Adult E-Poster

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UTILITY OF BRONCHOSCOPIC INTRA-TUMORAL ALCOHOL INJECTION (ITAI) IN MEDIASTINAL PARAGANGLIOMA: A CASE REPORT

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INTRODUCTION/BACKGROUND

ITAI is an emerging bronchoscopic modality to restore airway patency in malignant airway obstruction, particularly in primary lung cancers and metastatic thoracic diseases. Its use in mediastinal paragangliomas, however, remains under-researched. Mediastinal paragangliomas present unique challenges for complete resection due to their high vascularity and proximity to critical structures.

CASE

A 35-year-old female presented to the respiratory clinic with chronic cough, hemoptysis and dyspnea. Her past surgical history included a right adrenalectomy done 15 years ago for pheochromocytoma. She was in biochemical remission up to 3 years post-operatively, then defaulted. Recently, she also experienced paroxysmal symptoms of headache, palpitation and diaphoresis, coinciding with new-onset hypertension. CT thorax revealed a middle mediastinal mass compressing the right bronchus intermedius and right lower lobe bronchus, causing segmental lung collapse. Her 24-hour urine metanephrines were 26 times elevated for normetanephrines at 58950 nmol/L (606-2287), and endobronchial biopsy confirmed paraganglioma. Multidisciplinary team discussions concluded that complete surgical resection was impossible, and multimodal therapies including systemic, radionuclide and local therapies, were indicated for disease control. Bronchoscopic interventions using ITAI combined with cryoablation, argon plasma coagulation and balloon dilation were performed in two separate sessions, following at least 10 days of preprocedural alpha blockade. The patient underwent the procedure without experiencing a catecholamine crisis but required a pint of packed red blood cell transfusion due to a drop in hemoglobin levels from post-procedural hemoptysis. Subsequent chest radiographs demonstrated improvement with better symptom control.

CONCLUSION

ITAI is a promising adjunctive debulking modality for managing mediastinal paragangliomas, particularly in alleviating disabling obstructive symptoms caused by endobronchial obstruction. ITAI induces tumor cell necrosis and microcirculatory embolization, thereby inhibiting tumor growth and reducing blood supply to the treated area. It may also serve as a bridge to systemic, radionuclide, or targeted therapies in cases where surgical resection is not feasible.

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YOUNG-ONSET DIABETES MELLITUS: A DIAGNOSTIC AND MANAGEMENT DILEMMA

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INTRODUCTION/BACKGROUND

Type 1 diabetes mellitus is typically characterized by severe insulin deficiency with diabetes-related autoantibodies, though up to 5% of patients may have insulin deficiency without these autoantibodies. Diagnosing and managing diabetes in young adolescents can be particularly challenging. We present a case of a 12-year-old male diagnosed with diabetes after presenting with diabetic ketoacidosis (DKA), facing significant management challenges.

CASE

A 12-year-old male presented with severe DKA requiring ventilatory support in December 2021. His parents had no history of diabetes, but two older siblings had type 2 diabetes. After successful DKA management, he was discharged with basal-bolus insulin therapy. His HbA1c was 15%, and investigations revealed absent autoantibodies and a low C-peptide level (<3.33pmol/L), suggesting insulin deficiency. Despite treatment, he experienced frequent nocturnal and postprandial hypoglycaemic episodes, as confirmed by continuous glucose monitoring (CGM). Reducing insulin doses did not resolve the hypoglycaemia. His condition was further complicated by non-compliance due to peer pressure and reluctance to take insulin while attending boarding school.

A trial of basal insulin combined with sulfonylurea and close glucose monitoring resulted in over six months of stable glucose levels without hypoglycaemia. However, after a subsequent hospitalization for *Klebsiella* bacteraemia and uncontrolled glucose, basal-bolus therapy was reinstated in