



The Efficacy of Lo-Chol in Hypercholesterolemia

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Abstract

Globally the public are seeking safe, effective holistic healthcare solutions. Unani-Tibb can make a significant contribution due to its legacy of wisdom, knowledge and the prescription of safe and effective remedies. For this to be integrated in public health, Tibb medicine has to rise to the many challenges that it face. One of them being to scientifically prove that Tibb medicine is safe, effective and sustainable.

Coronary artery disease is one of the leading causes of death in Western countries. The disease occurs most frequently in populations with diets high in cholesterol. This study looks at the efficacy of Lo-Chol, a Tibb cholesterol lowering medicine used for the treatment of hypercholesterolemia at the Tibb Medical Centre. Dietary and medication compliance were recorded for 20 patients to determine the efficacy of Lo-Chol in patients with hypercholesterolemia. Results showed that Lo-Chol is effective as a cholesterol lowering medication however further studies are needed to confirm its effects on the lipid profile.

KEYWORDS:

Coronary Artery Disease; Cholesterol; Hypercholesterolaemia; Lo-Chol; Tibb Medicine

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Introduction

Coronary artery disease is one of the leading causes of death in Western countries. The disease occurs most frequently in populations with diets high in cholesterol (Merck Manual, 2006). A high blood cholesterol is a contributor to plaque building up in the arteries and impeded blood flow to the brain, kidneys, genitals, extremities, and the heart. It is one of the primary causes of heart disease due to the deposits of cholesterol in arteries (Balch, 2010). Hypercholesterolemia is defined as the presence of elevated concentrations of cholesterol in the blood which predisposes to atheromatous disease (Concise Medical Dictionary, 2007).

'Statins' are the drug of choice and indicated in hypercholesterolemia. Common adverse effects include: gastrointestinal effects such as abdominal pain, constipation, diarrhea, flatulence, nausea, dyspepsia (SAMF, 2008).

Tibb medicine aims to maintain effective assimilation of nutrients whilst assuring effective elimination of waste products. The digestive process is essential to health as stated by Chisti :“most illness results when incomplete digestion of food has occurred over a short or long period of time” (Chisti,1991).

Modern medicine has provided impressive results in the past century however currently there is an increase in the lack of public confidence, largely due to several factors like the dehumanization of modern medical practice and procedures, modern medicine is becoming economically unsustainable, its inability to effectively treat chronic conditions, rise of iatrogenic diseases and the re-emergence of life threatening infections. .

Globally the public are seeking safe, effective holistic healthcare solutions. Unani-Tibb can make a significant contribution due to its legacy of wisdom, knowledge and the prescription of safe and effective remedies. For this to be integrated in public health, Tibb medicine has to rise to the many challenges that it face. One of them being to scientifically prove that Tibb medicine are safe, effective and sustainable (Siddiqui *et al*,2010).

According to Tibb medicine, hypercholesterolemia is a Cold and Dry condition due to the abnormal accumulation of the Melancholic Humour along Pathway 2 (chronic). Lo-Chol is suitable for metabolic disorders associated with Hot and Moist, Most and Hot, Cold and Moist and Cold and Dry illness. Lo-Chol is effective in the treatment of hypercholesterolemia, hypertriglyceridaemia and atherosclerosis. Lo-Chol contains among other natural ingredients, *Allium sativum* commonly known as garlic which is beneficial in cases of atherosclerosis, high cholesterol and hypertriglyceridaemia (Tibb Practitioner Monograph, 2011).

Aims and Objectives

1. To establish the effectiveness of Lo-Chol in patients with hypercholesterolemia.
2. Can Lo-Chol lower blood cholesterol levels in patients with hypercholesterolemia?
3. Is Lo-Chol more effective in patients who are compliant to the prescribed diet and medication?
4. Does the effect of Lo-Chol vary amongst different temperaments?

Methodology

Sample size - 20 patients

Population - Patients attending the Saartjie Baartman Tibb Medical Centre

Inclusion- Both genders, age 25 - 85 years old, pre- diagnosed patients and newly diagnosed patients. Patients on allopathic medication requesting to change to Tibb medication. All temperament groups.

Exclusion - 24 years old and younger

Time period : March – August 2011

Equipment - Cholesterol meter, cholesterol strips, alcohol swabs, needles

Testing of total blood cholesterol levels took place once weekly for 1 month followed by monthly testing for 5 months. Every patient was giving a cholesterol lowering diet alongside counseling on the importance of dietary and medication compliance. Dietary and medication compliance were documented on every visit.

