Tracking of Lipid Lowering Agents in Jordan

الدراسة الأردنية لتتبع الأدوية الخافضة للكوليسترول

Version # JPM_JoLLA 01

The Jordanian Collaborating Cardiology Group

The principal investigator:

Dr.Ayman Hammoudeh

Interventional Cardiologist from Al Istishari Hospital

The Co- investigator:

Pharm D Wesam Alsaud

Scientific Office Manger at Jordanian Pharmaceutical Manufacturing Company

1. BACKGROUND

Coronary artery disease (CAD) is considered one of the main causes of morbidity and mortality worldwide and in Jordan. One of the major risk factors that contributes to the development and progression of CAD is dyslipidemia(1). According to the World Health Organization (WHO), an estimated 17.9 million patients died in 2016 because of cardiovascular diseases, of which more than 80.0% of the deaths were due to stroke and myocardial infarction(2). A large number of clinical trials have reported the benefits of lowering LDL-C, in reducing the mortality rate among CAD patients(3), Based on that, the American College of Cardiology (ACC/AHA) published the 2019 blood cholesterol treatment guidelines to reduce atherosclerotic cardiovascular risk in adults. Which expands the role of LDL-C targets. It also specifies the importance of percentage reduction in LDL-C when prescribing high- or moderate-intensity statins as well as the medication's adherence by LDL-C testing and the efficacy of statin therapy. Furthermore, it highlights the importance of adding PCSK9 inhibitor therapy after receiving the maximum tolerated statin therapy and ezetimibe to achieve LDL-C < 70 mg/dl or non-HDL-C < 100 mg/dl for patients in each of the 4 statin benefit groups with atherosclerosis cardiovascular disease (ASCVD) with or without comorbidities (4)

The objective of physician continuing medical education (CME) is to help them keep abreast of advances in patient care, to accept new more-beneficial care, and discontinue use of existing lower-benefit diagnostic and therapeutic interventions(5), one of the medical barriers prevent patients from achieving goals, contributing to the perceived gap between the updated guidelines and daily clinical practice (6).

The present study aims to examine the trend of physician and their patients in measuring lipid profile and modifying the lipid lowering agents, then show the prevalence of patients, those with known ASCVD, who have LDL-C more than or equal to 70 mg/dl during using their statin treatment plan and compare this percentage with patients' healthcare provider specialty, and to study the impact of continuous medical education for Health care providers on lipid lowering therapy target goals achievement.

2. AIM OF STUDY / RESEARCH QUESTIONS

1. To examine the trend of physician and their patients in measuring lipid profile and modifying the lipid lowering agents in Jordan.
2. Measure the prevalence of patients, those with known ASCVD, who have LDL-C more than or equal to 70 mg/dl during using their statin treatment plan
3. To study the impact of continuous medical education for Health care providers on lipid lowering therapy target goals achievement.

4. STUDY DESIGN:

This is a prospective interventional multicentral study including several clinics of Cardiologist, Internist and General Physicians, in Jordan.

Half of the clinics will receive continuous medical education lecture and updated guideline remembering tools, and this is **our intervention**, the study target subjects, with a known ASCVD, treated with lipid lowering agents and still have LDL-C more than or equal to 70 mg/dl will be recruited from clinics.

A case report form for patients will be filled up including patients' demographics, history, comorbid diseases and ASCVD risk factor.

At the enrollment day the following information will be collected:

1. Current lipid lowering agent: (Name(s) and dose(s)):
   _____
2. Last Lipid profile Performed with date:

If YES: Who ordered the test?
If YES: What are the values:
(Total Cholesterol _____), (Triglycerides _____), (LDL_____), (HDL_____)
Other notes

The responsible investigator will perform a phone Call after 3,6,9 and 12 months of the enrollment day and collect the below information:

1. Current lipid lowering agent: (Name(s) and dose(s))_____
2. Is this the same as the medication at enrollment? YES NO
3. If NO: who made the change and when?
4. Is Lipid profile ordered since enrollment? YES NO
5. If YES: Who ordered the test?
6. If YES: What are the values:

(Total Cholesterol _____) (Triglycerides _____) (LDL_____) (HDL_____)

7. Cardiovascular events:

8. List all Death (when and why), ACS/Cath/Stent/CABG/CVA/Major bleeding/Hospital admission for non-cardiovascular cause (Why? _____), LL ischemia. Abdominal aortic aneurysm, Heart failure. CKD, List below (event and date):

9. Other notes:

4. STUDY SETTING/LOCATION

The study will be conducted in Jordanian Cardiologist, Internist and General Physicians Clinics among Jordan from South to North.

5. STUDY POPULATION AND SETTING:

- Target around 500 subjects in each group.
- Written informed consent was obtained from all study participants.
- Participation in the study was voluntary and the participants could quit at any time. Data confidentiality was guaranteed by the research team in JPM scientific office.
- Participation in the study is voluntary and no compensation will be paid to the subjects.

6. ELIGIBILITY CRITERIA

• Inclusion criteria:

- ☐ Adults more than or equal to 18 years old.
- ☐ Subject welling to sign the consent form and using a lipid lowering agent.
- ☐ Known ASCVD.
- ☐ ON statin foe the past three months or more with LDL-C > 70mg/dl.

• Exclusion criteria

- ☐ Mentally or physically handicapped people.
- ☐ Pregnant and breast-feeding females.
- ☐ Age below 18 years.

REFERENCES:

1. Shi A, Tao Z, Wei P, Zhao J. Epidemiological aspects of heart diseases. Experimental and therapeutic medicine. 2016;12(3):1645-50.
2. Organization WHCdCW. https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds) (2017). .
3. Stone NJ, Robinson JG, Lichtenstein AH, Bairey Merz CN, Blum CB, Eckel RH, et al. 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Journal of the American College of Cardiology. 2014;63(25 Pt B):2889-934.
4. Wilson PWF, Polonsky TS, Miedema MD, Khera A, Kosinski AS, Kuvin JT. Systematic Review for the 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the Management of Blood Cholesterol: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Journal of the American College of Cardiology. 2019;73(24):3210-27.
5. Bloom BS. Effects of continuing medical education on improving physician clinical care and patient health: a review of systematic reviews. International journal of technology assessment in health care. 2005;21(3):380-5.
6. Santi RL, Martinez F, Baranchuk A, Liprandi AS, Piskorz D, Lorenzatti A, et al. Management of Dyslipidaemia in Real-world Clinical Practice: Rationale and Design of the VIPFARMA ISCP Project. European cardiology. 2021;16:e16.

/