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Addisonian Crisis Following Abrupt Withdrawal of Potent Topical Corticosteroids: A Case Report

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Background: Prolonged use of potent topical corticosteroids can result in systemic absorption and hypothalamic–pituitary–adrenal (HPA) axis suppression. Abrupt withdrawal may precipitate life-threatening adrenal crisis, particularly during intercurrent illness. Awareness of this complication remains limited, especially when topical agents are obtained without prescription.

Case Presentation: A 58-year-old man with long-standing psoriasis presented with seven days of fever, cough, and acute deterioration. He had used potent topical corticosteroids (clobetasol propionate, betamethasone dipropionate, fluocinolone acetonide, and mometasone furoate) unsupervised for several years, discontinued one week prior to admission. He was hypotensive (67/47 mmHg), tachycardic, tachypnoeic, and hypoxaemic (SpO₂ 89% on room air). Chest radiograph showed extensive left-sided consolidation. Biochemistry revealed leukocytosis, hyponatremia, hyperkalemia, and acute kidney injury. Random serum cortisol was 106 nmol/L with an inadequate response to a short Synacthen test, confirming adrenal insufficiency. Management included aggressive intravenous fluids, vasopressor support, broad-spectrum antibiotics, and stress-dose hydrocortisone, resulting in full recovery.

Discussion: This case highlights the systemic consequences

of unsupervised potent topical corticosteroid use and the risk of Addisonian crisis following abrupt withdrawal. Clinicians should maintain a high index of suspicion for adrenal crisis in patients with shock or unexplained hypotension following steroid cessation.

Conclusion: Early recognition of adrenal insufficiency and prompt administration of stress-dose glucocorticoids are critical for patient survival. Patient education, supervised tapering, and regulation of potent topical steroid availability are essential to prevent such outcomes.

Biography

Dr. Nirmeen Khaled Maali and Dr. Hafiz Muhammad Tahir are dedicated clinicians at Southend University Hospital, United Kingdom. They specialize in endocrinology and acute internal medicine, with strong experience in managing hormone-related emergencies.

Their clinical work focuses on improving diagnostic accuracy and timely intervention in adrenal disorders. Both have contributed to case-based research highlighting rare but critical endocrine complications. Their current study emphasizes the risks of abrupt withdrawal of potent topical corticosteroids. They are committed to raising awareness about safe prescribing practices and patient education. They actively participate in academic presentations and medical forums to share clinical insights. Their collaborative efforts aim to enhance patient safety and strengthen evidence-based endocrine care.