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PAEDIATRIC GRAVES' DISEASE AND FACTORS ASSOCIATED WITH REMISSION IN A SINGLE TERTIARY CENTRE

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INTRODUCTION

Graves' disease (GD) accounts for 10-15% of all childhood thyroid disorders. It is a multifactorial disease with complex interactions among genetic, environmental, and endogenous factors.

METHODOLOGY

Sixty-eight children and adolescents under the age of 18 who were diagnosed with GD at Hospital Putrajaya were included in this cross-sectional review. Diagnostic criteria for GD were supporting clinical features, raised thyroxine (FT4), suppressed thyrotropin stimulating hormone (TSH) and positive thyrotropin receptor antibodies (TRAb). Remission was defined as the preservation of euthyroid status for more than a year following discontinuation of the antithyroid drug (ATD). Patients who achieved remission were compared to those with persistent disease to identify positive predictive factors.

RESULT

This study included 53 (77.9%) females and 15 (22.1%) males. The mean age at diagnosis was 8.77 ± 2.7 years old. Kaplan-Meier survival analysis showed cumulative remission rate was 6.5%, 16.2%, 26.4% and 46.9% with a duration of ATD treatment at 2 years, 4 years, 6 years, and 8 years respectively. Patients in the remission group were more likely to be female ($p=0.029$) and had a family history of autoimmune thyroid disorder ($p=0.004$). The duration of ATD treatment in this cohort was 3.8 ± 2.5 years. Adverse events (AE) were reported in 14.7% of the patients. Elevated liver enzyme was the most common AE ($n=6$), followed by hematologic abnormalities ($n=3$) and rash ($n=1$). All were minor AE which resolved without sequelae.

CONCLUSION

Gender and family history of autoimmune thyroid disorder can be used to stratify patients in terms of the likelihood of achieving remission. The cumulative remission rate increased with the duration of ATD use. These local population-based data and evidence can be helpful during the counselling of patients for treatment planning.