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Muscle Dysmorphia and Long-Term Anabolic Steroid Abuse: A 20-Year Case Report

Kas Dismorfisi ve Uzun Süreli Anabolik Steroid Kötüye Kullanımı: 20 Yıllık Olgu Raporu

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ABSTRACT

The aim of this study is to investigate the long-term psychological and physiological outcomes of muscle dysmorphia (MD) and the misuse of anabolic androgenic steroids (AAS) and performance-enhancing drugs (PEDs) in a Turkish male over two decades. Conducting a retrospective case review, including medical record analysis, psychological evaluations, and physical examinations were carried out to document the progression and consequences of MD and substance abuse. This study investigates the psychological and physiological effects of long-term AAS and PED use, explicitly excluding other potential causes through rigorous diagnostic assessments. The case underscores the direct relationship between these substances and severe health complications observed. The patient demonstrated persistent MD symptoms, compounded by continuous AAS and PED use, leading to severe health complications such as cardiac hypertrophy and endocrine disorders. The case highlights the necessity for early identification, intervention, and preventive approaches to address MD and PED abuse. It stresses the importance of ongoing surveillance and research to develop effective public health policies.

Keywords: *muscle dysmorphia, anabolic steroid abuse, performance-enhancing drug misuse*

ÖZ

Bu çalışma, son yirmi yıllık süre zarfında bir Türk erkeğinde görülen kas dismorfisi (KD) ve anabolik androjenik steroid (AAS) ile performans arttırıcı ilaçların (PAİ) sürekli kullanımının psikolojik ve fizyolojik etkilerini araştırmayı hedeflemiştir. KD ve madde kullanımının evrimini ve sonuçlarını belgelemek amacıyla hasta tıbbi kayıtlarının retrospektif analizi, psikolojik değerlendirmeler ve fiziksel muayeneler yapılmıştır. Bu çalışma, uzun süreli AAS ve PAİ kullanımının psikolojik ve fizyolojik etkilerini araştırmaktadır, titiz tanı değerlendirmeleri yoluyla diğer potansiyel nedenleri açıkça dışlamaktadır. Vaka, bu maddeler ile gözlenen ciddi sağlık komplikasyonları arasındaki doğrudan ilişkiyi vurgulamaktadır. Hastanın devamlı AAS ve PAİ kullanımı sonucunda kalıcı KD semptomları ve kalp büyümesi, hormonal dengesizlikler gibi ciddi sağlık sorunları ortaya çıkmıştır. Bu olgu sunumu, KD ile birlikte gelen AAS ve PED kötüye kullanımına karşı erken tanı, müdahale ve önleyici stratejilerin önemini ortaya koymaktadır. Ayrıca, etkili kamu sağlığı politikalarının oluşturulmasına yönelik kapsamlı araştırma ve sürekli izlemenin gerekliliğini vurgulamaktadır.

Anahtar kelimeler: *kas dismorfisi, anabolik steroid kötüye kullanımı, performansı artırıcı ilaç kötüye kullanımı*

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1. Introduction

In this account, we explore the journey of Mr. C., a Turkish fitness aficionado, as he navigates through the perils of muscle dysmorphia and the lure of anabolic steroids and PEDs. Beginning as a health-conscious individual, his fixation on achieving the perfect body led him down a perilous path marked by significant health and addiction issues. This narrative clarifies on the often-overlooked risks within the fitness community of Turkey, including the widespread availability of illicit substances, social acceptance, and a troubling lack of supervision. Through Mr. C.'s story of battling and surmounting liver and cardiovascular complications, we gain an insightful look into the consequences of such risky behaviors and the challenging journey towards healing and rehabilitation.

2. Case Presentation

2.1. Background

Patient M, a 45-year-old male from a major Turkish city, began a fitness journey two decades ago, escalating from leisurely gym visits to a rigorous bodybuilding routine driven by dreams of a professional physique. This pursuit led to the abuse of AAS and PEDs, causing mood swings, antisocial tendencies, and signs of steroid abuse like gynecomastia. Medically, he faced liver toxicity and sports-related heart enlargement, coupled with anxiety and depression, which, alongside a family history of cardiomyopathy, exacerbated his health issues. Socially, his relationships and career suffered. Despite severe health issues and medical advice to stop bodybuilding, he persisted, reflecting the strong cultural pressures of the bodybuilding community.

