

Incidence of Childhood Type 1 Diabetes Mellitus in Qatar between 2012- 2016.

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Introduction

The overall age-adjusted incidence of type 1 diabetes (T1DM) varied from 0.1/100,000 per year in China and Venezuela to 36.8/100,000 per year in Sardinia and 36.5/100,000 per year in Finland. This represents a 350-fold variation in the incidence among the 100 populations Worldwide. However since the early 1990s, the incidence of type 2 diabetes mellitus (T2DM) has increased in children and adolescents and is linked to the rise in childhood obesity. In the early 1990s, T2DM was representing about 3 percent only of pediatric diabetes in the United States, but by 2003, T2DM reached about 20 percent of pediatric diabetes

Objectives

to determine the incidence of T1DM, T2DM and the percentage of familial diabetes among these children aged 0–14 years in Qatar over 5 years period from 1-2012 till 12-2016.

Patients and methods

This was a prospective cohort study of the incidence of childhood T1DM, T2DM and the percentage of familial diabetes in children aged 0–14 years who were diagnosed with diabetes from 2012 to 2016 in Qatar. Identified case subjects during this time period were ascertained from two sources and verified using the capture-recapture technique. Data were obtained from the only Pediatric Diabetes center, Hamad Medical Center (HMC) for children living in Qatar

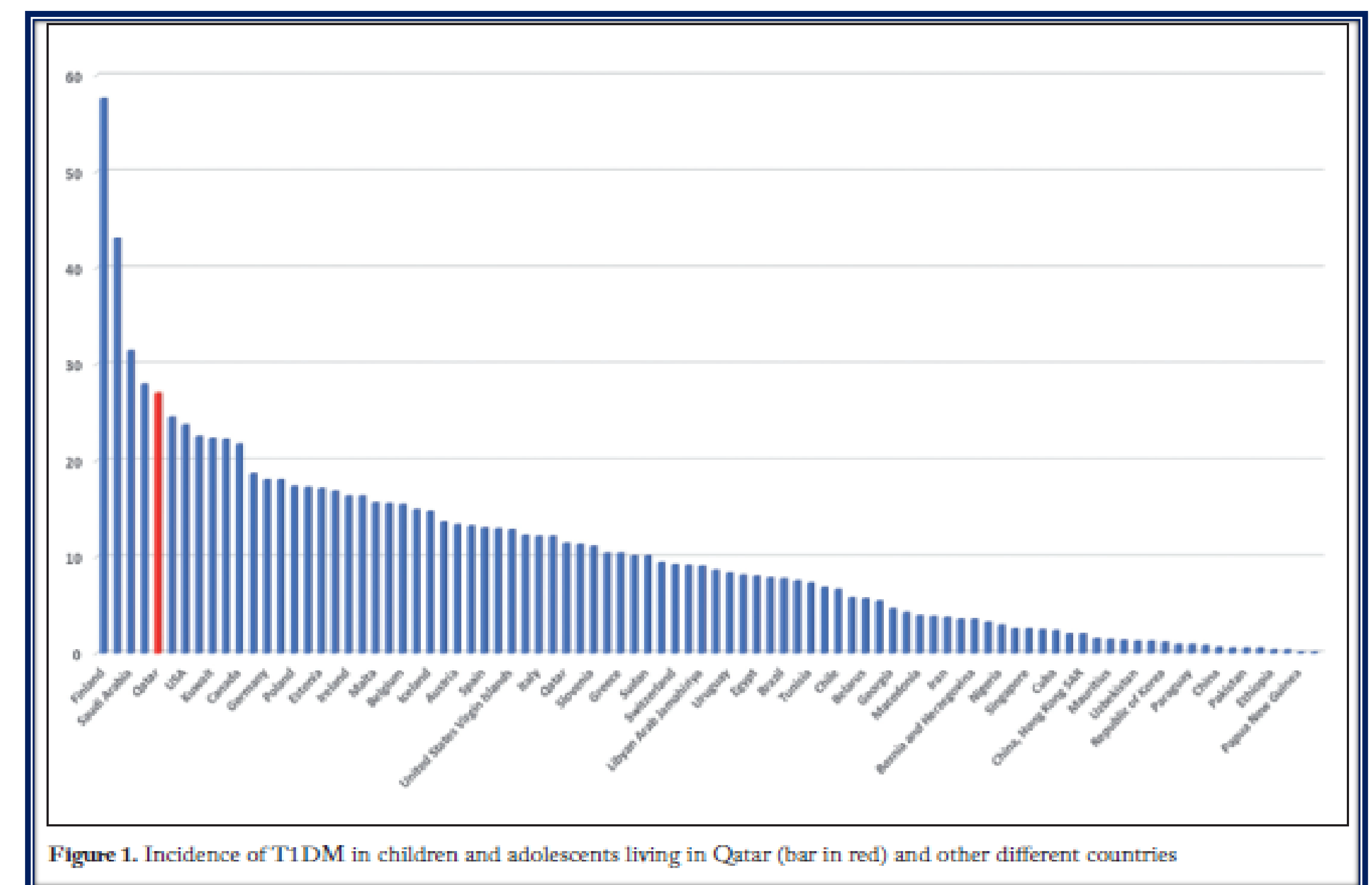
Results

Over the study period, 463 children aged 0–14 years in Qatar were diagnosed diabetes. 424 of them were T1DM and 38 were T2DM.

The incidence of diabetes in this population over the period 2012–2016 inclusive was 29.29 /100000 with a 95% CI of 21.8–32.4. Familial diabetes formed 14.69 % of all children with T1DM and T2DM. (table)

Results

Year	T1DM	T2DM	Total
2012	25.91	1.82	27.74
2013	26.05	4.40	30.45
2014	24.65	3.48	28.12
2015	33.49	2.07	35.57
2016	31.8	2.7	34.59



Discussion

The incidence rate of T1DM in Qatar is considerably higher compared to other countries all over the world, being the 4th highest rate among 89 countries, published in the International Diabetes Federation's Diabetes Atlas in 2011. (Figure 1).

Furthermore, the incidence of T1DM between 2012- 2016 (28.39/100,000) was significantly higher compared to the incidence rate reported between 2006- 2011 (23.15/100,000).

Conclusions

The incidence rates of both T1DM and T2DM among children and adolescents living in Qatar is considerably higher compared to other countries. A significant trend increase was registered in the 2012–2016 period compared to previous years. Further studies are required to determine the causes of these increases.

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