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ADRENAL SUPPRESSION DURING BIOLOGIC-FACILITATED STEROID TAPERING IN SEVERE ASTHMA: A REAL-WORLD TERTIARY-CENTRE EXPERIENCE

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INTRODUCTION

A significant proportion of severe asthma patients require oral corticosteroids (OCS) to maintain symptom control. Prolonged OCS predisposes patients to hypothalamic-pituitary-adrenal axis suppression which can be life-threatening. Biologic therapies are effective steroid-sparing options suitable for select severe asthma patients. We evaluated steroid tapering outcomes and adrenal function during biologic therapy in a tertiary severe asthma clinic.

METHODOLOGY

We retrospectively analyzed our severe asthma clinic cohort. Patients were included if they attended the clinic in 2025, had severe asthma requiring ≥ 5 mg maintenance prednisolone daily (or equivalent), initiated biologic therapy, and underwent adrenal function assessment with morning serum cortisol and/or Short Synacthen Test (SST) during steroid tapering between 2024 and 2025. Patients who were still weaning maintenance steroids were excluded.

RESULTS

A total of 43 patients were included. Median age was 66 years (interquartile range [IQR] 60–74), and 65% were male. Mepolizumab was the most used (17 patients), followed by benralizumab (15), tezepelumab (6), dupilumab (4), and omalizumab (1). Median baseline prednisolone dose was 10 mg (IQR 5–10). Median lowest dose achieved was 3 mg (IQR 0–3), sustained for at least 4 weeks in 90.7% of patients. Median reduction in prednisolone dose was 5 mg (IQR 5–7.25). In all, 42% of patients successfully discontinued maintenance steroids. Adrenal function was assessed using morning serum cortisol ($n = 37$) and/or SST ($n = 28$). Evidence of adrenal insufficiency was identified in 19 patients (44%), including 15 patients with failed SST and four with low morning cortisol suggestive of adrenal suppression. Morning serum cortisol was indeterminate in four patients. A total of 17 patients were referred to endocrinology. During steroid tapering, 11 asthma-related hospital admissions and eight emergency department presentations occurred, involving 10 patients.

CONCLUSION

Biologics facilitate the reduction of the OCS burden in severe asthma. Tertiary adrenal suppression is common during steroid tapering and requires prompt biochemical assessment and endocrinology referral. Structured monitoring of adrenal function is essential during biologic-facilitated steroid tapering in routine clinical practice.

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METASTATIC EXTRA-OVARIAN STEROID CELL TUMOR PRESENTING WITH HYPERANDROGENISM AND TRANSAMINITIS POST OOPHORECTOMY

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INTRODUCTION

Steroid cell tumors are rare sex cord-stromal tumors, accounting for <0.1% of ovarian neoplasms. Extraovarian steroid cell tumors are exceptionally rare, often androgen-secreting, and pose significant diagnostic challenges. Early recognition is essential to prevent prolonged morbidity from hyperandrogenism.

CASE

A 60-year-old female, 15 years after total hysterectomy and bilateral salpingo-oophorectomy for a large ovarian mass with massive ascites, presented with deranged liver function tests on routine follow-up. Ultrasonography and computed tomography imaging revealed multiple hypervascular lesions in the liver, retroperitoneum, and peritoneum, suggestive of metastatic disease, with normal-appearing adrenal glands. Biopsy of a liver lesion demonstrated a metastatic neoplasm with morphology and immunoprofile favoring a steroid cell tumor. However, metastasis from the adrenal cortex or an ovarian primary could not be excluded.

Given the prior bilateral oophorectomy, metastatic adrenocortical carcinoma was initially suspected, prompting endocrine evaluation. Further history revealed a 1-year history of progressive virilization, including increased facial hair and frontal balding. Hormonal studies demonstrated elevated testosterone (12.2 mmol/L and reference range 0.1–1.42) and dehydroepiandrosterone sulfate (15.9 μ mol/L and reference range 0.510–5.560) and the adrenocorticotrophic hormone level of 11.7 pmol/L (reference range 1.60–13.9) with suppressed gonadotrophins. Additional workup for catecholamine, cortisol, and aldosterone excess was unremarkable. The