2.2. Clinical Findings

In the clinical examination, 45-year-old Mr. C. showed clear signs of chronic AAS and PED misuse, including gynecomastia, muscle hypertrophy in the neck, acne, and injection marks, indicative of intramuscular steroid use. His voice had deepened, and there were signs of testicular shrinkage, suggesting hormonal disruption. Cardiological tests revealed an enlarged heart, and liver tests showed high enzyme levels, pointing to organ strain or the damage caused likely by toxic PEDs. Mr. C. admitted to using substances like testosterone and trenbolone, which are known to have severe health risks. The diagnosis of muscle dysmorphia was confirmed through a combination of clinical psychiatric evaluations and diagnostic scales specifically designed to identify dysmorphic disorders. These assessments included structured clinical interviews based on the DSM-5 criteria and the Muscle Appearance Satisfaction Scale (MASS) which quantitatively measures symptoms and severity of muscle dysmorphia. Psychologically, he suffered from anxiety, depression, and mood swings, common with AAS/PED abuse. This case reflects a broader, often secretive trend in Turkey and globally where the pursuit of fitness can lead to addiction with significant health and social consequences. There's a pressing need for more in-depth studies to unveil and address this complex issue. Mr. C.'s two-decade journey in fitness and bodybuilding started at 25 in a trendy Istanbul gym, initially motivated by a desire to improve his overall fitness, and evolved into a focus on bodybuilding by the age of 28. At 30, he began using AAS and PEDs, such as testosterone, growth hormone, insulin, primobolone and clenbuterol, intensifying his training. By 40, negative effects emerged: mood swings, social withdrawal, and health issues including gynecomastia and liver toxicity, leading to hospitalization. Despite health risks and medical warnings, he continued to use steroids, later facing cardiac issues and fertility concerns. At 45, after struggling with his identity and health, he stopped gym training and PEDs, advocating for awareness and regulation. Now, Mr. C. prioritizes outdoor activities, a balanced diet, and a healthy social life, renouncing substances for his well-being. Diagnostic assessments were thoroughly conducted to exclude other potential causes of these symptoms. Comprehensive liver function tests ruled out viral hepatitides, autoimmune liver diseases, and alcoholic liver disease. Similarly, endocrine disorders due to causes other than steroid use were excluded through detailed hormonal panels and assessments.

2.3. Diagnostic Assessment

Mr. C's diagnostic assessment revisited extensive bloodwork, liver, and lipid profiles to monitor the effects of long-term steroid use on liver health and cholesterol levels. Kidney function and complete blood counts were reassessed for damage caused by PEDs. To ensure that the liver health issues were solely attributed to AAS and PED use, extensive differential diagnostics were performed. These included comprehensive blood tests for hepatitis B and C, assessments for autoimmune liver disorders, and screenings for alcohol-related liver damage.

Additionally, tests for parasitic infections, which could also impact liver health, were conducted. These evaluations confirmed that there were no other underlying causes contributing to the liver abnormalities observed in Mr. C. Hormone levels, including testosterone, LH (luteinizing hormone), FSH (follicle stimulating hormone), and estradiol, were analyzed to check endocrine health and gynecomastia risk. Cardiovascular function was evaluated using past echocardiograms and EKGs to track his "athlete's heart" condition. Endocrine system checks were carried out with thyroid, insulin, and glucose tests, and results from MRI or ultrasounds were also considered for potential organ damage. Fertility was assessed through semen analysis and discussions on cryopreservation, offering a comprehensive view of his health for informed treatment and recovery planning.

2.4. Psychological Health Assessments

Mr. C's psychological evaluation included clinical interviews and neuropsychological tests to identify mood disorders and mental health issues, potentially aggravated by steroid use. Interviews assessed changes in mood and aggression, common with PEDs. Cognitive function was tested to determine the impacts on memory, attention, and decision-making. An addiction assessment evaluated Mr. C's dependency on PEDs and his exercise and body image behaviors, pertinent to muscle dysmorphia. This comprehensive approach offered a treatment plan addressing all psychological effects of his PED use.

3. Discussion and Conclusion

The case report of Mr. C offers a detailed longitudinal perspective on muscle dysmorphia and anabolic steroid abuse, providing valuable insights into the psychological and physiological effects of long-term PED use. A strength of this report is its depth of detail, offering a rare introspective view of the individual's experience over twenty years, which is not commonly available in scientific literature. This allows for a nuanced understanding of the interplay between the psychological drive for a certain body image and the physical impact of substance use. The exclusion of alternative causes for the observed health complications enhances the reliability of this case report. By focusing on AAS and PEDs and systematically ruling out other potential causes, we provide a clear linkage between substance misuse and the health issues, particularly liver toxicity, and hormonal imbalances observed in the patient.

However, there are limitations to this case report. It reflects a single individual's experience and may not be generalized across a diverse population of individuals with muscle dysmorphia and PED misuse. The case study does not provide a clear timeline of interventions or outcomes, and it lacks a controlled setting to isolate variables and establish causation.