Therapeutic goal (dosage): Low risk patients (without co-morbid factors) – Lower blood cholesterol levels to less than 5.5 mmol/L

chol -mmol/L	5.5 - 6	6 - 7	7 - 7.5	> 7.5
Lo Chol	1bd	2bd	2tds	2qid

Therapeutic goal (dosage): High risk patients (with co-morbid factors) – Lower blood cholesterol levels to less than 4.5 mmol/L

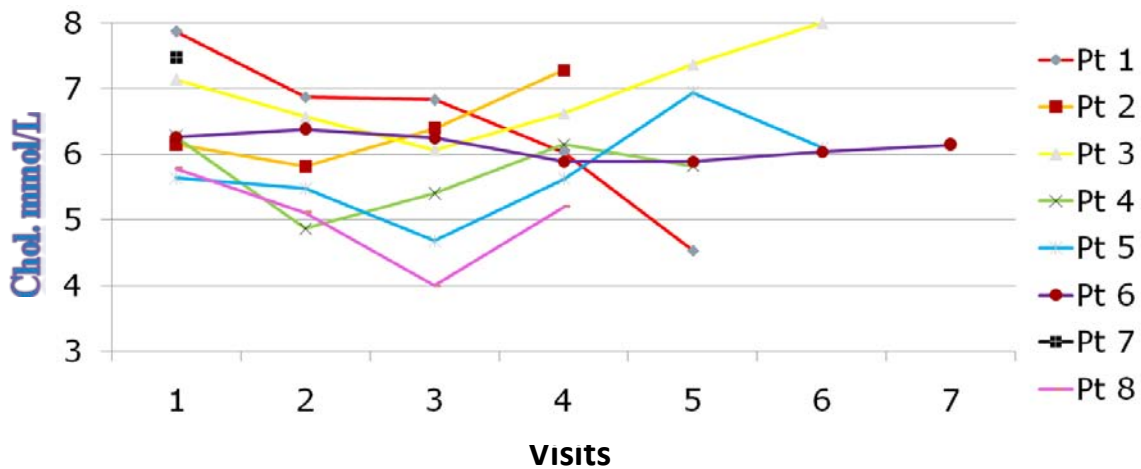
chol-mmol/L	4.5 - 5.5	5.5 - 6	6 - 7
Lo Chol	2bd	2tds	2qid

Results

Table 1 : Sanguinous / Phlegmatic

Patient	Temperament	Age	Gender	Co-morbid factors
01	P/S	68	M	Hypertension (HPT) ,Diabetes (DM)
02	S/P	33	M	Obesity
03	S/P	55	M	HPT
04	P/S	64	M	HPT
05	S/P	53	F	HPT
06	P/S	64	M	Congestive Heart Failure (CHF)
07	P/S	42	M	HPT
08	S/P	37	M	HPT

Graph 1: Total blood cholesterol (3mmol/L -8mmol/L) vs. Number of visits (1-10)



Graph 1b : Dietary /medications / both non-compliance (indicated by arrows)

