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Effectiveness and prescription pattern of lipid-lowering therapy and its associated factors among patients with type 2 diabetes mellitus in Malaysian primary care settings

By: [Elnaem, MH](#) (Elnaem, Mohamed Hassan)^[1]; [Mohamed, MHN](#) (Mohamed, Mohamad Haniki Nik)^[1]; [Huri, HZ](#) (Huri, Hasniza Zaman)^[2]; [Shah, ASM](#) (Shah, Azarisman Shah Mohd)^[3]

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THERAPEUTICS AND CLINICAL RISK MANAGEMENT

Volume: 15 Pages: 137-145

DOI: 10.2147/TCRM.S182716

Published: 2019

Document Type: Article

[View Journal Impact](#)

Abstract

Background: Cardiovascular diseases (CVDs) are the main complication leading to morbidity and mortality among patients with type 2 diabetes mellitus (T2DM). There is a large amount of evidence to support the use of lipid-lowering therapy (LLT) for the prevention of CVD. This study aimed to assess the effectiveness and prescription quality of LLT among T2DM patients and to identify its associated factors.

Methods: A multicenter cross-sectional study included 816 T2DM patients from four different primary care centers in Pahang, Malaysia. We involved LLT-eligible T2DM patients as per the national clinical practice guidelines (CPG). The assessment of therapy effectiveness focused on the attainment of target lipid measures stated in the CPG. Evaluation of the prescription quality was classified into appropriate, potentially inappropriate, and inappropriate, based on the compliance with guidelines and existence of potential safety concerns. Binomial logistic regression was employed to identify the predictors of LLT effectiveness and prescription quality.

Results: The overall percentage of T2DM patients receiving statin therapy was 87.6% (715/816). Statin therapy was appropriately prescribed in 71.5% of the cases. About 17.5% of the LLT prescriptions have at least one significant drug interaction with co-prescribed medications. The achievement of the primary target of low-density lipoprotein cholesterol (LDL-C) levels was observed in only 37% of T2DM patients. The LLT indication and appropriateness of prescription were significantly associated with the attainment of LDL-C treatment goals. Primary prevention, Malay race, and hypertension were identified as predictors for appropriate prescribing of LLT among T2DM subjects.

Conclusion: There is a need to enhance the quality of LLT prescribing in the primary care setting to cover all eligible high-risk patients and ensure patient safety. Strategies to improve the achievement of LDL-C goals among patients with T2DM, such as investigating the potential role of the combination therapy and high-intensity statin therapy, are required.

Keywords

Author Keywords: [primary care](#); [statin therapy](#); [diabetes](#); [dyslipidemia](#); [Malaysia](#)

KeyWords Plus: [HIGH-CARDIOVASCULAR-RISK](#); [PRIMARY PREVENTION](#); [DRUG INTERACTIONS](#); [FACTOR MANAGEMENT](#); [EUROASPIRE III](#); [LIFE-STYLE](#); [STATIN](#); [DYSLIPIDEMIA](#); [CHOLESTEROL](#); [DISEASE](#)

Author Information

Reprint Address: Elnaem, MH (reprint author)

Int Islamic Univ Malaysia, Fac Pharm, Dept Pharm Practice, Jalan Sultan Ahmad Shah, Kuantan 25200, Pahang, Spain.

Addresses:

[1] Int Islamic Univ Malaysia, Fac Pharm, Dept Pharm Practice, Jalan Sultan Ahmad Shah, Kuantan 25200, Pahang, Spain

[2] Univ Malaya, Fac Med, Dept Pharm, Kuala Lumpur, Malaysia

[3] Int Islamic Univ Malaysia, Fac Med, Dept Internal Med, Kuantan, Pahang, Malaysia

E-mail Addresses: drmelnaem@gmail.com

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Funding

Funding Agency	Grant Number
Research Management Center of the International Islamic University Malaysia	RIGS17-122-0697

[View funding text](#)

Publisher

DOVE MEDICAL PRESS LTD, PO BOX 300-008, ALBANY, AUCKLAND 0752, NEW ZEALAND

Journal Information

Impact Factor: [Journal Citation Reports](#)

Categories / Classification

Research Areas: Health Care Sciences & Services
Web of Science Categories: Health Care Sciences & Services

Document Information

Language: English
Accession Number: WOS:000456416600001
PubMed ID: 30705590
ISSN: 1178-203X

Other Information

IDS Number: HI4JJ
Cited References in Web of Science Core Collection: **44**
Times Cited in Web of Science Core Collection: 0

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