on routine screening. At presentation, 50% (n = 7) were prepubertal and 36% (n = 5) were underweight, with mean BMI SDS −1.4 ± 1.2. All had high fT4 78.43 ± 72 pmol/L and suppressed TSH TRAb positivity was 86% (n = 12). Anti-TPO or anti-thyroglobulin antibodies positivity was 79% (n = 11). In one child, all three antibodies were negative. Thyroiditis was the commonest ultrasound finding. Carbimazole starting dose was 0.6 mg/kg/day and average treatment duration was 3.5 ± 2.4 years, which achieved biochemical euthyroidism in 49 days. Relapse rate on carbimazole was 57% (n = 8). No adverse effects occurred, and none had definitive therapy. Currently, 71% (n = 10) are euthyroid on a mean carbimazole dose of 0.2 mg/kg/day; one is off carbimazole. Current height is −1.1 ± 1.31 SD and BMI SDS −0.42 ± 1.7 SD respectively.

CONCLUSION

Graves' disease is the commonest form of paediatric hyperthyroidism in Negeri Sembilan, affecting prepubertal Malay females who commonly present with thyrotoxicosis. Carbimazole effectively achieves biochemical euthyroidism with minimal side effects. However, linear growth is affected. Future studies should evaluate the factors associated with these findings.

EP_P007

CLINICAL AUDIT OF CLONIDINE AS A FIRST-LINE PROVOCATIVE AGENT TO EXCLUDE GROWTH HORMONE DEFICIENCY IN CHILDREN WITH SHORT STATURE

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INTRODUCTION

Clonidine is frequently utilized as a stimulus of growth hormone secretion to diagnose growth hormone deficiency in children. This clinical audit evaluates the efficacy and safety profile of clonidine as a sensitive, first-line screening agent to exclude GHD in children.

METHODOLOGY

A clinical audit was conducted on seven patients (4 females, 3 males) aged 7.1 to 12.3 years (median age 11.1) evaluated with clonidine stimulation test. The cohort included one prepubertal and six post-pubertal (highest tanner 2) children. Bone age was delayed at BA/CA ratio at 0.63–0.9 (median 0.8). Baseline IGF-1 levels ranged from 56 to 264 ng/mL. None of the children received sex steroid priming. A peak GH threshold of >10 ng/mL was utilized to exclude GHD. Safety profiles, specifically hemodynamic stability and level of consciousness, were actively monitored.

RESULTS

Clonidine effectively stimulated GH secretion and excluded GHD in six out of seven patients, yielding peak GH levels between 10.3 and 20.6 ng/mL. One patient with peak GH of 7.6 ng/mL with clonidine, and subsequent test with insulin tolerance test (ITT), confirmed GHD with a peak GH of 7.4 ng/mL. All participants (n = 7) experienced drowsiness. Hemodynamic adverse events were notable. Three patients experienced mild hypotension, and three patients developed clinically significant hypotension requiring normal saline fluid bolus.

CONCLUSION

Clonidine is a highly effective, sensitive first-line screening agent to exclude GHD, as it reliably stimulates GH peaks above diagnostic thresholds. However, close supervision is required due to drowsiness and the potential for severe hypotension requiring fluid resuscitation. Clinical judgment remains essential as secondary testing with another GH secretagogue is warranted when clinical suspicion persists.

EP_P008

CLINICAL OUTCOMES OF GONADOTROPIN-RELEASING HORMONE AGONIST THERAPY IN CHILDREN WITH CENTRAL PRECOCIOUS PUBERTY

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INTRODUCTION

Central precocious puberty (CPP) is the premature activation of the hypothalamic-pituitary-gonadal axis, often compromising adult height and psychosocial well-being. Timely treatment with gonadotropin-releasing hormone agonists (GnRHa) such as triptorelin is critical to halt pubertal progression and preserve growth potential. This study evaluated the clinical outcomes of triptorelin therapy in CPP at Sarawak General Hospital (SGH).

METHODOLOGY

A retrospective cross-sectional study was conducted among patients with CPP treated with triptorelin at the Paediatric Endocrine Clinic, SGH, including those currently receiving

therapy and those who had discontinued treatment. Demographic and clinical data were extracted from medical records and analyzed using SPSS version 25. Descriptive statistics summarized patient characteristics, while t-tests and non-parametric equivalents assessed treatment outcomes (p <0.05 significant).

RESULTS

Eleven patients were included (mean age 6.88 ± 2.21 years; 90.9% female). Two patients (18.2%) were obese at initial diagnosis, and the mean baseline body mass index was 17.64 ± 2.25 kg/m². Most cases were idiopathic (54.5%), while pituitary microadenoma was identified in 36.4%. At diagnosis, the bone age was advanced by a mean of 3.51 ± 1.39 years. Six patients discontinued therapy: four after completion and two at parental request. Among completers, mean treatment duration was 3.21 ± 2.42 years, ending at a mean age of 10.13 ± 0.95 years. Final height did not differ significantly from mid-parental height (p = 0.225). Triptorelin significantly improved final height standard deviation score (SDS) (p = 0.005) and reduced the bone age/chronological age ratio (p = 0.049), though predicted adult height gains were not statistically significant (p = 0.321). No adverse effects were reported.

CONCLUSION

GnRHa therapy slowed pubertal progression and preserved growth potential in children with CPP, with favorable safety outcomes. Larger prospective studies are warranted to validate long-term benefits and identify predictors of optimal response.

EP_P009

PAEDIATRIC GLUCOCORTICOID-INDUCED HYPERGLYCEMIA AND DIABETIC KETOACIDOSIS: AN UNDER-RECOGNIZED COMPLICATION OF CANCER THERAPY

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INTRODUCTION

Paediatric glucocorticoid-induced hyperglycemia (GIH) and diabetes are frequently under-recognized complications of cancer therapy. Early identification is essential, as delayed diagnosis may lead to severe metabolic consequences, including diabetic ketoacidosis (DKA). This study aims to characterize the clinical features, risk factors, and outcomes of GIH in a tertiary centre.

METHODOLOGY

A descriptive cross-sectional study was conducted at the Paediatric Endocrinology Unit, University Malaya Medical Centre, reviewing cases from January 2023 to December 2025. Data were extracted from electronic records, including demographic, clinical, and treatment-related variables.

RESULTS

Twelve cases of GIH or diabetes were identified, including two presenting with DKA. Most patients had leukemia (92%), with a male predominance (75%). The median age was 13.6 years, and the median body mass index was 22.1 kg/m². Over half (54%) were overweight or obese, and 45% exhibited acanthosis nigricans. A family history of diabetes was present in 75% of cases.

Hyperglycemia developed early in 66% of cases, typically within 2–5 days of initiating high-dose glucocorticoids. Median random blood glucose was 21.9 mmol/L, while median HbA1c was 6.4%. Half were symptomatic, most commonly with polyuria. Insulin therapy was required in 75% of cases, with a median duration of 26 days. Metformin was used in 50% of cases, often in combination with insulin. Most cases resolved following cessation of glucocorticoid therapy, except one who continues to receive metformin for a pre-diabetes state.

CONCLUSION

Adolescents, those with obesity, insulin resistance, and a positive family history of diabetes, represent high-risk groups for GIH. Importantly, GIH may present with life-threatening DKA. Routine glucose monitoring and risk stratification during glucocorticoid therapy are recommended. The development of local screening and management guidelines is crucial for improving early detection and optimizing patient outcomes.