NÖRO PSİKİYATRİ ARŞİVİ
ARCHIVES OF NEUROPSYCHIATRY

CASE REPORT / OLGU SUNUMU

Arch Neuropsychiatry 2019;56:316–318
https://doi.org/ 10.29399/npa.23475

Hypersexuality Manifesting as Excessive Masturbation in a Female Patient After Temporal Lobe Epileptic Surgery: A Rare Case Report

Bir Kadın Hastada Temporal Lob Epileptik Cerrahisi Sonrası Aşırı Mastürbasyon Şeklinde Ortaya Çıkan Hiperseksüalite: Nadir Bir Olgu Sunumu

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ABSTRACT

Interictal sexual behavior changes are frequently reported in patients with epilepsy, especially those with temporal lobe epilepsy. Changes in sexual function after temporal lobe epileptic surgery can vary within a wide range, ranging from disappearance of paraphilias existing in preoperative period, decreased libido or sexual activity, sexual arousal and orgasmic disorders, sexual activity arising to a normally acceptable level, or hypersexuality. Hypersexuality can be defined as having excessive sexual arousal and drive in abnormal frequency and intensity. Many hypotheses have been developed to explain etiology in hypersexuality in the literature. But there is no consensus on treatment. Here we aimed to present diagnosis and treatment process of hypersexuality manifesting as excessive masturbation in 38 years old, single female patient who underwent selective hippocampectomy (temporal lobe resection) 11 years ago.

Keywords: Epilepsy, temporal lobe; hypersexuality; epileptic surgery; excessive masturbation

ÖZ

Epilepsi tanılı, özellikle de temporal lob epilepsili hastalarda interiktal dönemde cinsel davranış değişiklikleri olduğu bildirilmiştir. Bu hastalarda cerrahi öncesi ve sonrası dönemde cinsel işlev değişiklikleri; ameliyat öncesi dönemde varolan parafililerin ortadan kalkması, libido veya cinsel aktivitede gerileme, uyarılma ve orgazm bozuklukları, cinsel aktivitenin normal kabul edilebilir düzeye gelmesi veya hiperseksüaliteye kadar geniş bir aralıkta değişebilmektedir. Hiperseksüalite anormal sıklık ve yoğunlukta kabul edilen cinsel uyarılma ve yanıt olarak tanımlamıştır. Literatürde hiperseksüalite etiyolojisini açıklamak için pek çok hipotez ortaya atılmıştır. Fakat halen tedavisi konusunda bir fikir birliği mevcut değildir. Biz bu vaka sunumunda 38 yaşında, bekâr bir kadın hastada seçici hipokampektomiden (temporal lob rezeksiyonundan) 11 yıl sonra aşırı mastürbasyon şeklinde ortaya çıkan bir hiperseksüalitenin tanı ve tedavi sürecini tartışmayı amaçladık.

Anahtar Kelimeler: Temporal lob epilepsisi, hiperseksüalite, epileptik cerrahi, aşırı mastürbasyon

Cite this article as: Gündüz N, Turan H, Polat A. Hypersexuality Manifesting as Excessive Masturbation in a Female Patient After Temporal Lobe Epileptic Surgery: A Rare Case Report. Arch Neuropsychiatry 2019;56:316-318.

INTRODUCTION

The risk of psychiatric disorders in patients with temporal lobe epilepsy (TLE) is higher than in patients with other types of epilepsy (1). The most common psychiatric comorbidities are mood disorders, anxiety disorders, personality disorders due to general medical condition, and sexual function changes (1, 2).

Interictal sexual behavioral changes are frequently reported in patients with epilepsy, especially those with TLE (3). Changes in sexual functions can also be observed after epileptic surgery (2, 3) and can vary within a wide range, ranging from disappearance of paraphilias existing in preoperative period, decreased libido or sexual activity, sexual arousal and orgasmic disorders, arising to a normally acceptable level or hypersexuality (4–7). But the mechanism is still controversial. Resection of the active epileptic zone during the surgery and the suppression of the seizure focus associated with the limbic system may increase the risk for psychiatric disorders (3).

In this case report, we aimed to present diagnosis and treatment process of a female patient with hypersexuality manifesting as excessive masturbation after temporal lobe resection (TLR).