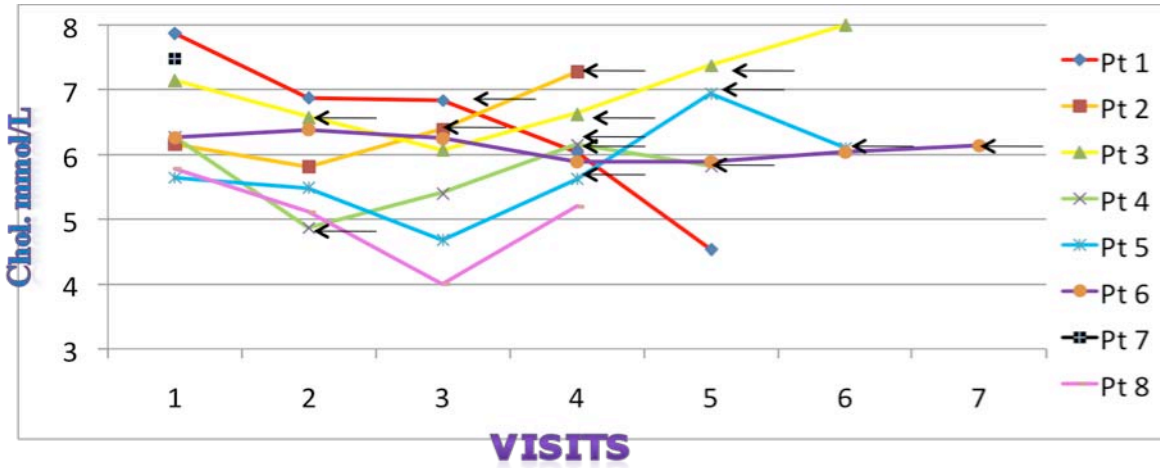
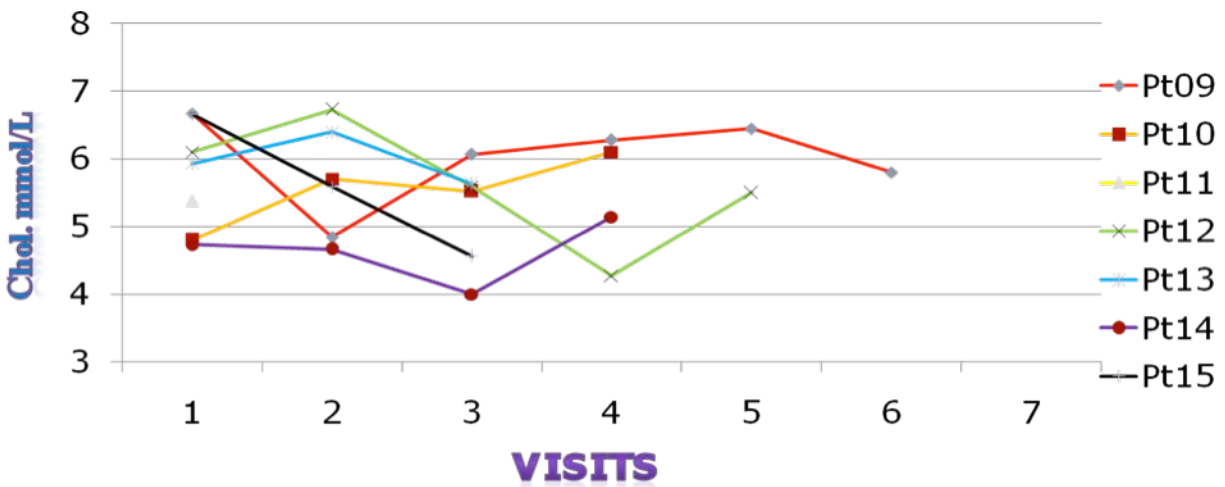


Table 2: Phlegmatic / Melancholic

Patient	Temperament	Age	Gender	Co-morbid factors
09	P/M	65	M	DM
10	M/P	57	M	Hypercholesterolemia
11	P/M	49	F	Anxiety /Stress
12	P/M	65	F	HPT , DM
13	P/M	58	F	HPT
14	P/M	85	M	HPT , CVD
15	P/M	52	M	HPT

Graph 2: Total blood cholesterol (3mmol/L -8mmol/L) vs. Number of visits (1-10)



Graph 2b : Dietary /medications / both non-compliance (indicated by arrows)

