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A Hidden Epidemic: Unmasking Steroid Dependence and Cushingoid Sequelae in Resource-Limited Settings

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Abstract

Corticosteroid dependence is an increasingly prevalent yet under-recognized cause of iatrogenic Cushings syndrome, particularly in rural and underserved regions. The unregulated availability of steroids, insufficient patient education, and inadequate medical supervision compounds this issue. Steroids are frequently misused as symptomatic treatments for chronic pain and non-specific ailments, offering transient relief while masking underlying conditions and causing long-term harm, including metabolic dysfunction, osteoporosis, immunosuppression, and adrenal insufficiency[1,3,7]. The problem is exacerbated in peripheral areas due to a combination of factors: limited access to trained healthcare professionals, reliance on informal practitioners, sociocultural norms[2] that favor self-medication, and weak regulatory oversight. In addition, the improper and prolonged use of drugs like phenytoin without regular monitoring has been linked to severe complications such as cerebellar atrophy. Addressing this silent public health threat requires targeted interventions, including comprehensive community education, capacity building for local healthcare providers, stricter regulation of over-the-counter steroid sales, and improved access to evidence-based medical care. Without coordinated efforts, drug dependence and steroid misuse will continue to contribute significantly to preventable morbidity and mortality in vulnerable populations.

Keywords: Corticosteroid Abuse, Drug Dependence, Iatrogenic Cushings Syndrome, Rural Healthcare, Self-Medication, Public Health Policy.

Introduction

Drug dependence and steroid abuse are growing public health concerns, particularly in rural and underserved regions where access to qualified healthcare is limited and awareness about drug-related complications remains low. The unsupervised and prolonged use of corticosteroids, often driven by their easy availability and perceived quick relief, has led to a surge in cases of iatrogenic Cushing's syndrome and other serious health complications. Similarly, the long-term use of medications like phenytoin, without proper monitoring, has been associated with rare but severe adverse effects such as cerebellar atrophy. In both cases, a critical lack of

awareness among patients and even healthcare providers contributes to delayed diagnosis and poor outcomes. The convergence of sociocultural factors, inadequate regulation, and limited healthcare infrastructure continues to fuel the cycle of dependence and preventable morbidity

Aims and Objectives

- To identify patients undergoing corticosteroid therapy and implement timely drug modification or substitution where clinically indicated.
- To provide patient-centered education regarding the complications associated with prolonged single-drug dependence, especially unsupervised or continuous steroid use. 3. To evaluate clinical outcomes following appropriate drug modification or discontinuation, supported by structured follow-up and motivational counseling.

Materials and Methods

Study Setting: Kamineni Institute of Medical Sciences (KIMS), Narketpally, Telangana, India.

Ethical Approval: Ethical clearance was obtained from the Institutional Ethics Committee. Informed consent was obtained from all study participants.

Study Design: Prospective, observational, non-randomized study. Study Duration: October 2023 to November 2024. Follow-Up Schedule: Follow-up was conducted over a minimum period of one year at 2 weeks, 6 weeks, 12 weeks, 6 months, and 12 months.

Inclusion Criteria: - Adult patients (male and female) aged 18 years and above. - Patients currently using corticosteroids for symptomatic relief across various etiologies.

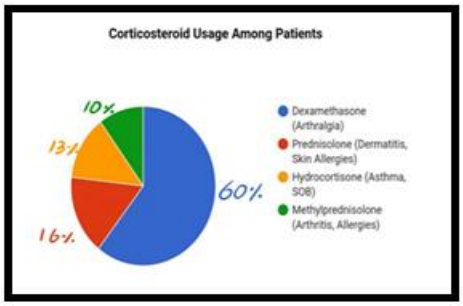
Exclusion Criteria: Individuals below 18 years of age. - Patients unwilling to participate. - Patients with congenital or inherited endocrine disorders.

Challenges and Solutions

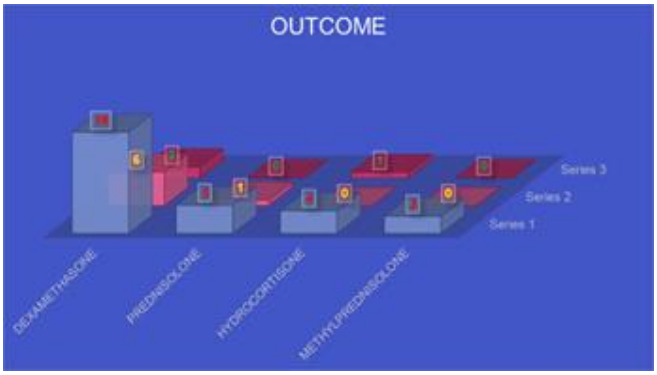
1. Identifying Dependence: Patients often presented with chronic symptoms treated repeatedly with steroids, requiring detailed history-taking and awareness to recognize drug dependence.
2. Determining the Actual Etiology: Many patients were initially misdiagnosed or treated symptomatically, necessitating comprehensive diagnostic workups to uncover the underlying pathology
3. .Managing Etiology and Rebuilding Trust: Educating patients and building confidence in alternative treatment regimens was critical for successful withdrawal from corticosteroids and management of the actual condition.[7]
4. Solution: Early identification of corticosteroid dependence and timely intervention using disease-modifying agents[7] for respective etiologies significantly reduced morbidity and mortality. This emphasized the urgent need for public education in rural areas and stricter control over over-the-counter steroid availability.

Results

The majority of cases were male patients aged between 40 and 60 years. - Many presented with a common history of chronic steroid use despite differing underlying etiologies. - Clinical improvement was noted following structured withdrawal of steroids and initiation of appropriate therapy.



Graph 1:



Graph 2:

Conclusion

The study revealed that patients with similar complaints often had distinct underlying etiologies, all complicated by a shared factor: indiscriminate corticosteroid use due to lack of awareness and the pursuit of inexpensive, immediate relief. Early identification of steroid dependence, coupled with patient education and substitution with disease-specific treatments, effectively reduced the risk of long-term complications. The findings underscore the urgent need to educate rural populations and enforce regulations on over-the-counter steroid distribution to safeguard public health.

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