Research Article

Effect of Vipassana meditation on lipid profile

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Abstract

Vipassana is one of India's most ancient meditation techniques. The study is undertaken to find out the effect of Vipassana intervention in reducing the severity of risk factor lipid profile through a self controlled trial at Government Medical College and Hospital, Latur, by Department of Physiology and pathology. The subject's mean serum cholesterol level before Vipassana practices was 187.5±11.21 and after Vipassana practices was 170.78±12.8.(average fall 16.72) , the mean serum triglyceride level before Vipassana practices was 150.9 ±5.45 and after Vipassana practices was 136.92±5.91. The (average fall 13.98), the mean serum HDL level before Vipassana practices was 52.63 ±5.99 and after Vipassana practices was 60.21 ±7.94.(average rise 7.58).All findings statistically significant ($p<0.001$). Vipassana could contribute as mechanisms, which result in modification in lipid status.

Keywords: Vipassana, lipid profile.

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INTRODUCTION

Vipassana is one of India's most ancient meditation techniques. The word Vipassana means seeing things as they really are. It is the process of self-purification by self-observation. One begins by observing the natural breath to concentrate the mind. With a sharpened awareness one proceeds to observe the changing nature of body and mind and experiences the universal truths of impermanence, suffering and egolessness. It is claimed that it can be freely practised by everyone, at any time, in any place, without conflict due to race, community or religion, and will prove equally beneficial to one and all. Many people have claimed beneficial effects on health. With this background and encouraged by the fact that only a few studies have been carried out in India. The present study is undertaken to find out the effect of Vipassana intervention in reducing the severity of risk factors in CHD through a self controlled trial at Government Medical College and Hospital, Latur, by Department of Physiology and pathology. It is attempted to assess the magnitude of risk factor in cardio-vascular disease, lipid profile level before and after "Vipassana intervention programme".

AIMS AND OBJECTIVES

To study Vipassana as a method of cost-effective practice for prevention and treatment of heart diseases and other diseases, which are influenced by body mass index, blood sugar levels and lipid profile.The **objectives** of the present study is to study the effect of Vipassana on lipid profile in the study subjects.

MATERIAL AND METHODS

Type of study: The present study was designed as a self controlled trial.

Duration: The study subjects were enrolled between 1st jan to 11jan 2014.The active intervention period was one10 days. Each enrolled subject was followed for a period 10 days during the intervention programme.

Place: The present study was carried out at dhammavas vipassana center, Latur. A Vipassana camp was organized by the vipassana center,Latur. The training of Vipassana a was given by a Vipassana teacher . This camp was free for all people.

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Study subjects: 30 subjects in the age group of 20-55 years, men were included in the study.

Criteria for inclusion: Those subjects who had voluntarily enrolled for this programme during study from 1st jan to 11jan 2014in the age group of 20-55 years.

Criteria for exclusion: Subjects with addictions (smoking, tobacco chewing, alcohol intake), hypertension, diabetes mellitus, unstable angina pectoris, left ventricular failure, cardiomegaly, ventricular arrhythmia or any other systemic diseases were excluded. There were 30 subjects who had enrolled, were selected for study. Remaining were not selected due various reasons.

Follow-up: Subjects were assessed after 10 days for lipid profile estimation.

Data analysis: To determine effectiveness of Vipassana yogic life-style intervention programme, data before and after the programme were analysed for significant differences using paired 't' tests. A 'p' value < 0.05 was considered significant.

OBSERVATIONS

There were total 30 subjects enrolled for 10days Vipassana training programme.

Table 1: Comparision of average blood cholesterol, triglyceride, hdl before and after vipassana

Parameter	Before Vipassana mean ± SD	After Vipassana mean ± SD	't'	'p'	Significance
Blood Cholesterol (mg%)	187.5 ± 11.21	170.78 ± 12.8	7.8	<0.001	HS
Blood Triglyceride (mg%)	150.9 ± 5.45	136.92 ± 5.91	6.5	<0.001	HS
Blood HDL (mg%)	52.63 ± 5.99	60.21 ± 7.94	7.9	<0.001	HS

DISCUSSION

The present self-controlled trial shows the effect of Vipassana in reducing the severity of risk factor i.e. lipid profile.