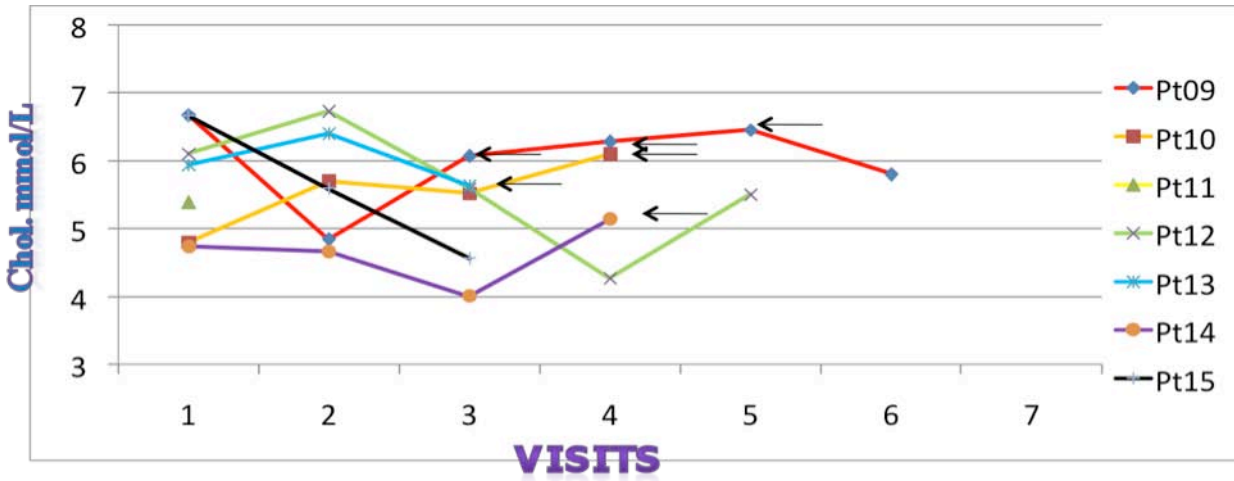
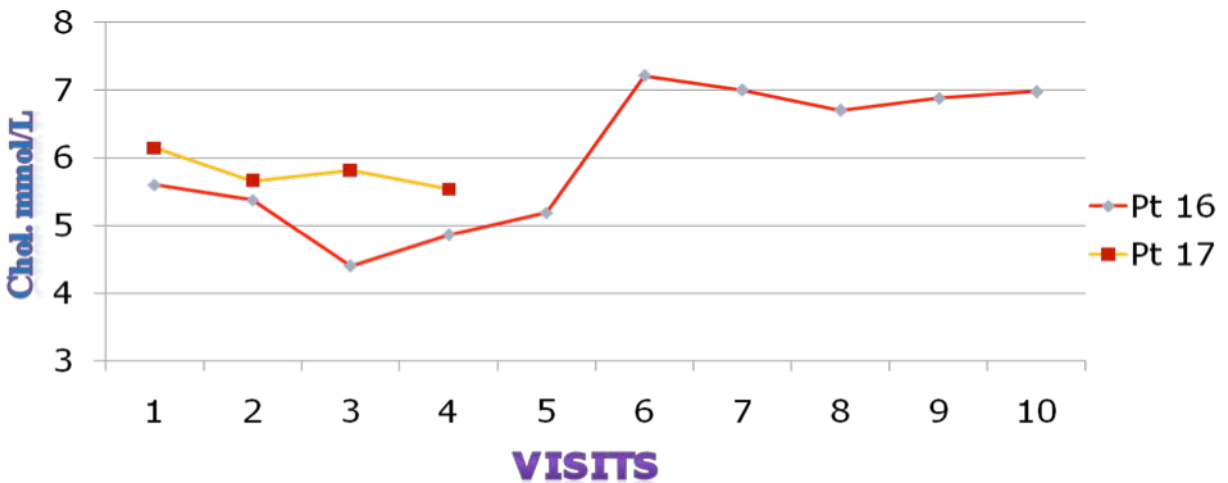


Table 3: Bilious / Sanguinous

Patient	Temperament	Age	Gender	Co-morbid factors
16	B/S	53	M	HPT, GORD
17	B/S	48	F	HPT

Graph 3: Total blood cholesterol (3mmol/L -8mmol/L) vs. Number of visits (1-10)



Graph 3b : Dietary /medications / both non-compliance (indicated by arrows)

