortisol (431.1 nmol/L), prolactin (206.32 mIU/L), testosterone (1.68 nmol/L), and thyroid function (TSH 1.17 mIU/L; T4 13.80 pmol/L).

The family intervention was done with detailed psychoeducation regarding the current condition. The child is also being referred to a clinical psychologist for emotional regulation. The patient also received psychoeducation during her psychiatric follow-ups, which focused on understanding hypersexuality, reducing guilt associated with masturbation, and promoting safer coping strategies. The goal was to reduce behavioural impulsiveness, enhance insight, and promote safer coping mechanisms. The intended outcome was to increase the patient's emotional self-regulation and decrease high-risk sexual behaviour. Interventions were delivered over multiple outpatient visits across three months. The patient was also referred for spiritual counselling, which aligned with the family's religious values. This intervention was aimed at promoting religious coping strategies within a culturally and religiously appropriate framework, as requested by the family. The mother became more open and able to accommodate the child's needs, reduced her strictness, and gave good support for the child.

Oral sertraline 25 mg nightly was started to address the symptoms of hypersexuality, manage impulsiveness, and treat the preoccupation towards sexual thoughts. Within two weeks, the dosage was increased to 50 mg nightly due to persistent symptoms. Over the next two months, gradual improvements were observed, including better emotional regulation and reduced frequency of sexual urges. By three months post-initiation, the patient remained stable on sertraline 50 mg. The patient expressed more control over her impulses. According to her mother, there was a significant improvement in the child's emotional regulation. The family also noted enhanced communication and a more supportive dynamic at home, which contributed positively to the patient's overall progress.

DISCUSSION

Sexual addiction is a prevalent and serious condition, often accompanied by psychiatric and somatic comorbidities (2). Beyond sexual addiction, compulsive sexual behaviour disorder has recently been classified as a distinct psychiatric condition (3). While the neurobiology and neuropharmacology of sexual behaviour are not yet fully understood, extensive research has been conducted to elucidate the neuronal circuits and neurotransmitters involved (4). In pituitary microadenoma-related hypersexuality, understanding the underlying hormonal and neuropsychiatric interactions is essential for developing comprehensive management strategies.

In this case, hypersexuality is evidenced by a pattern of excessive sexual thoughts, urges, and behaviours that were developmentally inappropriate and markedly interfered with her psychosocial functioning. While adolescents may experience an increase in sexual interest during puberty due to hormonal changes, the intensity and compulsive nature of this patient's behaviour (including persistent sexting, frequent masturbation, and defiance of social boundaries) suggest a pathological pattern.

Pharmacological interventions, though promising, currently lack robust empirical support, and findings from available studies often have limited generalizability (3). The choice of medication depends largely on the severity of hypersexuality and the presence of comorbid psychiatric or sexual disorders (1). Given the high prevalence of co-occurring conditions in individuals with hypersexuality, these factors must be carefully evaluated to tailor effective pharmacological treatment (3). For hypersexuality in sex offenders with paraphilic

disorders, treatment should adhere to the risk-needs-responsivity model, whereby higher-risk individuals receive more intensive therapeutic interventions (4). Moreover, psychiatric evaluations are essential before any off-label pharmacological interventions, emphasising the need for strict adherence to safety protocols (5).

The main pharmacological agents studied include opioid antagonists, selective serotonin reuptake inhibitors (SSRIs) such as paroxetine, citalopram, fluoxetine, and sertraline, mood stabilisers, tricyclic antidepressants (e.g., clomipramine), serotonin antagonist and reuptake inhibitors, and N-acetylcysteine (3). However, few randomised controlled trials have been conducted, and no medications have received formal approval for hypersexuality treatment. Among the available options, SSRIs stand out as a key pharmacological approach for managing hypersexuality (1). For hypersexuality in pituitary microadenoma, SSRIs may serve as a valuable treatment option, particularly in managing impulsivity and preoccupation, though further studies are needed to confirm their efficacy in such cases.

SSRIs are considered the first-line pharmacological treatment for sexual addiction, either alone or in combination with naltrexone. These medications are widely prescribed due to their favourable safety profile compared to other antidepressants (5). In cases of hypersexuality in mild paraphilic disorders, such as exhibitionism or the consumption of child pornography, SSRIs can be effective, especially when the risk of a sexual offence is low (2). In this case report, the patient showed a positive response to sertraline, evidenced by a reduction in the frequency of masturbation. However, full remission or recovery has not yet been achieved. Similar findings have been reported in other cases, including one involving a male patient with compulsive sexual behaviour, who demonstrated marked improvement with sertraline. In that case, nearly complete remission of symptoms was observed after more than three years of combined treatment with naltrexone (3).

The decision to initiate sertraline in this case was based on its established efficacy in managing impulsiveness and sexual preoccupations, which were prominent in this patient's presentation. The selection of this medication followed a comprehensive evaluation of potential risks and benefits, which was thoroughly discussed with both the patient and her parents. Ethical considerations regarding the use of SSRIs in this patient were meticulously examined. Informed consent was obtained from both the patient and her parent in accordance with ethical guidelines. The patient was closely monitored for adverse effects, with particular attention paid to mood alterations, suicidal ideation, and emotional flattening. Treatment progress was assessed through qualitative feedback from the patient and her mother, with improvements noted in the diminished frequency and intensity of sexual behaviours.

Pharmacological interventions should be integrated into a comprehensive treatment plan that includes psychotherapy. Psychotherapeutic approaches, particularly cognitive-behavioural therapy (CBT), are central to improving treatment outcomes for hypersexuality (2). Psychoeducation and psychotherapy remain the first-line treatment options and should always be part of the therapeutic strategy (1). While pharmacological therapies are primarily considered adjuncts, psychological therapies currently offer the strongest empirical support in the treatment of CSBD and problematic pornography use (3). In pituitary microadenoma-associated hypersexuality, integrating SSRIs with CBT and psychoeducation ensures a holistic approach, addressing both the biological and psychological aspects of the condition for long-term improvement.

This case report has several limitations. First, the findings may have limited generalisability, as they are based on a single patient from a specific cultural and clinical context. Second, the duration of follow-up was relatively short, which restricts conclusions about the long-term effectiveness. Lastly, some aspects of symptom improvement, particularly related to behavioral changes, relied on subjective observations from caregivers and clinicians, which may introduce bias.

CONCLUSION

This case illustrates the importance of combining pharmacological and psychological interventions tailored to cultural context. We recommend a multidisciplinary approach that includes regular psychological support and family involvement. Family involvement was pivotal in facilitating adherence to treatment and promoting behavioural improvement. Moreover, incorporating culturally sensitive strategies may enhance the therapeutic alliance and patient engagement. Future interventions should continue to prioritise family-centred and culturally informed approaches to ensure sustainable and holistic outcomes.

SSRIs such as sertraline are known to enhance serotonin availability in the brain, which plays a key role in regulating mood, impulsivity, and sexual drive. In this case, sertraline contributed to a notable reduction in the frequency of masturbation and intensity of sexual preoccupation. While no formal CBT was administered, the combination of pharmacotherapy with culturally tailored psychoeducation and family counselling supported emotional regulation and behavioural improvement. Nonetheless, the use of SSRIs in adolescents requires caution due to the limited empirical data and potential for side effects. Future studies should explore the long-term safety and efficacy of SSRIs in

managing hypersexuality, particularly in cases with neuroendocrine involvement.

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