



بسم الله الرحمن الرحيم

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مسئولية عن محتوى هذه الرسالة.

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Outcomes of Health Care Services Provided to Egyptian Patients with Type 1 Diabetes Mellitus Attending Pediatric Diabetology Unit, Children's Hospital, Ain-Shams University

Thesis

*Submitted for Partial Fulfillment of
Master Degree in Pediatrics*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العليم

صدق الله العظيم

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Ahmed Abdel-Hamid Ahmed

Faculty Mission

The Faculty of Medicine of Ain Shams University prepares a trained doctor with competitive skill at the local and regional level, capable of teaching, learning and training for life and is committed to standards of medical service and professional ethics, and the college supports the continuous development of programs, courses and scientific research while keen to expand applied scientific research and health care programs to serve the needs of society and develop the environment.

Outcomes of Health Care Services Provided to Egyptian Patients with Type 1 Diabetes Mellitus Attending Pediatric Diabetology Unit, Children's Hospital, Ain-Shams University

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ABSTRACT

Introduction: Efforts in treating patients with type 1 diabetes are targeting strict glycemic control to prevent long- and short-term adverse health outcomes.

Aim of the work: to evaluate the current health care services provided to patients with type 1 diabetes registered in Pediatric and Adolescent Diabetology Unit (PADU), Children's hospital of Ain-Shams University, in terms of metabolic control and complications encountered.

Patients and Methods: This cross-sectional study was conducted on all patients attending diabetology clinic during the period between May 2017 and July 2018. Patients' data was collected via the case record form of clinic including baseline and follow up examination and investigations.

Results: The mean age of patients was 12.63 ± 3.41 years with mean diabetes duration 5.54 ± 3.07 years. The mean HbA1c was 8.75 ± 1.94 %, with mean number of blood glucose monitoring (SMBG) 2.43 ± 0.64 times/day. Patients with more than 5-year-diabetes duration have significantly higher cholesterol level (167.58 ± 38.02 versus 163.23 ± 35.54 mg/dl), higher LDL (100.23 ± 29.49 versus 95.70 ± 28.11 mg/dl), presence of celiac antibodies (5 cases versus 4 cases) and lower number of SMBG (2.24 ± 0.66 versus 2.58 ± 0.57 times/day), ($p < 0.05$).

Conclusion: Despite a low frequency of microvascular complications, our results demonstrated that management of children and adolescents with type 1 diabetes in our center is not optimal in terms of glycemic control.

Keywords: Type 1 Diabetes, Health Care, glycemic control, microvascular complications

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List of Abbreviations

Abb.	Full term
ACR	Albumin/creatinine ratio
ADA	American Diabetes Association
ANOVA	Analyses of variance
BG	Blood glucose
BGM	BG monitoring
BMI	Body mass index
BOHB	Beta-hydroxybutyric acid
CAD	Coronary artery disease
CGM	Continuous glucose monitor
CSII	Continuous subcutaneous insulin infusion
DCCT	Diabetes Control and Complications Trial
DED	Diabetic eye disease
DKA	Diabetic ketoacidosis
DME	Diabetic macular edema
DR	Diabetic retinopathy
DTSQ	Diabetes Treatment Satisfaction Questionnaire
EMR	Electronic medical record
GMI	Glucose management indicator
HbA1c	Glycosylated Hemoglobin
HDL	High-density lipoprotein
HHS	Hyperglycemic hyperosmolar state
HLA	Human leukocyte antigens
IHSG	International Hypoglycemia Study Group

List of Abbreviations *cont...*

Abb.	Full term
IQR	Interquartile range
ISPAD	International Society for Pediatric and Adolescent Diabetes
IZS	Insulin zinc suspension
LDL	Low-density lipoprotein
NICE	National Institute for Clinical Excellence
NPH.....	Neutral Protamine Hagedorn insulin
PAD	Peripheral artery disease
PADU	Pediatric and Adolescent Diabetes Unit
SDS	Standard deviation scores
SMBG	Self-monitoring of blood glucose
SPSS	Statistical Package for Social Science
T1D	Type 1 diabetes
TSH	Thyroid stimulating hormone
UAE	Urinary albumin excretion

PROTOCOL

PROTOCOL OF A THESIS FOR PARTIAL FULFILMENT OF MASTER DEGREE IN PEDIATRICS

Title of the Protocol:

Outcomes Of Health Care Services Provided To Egyptian Patients With Type 1 Diabetes Mellitus Attending Pediatric Diabetology Unit, Children's Hospital, Ain-Shams University

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