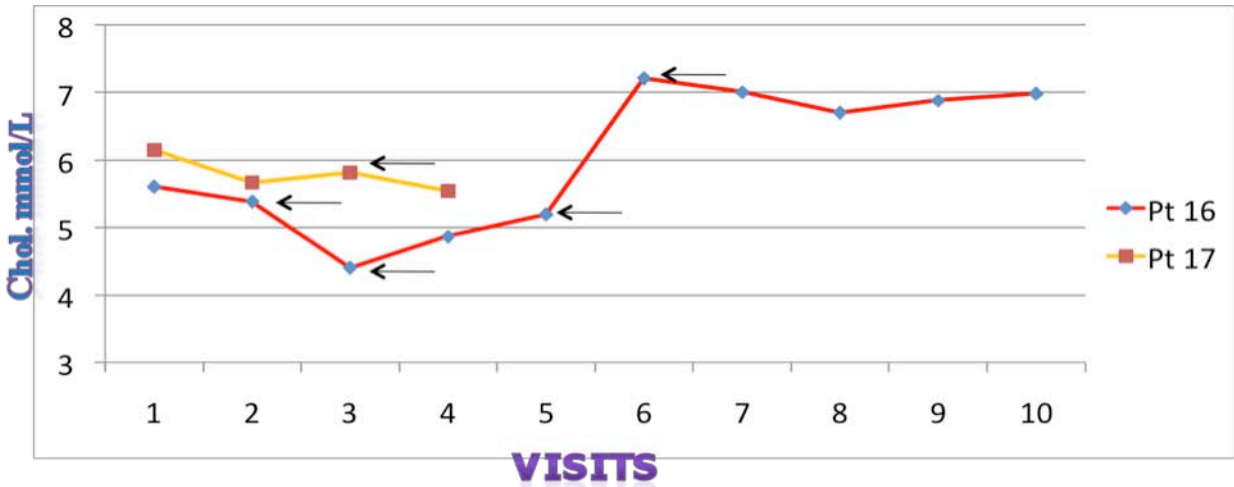
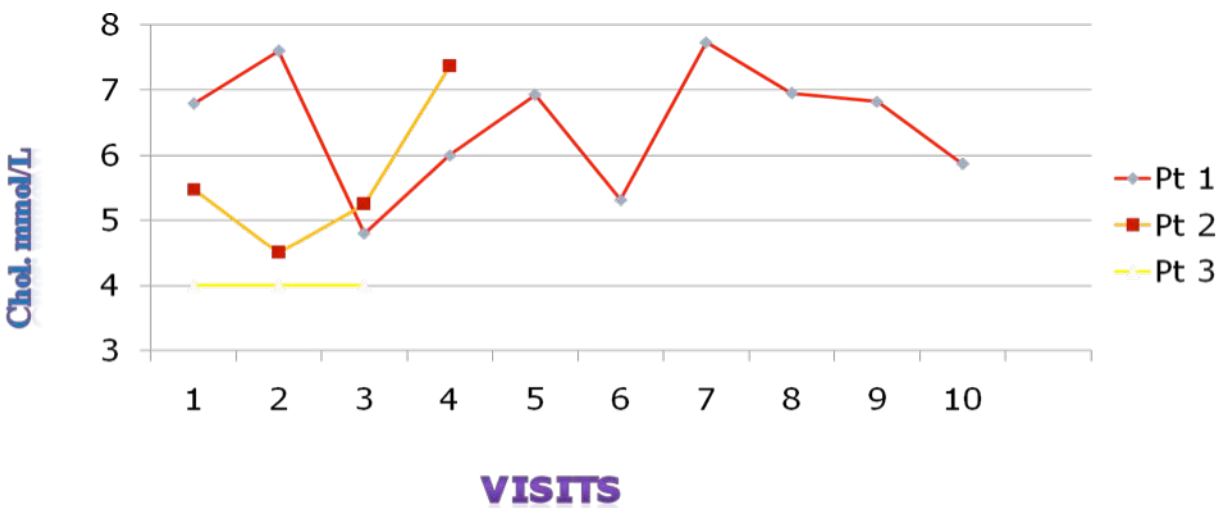


