



# Clinical and Epidemiological Features of Children with Type 1 Diabetes

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## Introduction

The world health organization has adopted diabetes as the most important health problem because of its increasing frequency and complications. Determination of changes in patient profile over the years due to type 1 diabetes (T1DM), the most common type of diabetes in childhood, is an important point in the follow up observation and treatment of diabetes.

## Aim

To determine the epidemiological and clinical characteristics of children and adolescents with T1DM diagnosis and to evaluate the change over the course of time.

## Method

The files of 631 patients diagnosed with T1DM between 1990 and 2017 in Gazi University Faculty of Medical Hospital Pediatric Endocrinology Department were examined retrospectively. The gender of the cases, age of diagnosis, season of diagnosis, complaint of admission, duration of symptoms, laboratory and physical examination findings as the time of admission, family history of diabetes mellitus, accompanying autoimmune diseases and chronic complications were recorded. The cases were divided into three groups according to the years of diagnosis (1990-2000, 2001-2010 and 2011-2017).

## Conclusion

It was discovered that T1DM cases were diagnosed mostly in winter and autumn seasons, the diagnosis peaked at ages 6-10 and puberty age group and 41.7% of them were diagnosed with DKA. This study contains cases that were referred to our hospital in this context, there is a need for extensive studies to be done nationwide to have enough knowledge about T1DM epidemiology.

## Results

309(49%) of the cases were females while 312 (51%) were males with a mean age of  $8.7 \pm 4.2$  years. Diagnosis is most common in winter and autumn seasons. The most common referral complaints were polyuria (93.1%), polydipsia (94.1%) and weight loss (58.8%). There was an increase in nocturia complaints in respect to years. ( $p=0.035$ ). Family history of diabetes mellitus was found to be 15.7% for T1DM and 53.6% for T2DM. 47.7% of the cases were diagnosed of diabetic ketoacidosis (DKA), 29.7% of hyperglycemia and 22% of ketosis. In patients with familial T1DM the rate of incidence of DKA in admission was low ( $p=0.001$ ). It was found that the recurrence rate was significantly higher in females compared to males ( $p = 0.001$ ). The recurrence rate of DKA was 12.9% and decreased when evaluated according to years ( $p < 0.001$ ). Hashimoto's disease was 20.4%, Celiac disease was 5.6%, nephropathy was 9.6% retinopathy and neuropathy was 0.9%.

	n (%)
Polyuria median duration (days) (min-max)	460 (93.1) 20 (1-120)
Polydipsia median duration (days) (min-max)	462 (94.1) 20 (1-120)
Polifagia median duration (days) (min-max)	81 (16.9) 20 (4-180)
Nocturia median duration (days) (min-max)	147 (30.7) 15 (1-90)
Abdominal pain median duration (days) (min-max)	87 (18.2) 2 (1-7)
Weight loss median duration (days) (min-max)	282 (58.8) 30 (2-180)
Urinary incontinance median duration (days) (min-max)	91 (19.0) 15 (1-90)
Blurred vision median duration (days) (min-max)	7 (1.5) 1 (1-1)
Changes in level of consciousness	36 (8.9)

