

Growth abnormalities in patients with Type 1 diabetes

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INTRODUCTION

Autoimmune type 1 diabetes is the most common endocrine disease in children. Like any other chronic disease, it can affect their growth. The aim of our work was to describe the different growth abnormalities observed in type 1 diabetic patients followed-up in the department of Endocrinology-Diabetology-Nutrition of Mohammed-VI University Hospital Center of Oujda, in the eastern of Morocco.

RESULTS

The mean age was 14.9 ± 4 years, sixteen percent of patients were below 10 years old and the sex ratio (Boy/Girl) was 1. The duration of diabetes was less than 13 months for half of patients, with a mean duration of 3.2 years. Twenty percent of patients had an onset of type 1 diabetes. All of the patients were poorly controlled patients with an average of HbA1C of 10.9 ± 2.5 %. Seventy-eight percent of patients had a normal weight ($-1SD \leq \text{Weight} \leq +1SD$) (figure2) and 84% had a normal height ($-1SD \leq \text{height} \leq +1SD$) (figure 1) . Fourteen percent of our patients had a weight $\geq 2SD$, and only 8% had a weight below 2SD. On the statural level, 10% of patients had a height $\geq 2SD$, and short stature was observed in only 5% of cases ($\leq 2SD$). In our series, no statistical correlation was found between diabetes duration, diabetes imbalance and growth abnormalities.