Medical literature (Pope et al., 2005) provides a backdrop for understanding Mr. C's case. Studies have consistently shown that anabolic steroid abuse can lead both to the physical symptoms observed in Mr. C's, such as cardiomegaly and liver toxicity and psychological effects like mood swings and anxiety (Olivardia et al., 2000; Baggish et al., 2017). These references underscore the established patterns of symptomatology associated with PED use.

The conclusions drawn from Mr. C's case are based on the direct correlation observed between his PED use and the decline in his physical and psychological health (Van et al., 2010; Bonnecaze et al., 2021). The scientific rationale for these conclusions is supported by the medical literature that links anabolic steroid use with both the onset and progression of similar health complications.

The primary take-away from Mr. C's case is the critical importance of early detection, monitoring, and intervention in individuals exhibiting signs of muscle dysmorphia and substance abuse. This case demonstrates the need for comprehensive healthcare strategies that incorporate regular monitoring and culturally sensitive interventions tailored to the fitness environment. It also underscores the necessity for thorough research into the long-term effects of anabolic steroid and PED misuse to enforce effective public health policies and promote individual treatment plans.

Primary "Take-Away" Lessons

The critical takeaways from the case of Mr. C center on the necessity of early detection, timely intervention, and consistent monitoring in managing the risks associated with muscle dysmorphia and the abuse of performance-enhancing drugs. Highlighting the pressing need for heightened vigilance and improved regulations within the fitness industry, the case points to the dangers of easy access and the

social normalization of PED use. It advocates for an integrated treatment regime that encompasses medical treatment, psychological support, and social care, recognizing the multifaceted challenges experienced by individuals with similar conditions. The case of Mr. C is a clarion call for thorough research that can shape public health policies and foster educational initiatives, aiming to curb the prevalence of PED misuse and its accompanying mental health issues.

Patient Perspective

Reflecting on my treatment, I've endured repeated hospitalizations for liver issues caused by steroid and PED use, treated with hepatoprotective serums. These hospital stays managed my physical symptoms but also highlighted the damage from chasing an ideal physique. Despite the lack of psychotherapy or psychiatric medications, psychological assessments illuminated the mental health toll from PED misuse. These evaluations were crucial in recognizing the mental impacts alongside my physical health.

Informed Consent

Mr. C provided informed consent for this case report publication. He was fully briefed on its purpose, content, and the public's access to the information. Despite efforts to anonymize the report, the uniqueness of his case might make complete anonymity difficult. He understood his right to withdraw consent at any time without affecting his treatment or rights. After considering the benefits and risks, and with the hope of aiding others by highlighting issues of muscle dysmorphia and steroid abuse, Mr. C consented, with written proof on file for the journal's review.

Ethics approval and consent to participate
Ethics approval was waived by İstanbul Nişantaşı University as this retrospective case report does not include identifiable data or test new interventions, aligning with the Helsinki Declaration. Mr. C. provided informed consent for the inclusion of his anonymized details in this publication, with consent documentation available for editorial review. All personal identifiers have been carefully omitted to protect the patient's privacy. The ethical committee's reference for this report is 2023/42.

Conflict of interest

There is no conflict-of-interest of the author to declare.

Financial Disclosure
There is none.

Availability of data and materials
The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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References

Baggish A L, Weiner R B, Kanayama G, Hudson J I, Lu M T, Hoffmann U & Pope Jr H G. (2017). Cardiovascular toxicity of illicit anabolic-androgenic steroid use. Circulation. 2017;135(21): 1991-2002. https://doi.org/10.1161/CIRCULATIONAHA.116.026945

Bonnecaze A K, O'Connor T & Burns C A. (2021). Harm reduction in male patients actively using anabolic androgenic steroids (AAS) and performance-enhancing drugs (PEDs): a review. *J Gen Intern Med*. 2021;36(7):2055-2064. https://doi.org/10.1007/s11606-021-06751-3

Olivardia R, Pope Jr H G & Hudson J I. (2002). Muscle dysmorphia in male weightlifters: A case-control study. *Am J Psychiatry*. 2000;157(8):1291-1296. https://doi.org/10.1176/appi.ajp.157.8.1291

Pope C G, Pope H G, Menard W, Fay C, Olivardia R & Phillips K A. (2005). Clinical features of muscle dysmorphia among males with body dysmorphic disorder. *Body image*. 2005;2(4): 395-400. https://doi.org/10.1016/j.bodyim.2005.09.001

Van Amsterdam J, Opperhuizen A & Hartgens F. (2010). Adverse health effects of anabolic–androgenic steroids. *Regul Toxicol Pharmacol*. 2010;57(1):117-123. https://doi.org/10.1016/j.yrtph.2010.02.001