CASE

Thirty-eight-year-old, single female patient who underwent selective

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Received/Geliş Tarihi: 13.11.2018, **Accepted/Kabul Tarihi:** 21.02.2019, **Available Online Date/Çevrimiçi Yayın Tarihi:** 04.10.2019

amygdalohipocampectomy (SAH) 11 years ago admitted to our outpatient clinic with the complaints of feeling sad and hopeless, diminished interest or pleasure in activities, social isolation, insomnia, feelings of excessive or inappropriate guilt and suicidal thoughts. The patient was taken to our inpatient clinic with the diagnosis of major depressive disorder (MDD).

In the first week of hospitalization, she rarely left her room and she had comorbid severe anxiety symptoms especially on the days when male doctors and/or medical personnel were on duty. Even when her father, brother and/or male nephew came to visit her, she refused to see them. So, we had to make the interviews in the patient's room. In the second week, she told that she had excessive sexual arousal and sexual desire with or without simultaneously sexual stimulus 6 months after SAH. These sexual changes gradually increased 6 months ago and she started to masturbate. In the last three months, masturbation could persist about 20 hours of a day. She also had sexual dreams and fantasies during masturbation. Due to excessive masturbation, she had injuries caused by irritation on external genital area. It was very difficult to resist sexual intercourse when she encountered with male gender, so she rarely left her room. She was Muslim and premarital sexual intercourse was forbidden according to her religious beliefs. She had feelings of inappropriate guilt and sin because of excessive masturbation.

Medical History

She had febrile convulsion due to tuberculous meningitis when she was 2 years old. She was diagnosed with right-sided TLE based on the ictal EEG because of tactile hallucinations, automatism and seizures when she was 10 years old. Despite different antiepileptic drugs in mono- or poly-therapy regimens, she continued to have epileptic seizures. She had hyposexuality manifesting as decrease in sexual arousal and desire 5 years after the diagnosis of TLE.

Seizure Localization

Presurgical neuropsychological investigation had revealed ictal discharge starting from the right mesial temporal region during video-EEG monitoring, right-sided hippocampal sclerosis on MRI. The cranial PET image of the patient before surgery had showed a low metabolic activity in the right inferior temporal cortex compared to its symmetric area. The cranial MRI of the patient before surgery had revealed right hippocampal volume reduction and signal enhancement while right frontotemporal onset seizure had been observed in 16 hours video EEG monitoring of the patient. SAH had been performed with right pterional craniotomy. The result of the pathology specimen was right mesial temporal sclerosis. She was completely seizure free after surgery.

Psychiatric History

She had depressive complaints and excessive sexual arousal 6 months after TLR. She had different psychopharmacological treatment regimens like antidepressants, antipsychotics, anxiolytics, mood stabilizers because of her resistant depressive symptoms.

Clinical Follow-up and Treatment

Complete blood count, renal and hepatic function, electrolyte imbalance tests, thyroid function tests, FSH, LH, PRL, E2 were all normal. MRI of the brain showed post-operative gliotic changes in the posterior zone of the right temporal lobe and right hippocampal resection. Neurological and gynecological consultations were reported to be normal. Due to depressive symptoms and excessive masturbation paroxetine 30 mg per day and risperidone 2 mg per day were started. Following psycho-education, she was asked to take notes about how long the masturbation lasted. Depressive symptoms were followed by Beck Depression Inventory (BDI) and Hamilton Depression Rating Scale (HAM-D). The results of these scales measured four times and reduced during follow-up. Scores of BDI and HAM-D were found to be 52-44-28-11 and 29-17-12-5 points, respectively. We observed marked improvement in depressive symptoms and excessive sexual arousal and masturbation after eight weeks follow up. The follow-up of the patient continues with the remission.

DISCUSSION

Blumer identified hypersexuality as 'sexual arousal and response that is precisely and clearly abnormal in frequency and intensity for the individuals' (8). Our patient was masturbating almost all the day and night as an abnormal frequency and intensity, so she was diagnosed with hypersexuality (8).