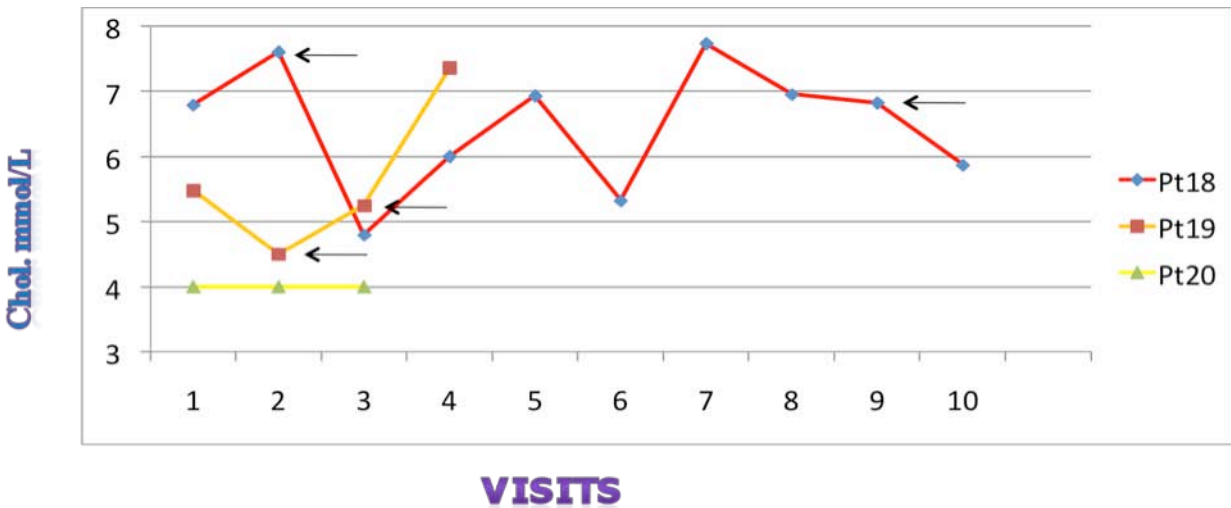
Table 4: Melancholic / Bilious

Patient	Temperament	Age	Gender	Co-morbid factors
18	M/B	70	F	HPT
19	M/B	30	M	Hypercholesterolemia
20	B/M	58	M	MI

Graph 4: Total blood cholesterol (3mmol/L -8mmol/L) vs. Number of visits (1-10)



Graph 4b : Dietary /medications / both non-compliance (indicated by arrows)



- 60% of patients experienced decreased blood cholesterol levels on the 1st visit.
- 60% of patients reported that a rise in blood cholesterol levels after treatment was due to non-compliance to the prescribed diet / medication / both.
- 35% of patients experienced decreased cholesterol levels despite non-compliance to diet / medication / both.
- 50% of patients experienced lower cholesterol levels on the final visit.
- No adverse effects due to the use of Lo-Chol have been reported.

Discussion

The Sanguinous /Phlegmatic group displayed the most stable (consistent) results. According to Tibb these individuals has a dominance of the quality moisture which allows Physis to overcome the Melancholic imbalance associated with hypercholesterolemia (Cold and Dry). Lo-Chol has a Hot and Dry quality which assists in gradually moving these individuals towards moisture. This shift can be seen biochemically by lowered blood cholesterol levels.

Patients with either Bilious /Melancholic dominance or sub-dominance displayed unstable (inconsistent) results which can be explained on basis of their innate levels of dryness which causes them to be more susceptible to the Melancholic imbalance (Cold and Dry) associated with hypercholesterolemia.

Patients displayed higher cholesterol levels during the winter season. According to Tibb the coldness of winter impacts or worsens Melancholic imbalances (Cold and Dry). This correlates

to Krause's Food and Nutrition Therapy which states that one of the numerous factors that affect serum cholesterol levels is the season of the year (Mahan & Escott-Stump, 2008).

Conclusion

- Lo-Chol is effective in hypercholesterolemia
- Lo-Chol does lower cholesterol levels in patients with hypercholesterolemia
- Lo-Chol's effectiveness is dependent on dietary and medication compliance
- The effect of Lo-Chol does vary amongst different temperaments.

Important considerations when prescribing Lo-Chol : temperament, age , gender, co-morbid factors, season, dietary and medication compliance.

This study highlights the importance of the Humoral theory in the treatment of hypercholesterolemia. The concept of temperament plays a pivotal role to the effective lowering of total blood cholesterol levels.

Recommendations

A clinical evaluation of the efficacy of a Unani compound drug was undertaken by the University of Colombo in Sri Lanka. The results showed that the research drug has significant effects in lowering the level of serum total cholesterol, triglycerides, LDL, VLDL and increasing the level of HDL cholesterol (Sirajudeen *et al*, 2010).

To provide a scientifically valid contribution to the current treatment for hypercholesterolemia, follow up research should be aimed to establish the effect of Lo-Chol on the lipid profile especially LDL and HDL ratio.

A recent comparative study on the efficacy of selected herbal medicines for the hyperlipidemia by Hamdard University compared the efficacy of Lipitame, a herbal coded medicine to Simvastatin through a randomized controlled prospective study. The results showed that Lipitame was well accepted by patients without significant side effects whilst significantly reducing overall lipid levels (Siddiqui *et al*, 2010).

Future research should be aimed to compare Lo-Chol to common allopathic cholesterol lowering medication in terms of efficacy and adverse effects. The Integrative Tibb approach in the treatment of chronic conditions needs to be scientifically documented including all necessary biochemical markers. This will allow for convincing scientific data which can position the Integrative Tibb approach in the Public Health system of South Africa.

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