PREVELANCE OF FATTY LIVER IN PATIENTS WITH TYPE 1 DIABETES MELLITUS ATTENDING DIABETES CLINIC AT ALEXANDRIA UNIVERSITY CHILDREN'S HOSPITAL

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Introduction

Type 1 diabetes mellitus (T1DM) - related hepatopathy is not uncommon and tends to be more prevalent among children with poor glycemic control. Recent studies suggest that fatty liver disease may be more common in T1DM than previously thought. [1]

Objectives

The aim of this work was to determine the frequency of hepatopathy in patients with T1DM attended diabetes clinic at Alexandria university children's hospital (AUCH) and it's relation to the state of glycemic control and lipid profile.

Methods

Study was carried out on 70 patients diagnosed with T1DM attended diabetes clinic at AUCH. All were subjected to the following:

- History, full detailed physical examination, Anthropometric measurements: Height standard deviation (SD) score and body mass index (BMI) percentile.
- Liver function tests (albumin, prothrombin time, ALT, AST).
- Lipid profile: total cholesterol, LDL-cholesterol, HDL-cholesterol and triglycerides.
- HbA1C
- Transabdominal ultrasonography by using scoring system for detection of fatty infiltration of the liver. [2]

Results

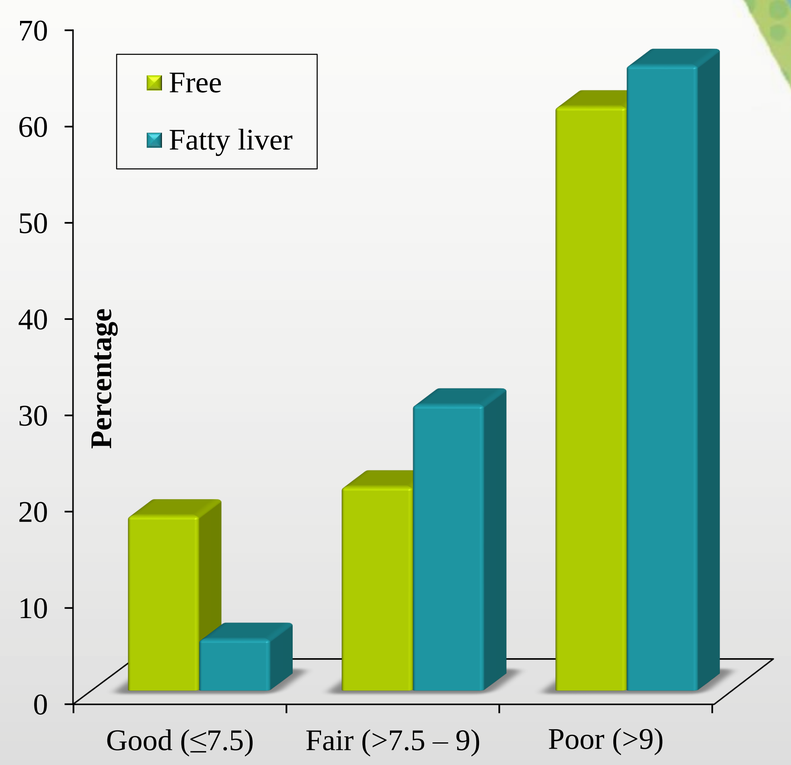
- In the present study, the mean duration of diabetes was 6.5 ± 2.2 years.
- About (51.4%) of the patients were using premixed insulin therapy.
- Hypercholesterolemia, hypertriglyceridemia, high LDL and low HDL were found in (24.3%, 17.1%, 8.6% and 4.3%) of the patients respectively.
- (62.9%) of patients were with poor glycemic control.
- More than half of the patients had been found to have fatty liver (52.9 %).

Table (1): Relation between U/S abdominal and different parameters (n = 70)

	U/S abdominal		χ^2	p
	Free (n = 33)	Fatty liver (n = 37)		
Sex				
Male	16 (48.5%)	21 (56.8%)	0.479	0.489
Female	17 (51.5%)	16 (43.2%)		
Age (years)				
≤10	11 (33.3%)	13 (35.1%)	0.025	0.874
>10	22 (66.7%)	24 (64.9%)		
BMI percentile (BMI for age)				
Underweight	2 (6.1%)	2 (5.4%)	1.793	0.692
Normal weight	25 (75.8%)	27 (73%)		
Overweight	5 (15.2%)	4 (10.8%)		
Obese	1 (3%)	4 (10.8%)		
Type of insulin				
Basel bolus	14 (42.4%)	20 (54.1%)	0.944	0.331
Pre mixed	19 (57.6%)	17 (45.9%)		
Total cholesterol (mg/dl)				
Normal (≤200)	27 (81.8%)	26 (70.3%)	1.265	0.261
Hypercholesterolemia	6 (18.2%)	11 (29.7%)		
TG (mg/dl)				
Normal (≤150)	29 (87.9%)	29 (78.4%)	1.108	0.292
Hypertriglyceridemia	4 (12.1%)	8 (21.6%)		
LDL (mg/dl)				
Normal (up to 140)	32 (97%)	32 (86.5%)	2.446	0.203
High	1 (3%)	5 (13.5%)		
HDL (mg/dl)				
Low	0 (0%)	3 (8.1%)	2.795	0.242
Normal (>35)	33 (100%)	34 (91.9%)		
Last HbA1c (%)				
Good (≤7.5)	6 (18.2%)	2 (5.4%)	2.912	0.254
Fair (>7.5 – 9)	7 (21.2%)	11 (29.7%)		
Poor (>9)	20 (60.6%)	24 (64.9%)		

χ^2: **Chi square test**

p: p value for comparing between the two categories



Conclusions

A high rate of fatty liver among the patients was found and it was related to patients with poor glycemic control.

References

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