Some researchers conceptualized hypersexuality after TLR as a feature of Kluver-Bucy Syndrome (KBS) (8–10) that is known to be resulted from bilateral lesions of medial temporal lobe in rhesus monkeys. KBS has been defined as visual agnosia, hyperorality with changes in dietary habits, hypermetamorphosis (intolerable impulse to visual stimulus), affective changes, loss of normal fear and anger and hypersexuality (10). One of these researchers, Blumer observed hypersexuality, persistant sexual arousal, homosexual behavior, changes in dietary habits and extinction of irritability in three patients after three to six weeks postoperative silent periods (8). Blumer suggested that epileptic discharges of the temporal lobe resulted in an excited limbic system, causing irritability and hyposexuality in the patients with TLE. After epileptic surgery, the limbic system is inhibited as a result of the extinction of the epileptic discharges to the limbic system, and the decrease in irritability and hypersexuality are observed in these patients (8). Cogen et al. (9) described hypersexuality after unilateral TLR as "partial KBS". In this case report, the authors suggested that there was no other KBS specific symptom and also that the emerging time of the hypersexuality was longer than that the primates and human KBS cases presented in the literature that typically hypersexuality had emerged in the first postoperative year. The presurgical tests such as unilateral ictal discharge starting from the right mesial temporal region during video-EEG monitoring, right-sided unilateral hippocampal sclerosis on MRI, right sided unilateral hypometabolism in PET revealed unilateral temporal dysfunction in our case report. Our patient had affective changes manifested as severe depressive symptoms and hypersexuality manifested as excessive sexual arousal and masturbation from the above-mentioned KBS-specific symptoms.

Baird et al. (11) have shown that after TLR sexual function gets normal level in many patients and that sexual function reaches a level that is slightly below or above accepted as normal in a low number of patients. In this study, changes in the frequency and intensity of masturbation were reported by some patients, but none of them reached the level of hypersexuality. The same authors have reported a case series of 7 patients with hypersexuality after TLR. In this case series, hypersexuality was reported as sexual orientation change from heterosexuality to homosexuality, an increase in sex drive, an increase in sexual desire and increase in frequency and intensity in sexual thoughts. None of these cases reported excessive masturbation (5). The excessive sexual arousal and desire of our patient, who never had any sexual intercourse due to the prohibition of pre-marital sexual intercourse in Muslim societies, had presented as excessive masturbation. Our patient did not tell anybody about this sexual arousal symptoms for a long time because of feelings of intense guilt and sin. Hypersexuality manifesting as excessive masturbation after TLR was also presented by Özmen et al. (12).

Baird et al. compared the sexual outcomes after TLR and extratemporal resection (ETR) (11). The remarkable changes in sexual functions were observed more in women than in men. In patients with TLR, increase in sexual function to a normal accepted level or slightly above the normal accepted level had been observed more often than decrease in sexual function. Sexual function changes were more common after right TLR and

it was concluded that right TLR is more frequently associated with sexual function changes than left TLR (11). In our case report, in accordance with the study above, sexual function changes after surgery had manifested as increase in sexual arousal and desire manifested after right TLR.

Our patient had hyposexuality before the surgery in an accordance with the literature (1–3). It may because of the epileptic seizure itself (8) and antiepileptic drugs (13, 14).

Post-operative sexual changes usually develop in the first three months and can persist years after TLR (5, 11). In our case report, sexual changes began within 6 months after TLR.

Serotonergic and antiepileptic drugs have been widely used in hypersexuality (15). We have chosen paroxetine for severe depressive symptoms and risperidone –one of the potent second generation antipsychotics, which may decrease sexual arousal and desire. Also we made behavioral monitoring and psychoeducation. We observed that psychopharmacological treatment as well as behavioral exercises have contributed to the treatment process.

It is clear that there are still areas of brain functioning that have not been discovered. There is a need for new case studies in both case-specific and experimental settings for effective treatment planning.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept - NG, HT; Design - NG, AP; Supervision - AP; Resource - NG; Materials - NG; Data Collection and/ or Processing - NG, HT, AP; Analysis and/or Interpretation - AP; Literature Search - NG; Writing - NG, HT; Critical Reviews - AP.

Conflict of Interest: There is no conflict of interest among the authors.

Financial Disclosure: No financial support was used.

Hakem Değerlendirmesi: Dış Bağımsız.

Yazar Katkıları: Fikir - NG, HT; Tasarım - NG, AP; Denetleme - AP; Kaynak - NG; Malzemeler- NG; Veri Toplanması ve/veya İşlemesi - NG, HT, AP; Analiz ve/ veya Yorum - AP; Literatür Taraması - NG; Yazıyı Yazan - NG, HT; Eleştirel İnceleme - AP.

Çıkar Çatışması: Yazarlar arasında çıkar çatışması bulunmamaktadır.

Finansal Destek: Finansal destek kullanılmamıştır.

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