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**Metabolic control in children and adolescents with insulin-dependent diabetes mellitus at king abdul-aziz university hospital.**

[Al-Agha A](#), [Ocheltree A](#), [Hakeem A](#).

King Abdulaziz University, Department of Pediatrics, Jeddah, Saudi Arabia. aagha@kau.edu.sa.

**Abstract**

**Objective:** Preventing long-term diabetic complications requires good metabolic control, especially in type 1 diabetes mellitus (T1DM). We describe the metabolic control of T1DM and the factors affecting it among children and adolescents attending the Pediatric Clinic at King Abdul-Aziz University Hospital. **Methods:** A retrospective cross-sectional study was conducted on T1DM children and adolescents who had attended the Pediatric Clinic at King Abdul-Aziz University Hospital from 2006 to 2010. Both clinical and laboratory data were reviewed for the enrolled cases. The mean age of the patients was  $12.5 \pm 4.1$  years. Ages ranged from 1 to 18 years (n=484: male=213, female= 271). 38.6% of the patients were pre-pubertal and 61.4% - pubertal. The patients were categorized into 3 age groups as 1-6 years (10.3%), 7-12 years (33.5%) and 13-18 years (56.2%). **Results:** The overall mean HbA1c was  $9.4 \pm 2.4\%$  and the duration of patient follow-up was  $26 \pm 17$  months. 10.3% of the patients were on conventional insulin regimens and 89.7% - on intensive insulin therapy. 31.4% had satisfactory HbA1c according to the American Diabetes Association guidelines. The duration of T1DM was  $2.9 \pm 1.4$  years. The patients with diabetes duration  $\leq 2$  years (45%) had a mean HbA1c of  $8.7 \pm 1.8\%$  and those with diabetes duration  $> 2$  years (55%) had a mean HbA1c value of  $9.8 \pm 2.3\%$  ( $p < 0.001$ ). **Conclusions:** The metabolic control of T1DM children in our cohort was less satisfactory than in other studies. We recommend the promotion of physical exercise and family educational programs to improve the metabolic control of T1DM pediatric patients in our population