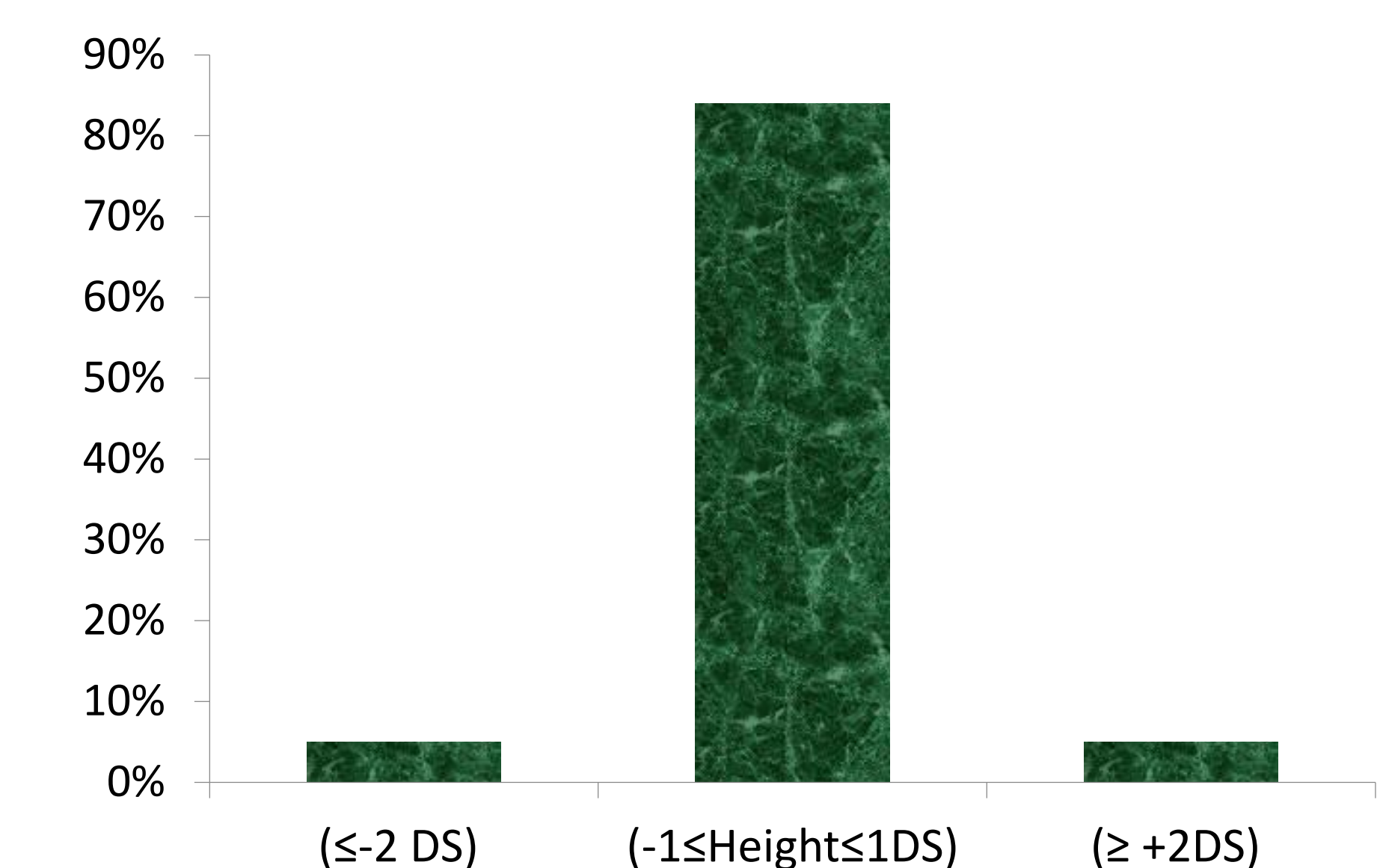


Figure 1: Distribution of patients according to their height

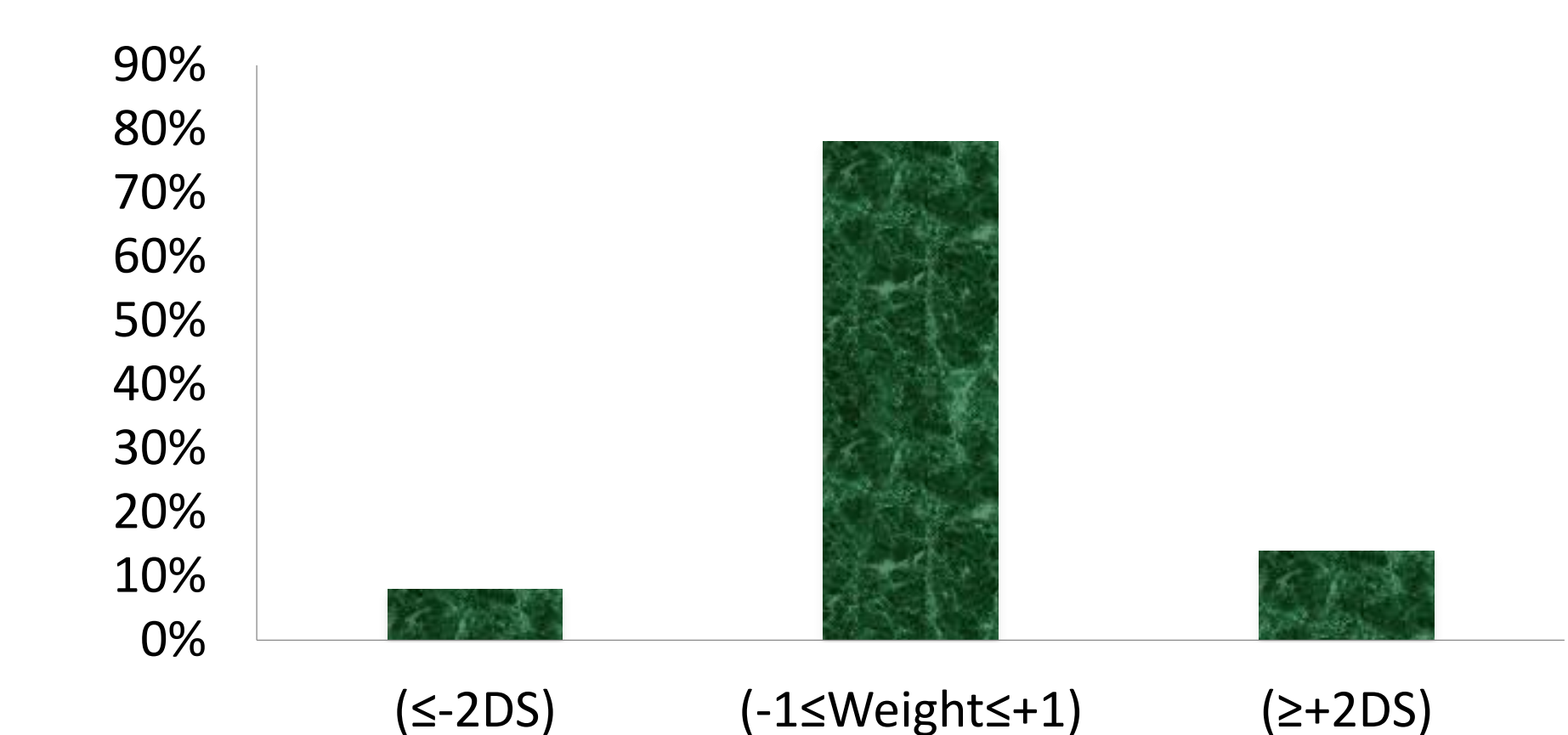


Figure 2: Distribution of patients according to their weight

PATIENTS-METHODS

This is a retrospective descriptive and analytical study including 183 type 1 diabetic patients, under the age of 21, hospitalized in the department of Endocrinology-Diabetology-Nutrition of Mohammed-VI University Hospital Center of Oujda. Weight and height were read into Sempe-Pedron growth curve

CONCLUSIONS

The effect of glycemic control on growth is debated in literature. At the time of diabetes diagnosis, some studies reported a statural advantage in diabetic children compared to non-diabetic children. The incidence of short stature in type 1 diabetes is rare; its presence is often correlated with the existence of other chronic diseases, like celiac disease. Therefore, it seems necessary to investigate growth delay in the presence of type 1 diabetes.

REFERENCES

- 1/ G. Mamou et al. Retard staturo-pondéral : une cause peut en cacher une autre. Annales d'Endocrinologie, Vol 67, N° 5 - octobre 2006, p. 436
- 2/ Du Caju M, et al. Longitudinal data on growth and final height in diabetic children. *Pediatr Res* 1995 ; 38 : 607-11
- 3/ Emmerson A, et al. height at diagnosis in diabetes. *Eur J Pediatr* 1988 ; 147 : 319-20
- 4/ Messaoui A et al. Bone age corresponds to chronological age at onset of type 1 diabetes in youth. *Diabetes care* 2009 ; 32 : 802-3
- 5/ J. Jos et al. Croissance des enfants atteints de diabète insulino-dépendant. Étude de 104 observations, *Archive de Pédiatrie*, Volume 3, Issue 3, March 1996, Pages 218-226
- 6/ N. Moussa Balde et al. P95 Retard de croissance et retard pubertaire chez les enfants diabétiques en Guinée, *Diabetes and Metabolism*, Volume 38, Supplement, Volume 38, Supplement 2 March 2012, Page A54

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