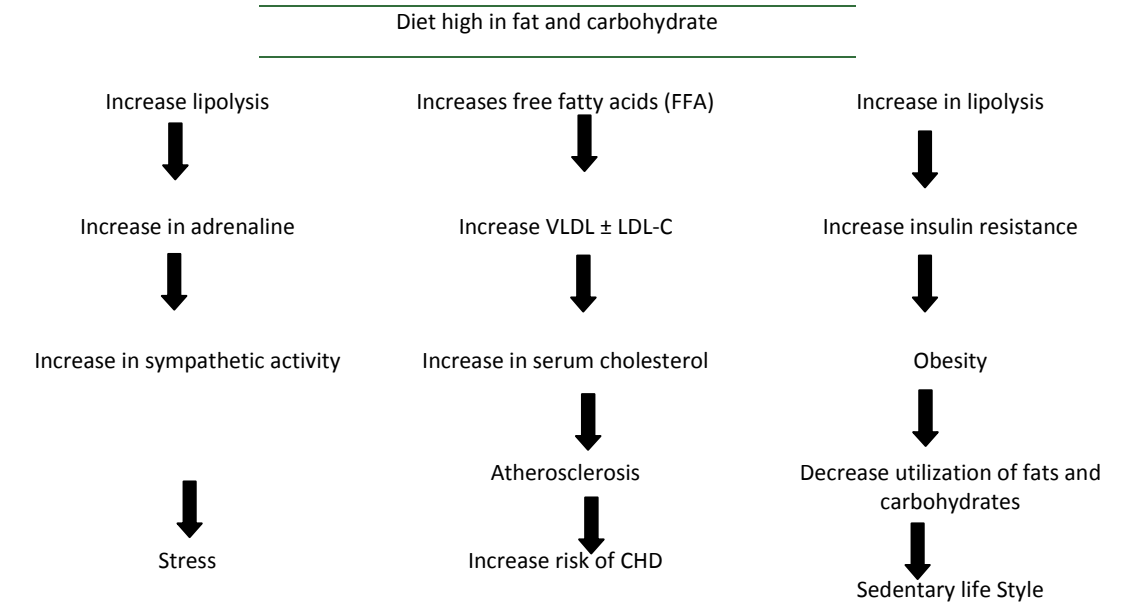
Profile of study subjects: Total 30 subjects voluntarily enrolled for Vipassana meditation. All were males.

Lipid profile: It is observed from **table I** that, subjects mean serum cholesterol level before Vipassana practices was 187.5 ±11.21 and after Vipassana practices was 170.78 ± 12.8. The average fall in serum cholesterol level was 16.72. This indicates decrease in serum cholesterol level after Vipassana and it was found to be statistically significant (p<0.001). It is observed from **table I** that, the mean serum triglyceride level before Vipassana practices was 150.9 ± 5.45 and after Vipassana practices was 136.92 ± 5.91. The average fall in serum triglyceride level was 13.98. This indicates decrease in serum triglyceride level after Vipassana and it was found to be statistically significant (p<0.001). It is observed from **table I** that the mean serum HDL level before Vipassana practices was 52.63 ± 5.99 and after Vipassana practices was 60.21 ± 7.94. The average increase in serum HDL level was 7.58. This indicates increase in serum HDL level after Vipassana and it was found to be statistically significant (p<0.001). The present study findings are in agreement with the following studies. Barnard RJ. *et al* (1992)[2] at California who after 3 weeks of Meditation practices reported that total cholesterol fall by 13%, triglyceride by 26%,LDL-C by 26%.These changes were found to be statistically significant (p<0.01). In another study conducted by Barnald RJ. (1991)[1] at California after 3 weeks of Meditation practices, there was decreased in total serum cholesterol by 23%(P<0.01), LDL-C by 22%(P<0.01) and total cholesterol/HDL-C ratio by 9%(P<0.01) which was significant. Mahajan AS. *et al* (1999)[6] at New Delhi, who at end of 14 weeks follow-up after Meditation practices demonstrated that total cholesterol fall by 14.78%, LDL-C by 19.07%, total cholesterol/HDL-C ratio by 27.75% and triglyceride by 28.51% and HDL-C increased by 20.20%.In coronary risk group total cholesterol fall by 11.34%, LDL-C by 13.66%, total /HDL-C ratio by 23.59% and triglyceride by 26.55% in angina group. The changes were significant (p<0.05). Prasad *et al* (2006)[8] in a before and after study carried out at Hyderabad, India, after 60 days of Meditation practices significant reduction was observed in triglyceride, cholesterol and VLDL.There was significant increase in HDL levels in these subjects. (P<0.05)

Dyslipidemia

Dyslipidemia is one of the important modifiable risk factor of CHD. It initiates atherosclerotic plaque formation, finally resulting in alteration in endothelial cell functions, which enhances the coagulability of blood by activation of numerous factors for which apoliproteins have been implicated. The modification of lipid profile may be important both in the prevention and control of CHD.[7]

Mechanism of dyslipidemia



A combination of stress management training (stretching relaxation exercises) and an essentially vegetarian diet may be responsible for decrease in serum cholesterol.[5] Meditation and low fat vegetarian diet is likely to contribute in improvement of lipid profile.[7, 4]

The mechanism by which yoga acts could by many ways: Increased physical activity alone is associated with more favorable lipid profile, the effect continues with passage of time. Diet, exercise and weight loss, leading to an increase in HDL levels, also affect the activity of hepatic lipase and lipoprotein lipase at the cellular level. This could affect metabolism of lipoprotein and lead to an increased uptake of triglyceride by the adipose tissue.[1] Meditation is believed to bring about a stable autonomic balance and hypo metabolic state and improve the biochemical and hormonal profile. [7] A 23.3-mg/dl lower total cholesterol in men aged 40 years is associated with 54% lower CHD risk. Every 1.2 mg/dl rise in HDL-C appears to be associated with at least 3% reduction in CHD risk.[3] Hence it can be said that Vipassana stress management, dietary modification could all contribute as mechanisms, which result in modification in lipid status.

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