

AN OBSERVATIONAL STUDY ON PREVALENCE OF ATHEROSCLEROSIS  
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## ABSTRACT

Atherosclerosis is pathological conditions mainly affects elderly peoples or middle aged population suffering from other diseases like obesity and diabetes, etc. The atherosclerosis may lead other consequences like heart failure. The Ayurveda term “Dhamani pratichay” can be correlated with atherosclerosis. As per Charak Samhita it can be considered as disease of Kapha dosha which mainly arises due to the indulgence in awful dietary and life style habits. Dhamanipratichay need to be cure in early stage to prevent further consequences related to the heart and blood circulation. The Ayurveda approaches of treatment of Dhamanipratichay mainly work around to pacify Kapha dosha and conduction of disciplinary life style. The prevalence of disease depends upon many factors, considering this fact we performed an observational study to demonstrate the prevalence of Dhamani pratichay and related factors. The diet and lifestyle observed as common factors associated with cases of Dhamani pratichay.

**KEYWORDS:** Ayurveda, Dhamani pratichay, Atherosclerosis, Observational, Study.

## INTRODUCTION

*Dhamanipratichay* is condition that can be correlated with atherosclerosis as per modern science. *Dhamanipratichay* described as one amongst the twenty *Nanatmaja vikara of Kapha* in ancient Ayurveda texts. The vitiation of *Kapha dosha* mainly involves in disease pathogenesis, *Kapha dosha* also leads condition of obesity and diabetes which can further triggers pathogenesis of *Dhamanipratichay*.<sup>[1-4]</sup>

Pathologically *Dhamanipratichay* involves accumulation of *Medadhatu* inside the arterial walls which results narrowing down the lumen and thickening of vessels. The *Vyana Vayu* affects movement of *Srotas* in *Dhamanipratichay* due to the vitiation of *Kapha Dosha* and accumulation of *Meda dhatu*.<sup>[4-6]</sup>

Ayurveda described several approaches to treat *Dhamanipratichay* including dietary and life style related conditions, *Snehan* and *Swedan* therapies, detoxification measure, uses of *Lekhana* herbs to reduce fat, drugs of *Hridya Mahakashaya* category and avoidance of causative factors, etc.

The pathologically disease involve *Kapha* vitiation thus *Kapha* pacifying therapy mainly indicated for

*Dhamanipratichay*, the drugs which normalizes *Dusya Rasa* and *Rakta Dhatus* also advocated along with drugs alleviating obstruction of *Rasavaha Srota*.<sup>[5-7]</sup>

Modern science described that atherosclerosis arises due to the damage of endothelium lining of arterial wall. The major events associated with disease pathogenesis are depicted in **Figure 1**.

As depicted in Figure 1 the deposition of fat on arterial wall causes hardening and thickening of arteries due to which lumen becomes narrows and blood flow through the artery becomes difficult leading to the conditions like high blood pressure and ischemia, etc.



Figure 1: Fat related events associated with atherosclerosis.

### IM & OBJECTIVE

✓ To present data associated with prevalence of *Dhamanipraticay* and explain factors related with disease *Dhamanipraticay*.

### MATERIALS AND METHODS

Study involves selection of patients from National Institute of Ayurveda, Seth Surajmal Bombaywala Ayurvedic Hospital and Satellite Hospital, Jawahar Nagar, Jaipur. Total 30 patients were selected on the basis of cardinal sign and symptoms of disease. All 30 patients were observed and investigated to check the factors and conditions associated with *Dhamanipraticay*.

### Study Protocol

The study conducted in winter season after the consideration of *Kaphaja Prakriti*.

### Investigational Parameters

#### A. Laboratory parameters

- ✚ Serum cholesterol level
- ✚ Serum triglyceride level
- ✚ H.D.L. level
- ✚ L.D.L. level
- ✚ V.L.D.L. level
- ✚ Blood pressure

#### B. Cardinal sign & symptoms

Confirmation of disease was done on the basis of laboratory investigations and sign & symptoms of disease.

### Observational Parameters

- Dietary habits/*Ahara*
- Smoking/drinking habits
- Strength of *Koshta*
- Predominant *Prakriti*
- *Satmyanuser*
- *Vyayama Shakti*
- *Desha/ Habitat*

### RESULTS

The laboratory parameters confirmed the pathological state of *Dhamanipraticay* in registered participants and the clinical diagnosis also ensure that all participants possessed cardinal symptoms of *Dhamanipraticay*. The registered participants of *Dhamanipraticay* were

investigated through questionnaire and clinical observations to establish predominant correlation between disease and related factors.

The observational parameters studies and results of same reported as follow.

Study observed 70% participants of *Dhamanipraticay* belongs from vegetarian category while 30% participants of *Dhamanipraticay* belong from mix-category.

Study observed that 50% participants were addicted to tea while smoking habits observed in 26.66% participants of *Dhamanipraticay*, alcoholic patients not observed in study.

The strength of *Koshta* was found to be optimum since 76.66% participants were of *Madhya Koshta* while 23.33% participants of hard *Koshta*. *Mridu Koshta* not observed in participants.

*Kaphja Prakriti* predominately found in 80% participants while 20% participants registered with *Vata-Kaphaj Prakriti*.

The *Satmyanuser* category witnessed 76.66% participants of *Sarvarasa* and 23.33% participants of *Madhyarasa*. No participant was observed with predominance of single *Rasa*.

*Pravar Vyayama Shakti* was found in 10% participants, *Madhyam Vyayama Shakti* was found in 40% participants and 50% participants recorded with *Avar Vyayama Shakti*.

The natural habitat of participants of *Dhamanipraticay* was also studied, 10% participants belong from *Jangla Pradesha*, 13.33% participants belong from *Anoop Pradesha* while 76.66% participants belong from moderate climatic or atmospheric conditions.

### DISCUSSION

Study observed that most of the participants belong from vegetarian category thus heavy vegetarian diet and life style might have imparted pathogenesis of *Dhamanipraticay*.

The consumption of tea, smoking and tobacco intake, etc. also play significant role in diseases since study

observed that many participants were addicted to *Vyasana*.

The lipid metabolism and deposition depends upon metabolic activities, however maximum participants possessed optimum strength of *Koshita* thus this factor not played significant role in disease occurrence amongst the registered participants.

As mentioned earlier *Kapha Dosha* is main factor associated with diseases therefore maximum participants were of *Kaphja Prakriti* or *Vata-Kaphaj Prakriti*. The vitiation of *Kapha* and *Vata* mainly triggers atherosclerosis followed by disturbance in blood circulation. The *Kapha* vitiating *Ahara-Vihara*, presence of other condition like diabetes and obesity, etc. can be considered as major causative factors of atherosclerosis in registered patients.

The maximum number of *Sarvarasa* participants suggested that patients might have consumed *Madhura Ahara* in excess that in later stage caused obesity and consequences of atherosclerosis.

The optimum *Vyayama Shakti* was not found in all participants that indicated that lack of exercise might have provoked the accumulation and deposition of lipid on arterial wall and inability to burn calorie fasten the diseases pathogenesis in *Madhyam Vyayama Shakti* participants.

The natural habitat also affects daily and dietary routine, the people of *Jangla Pradesha* mainly follows dietary routine and also involve in physical activities thus devoid chances of *Dhamanipratichay*, on other hands people of urban area indulges in awful dietary and daily routine thus get affected by such type of pathological conditions. Study observed only 10% participants belong from *Jangla Pradesha* while maximum participants of *Anoop Pradesha* and moderate climatic conditions, the participants other than *Jangla Pradesha* might have involved in sedentary life style which further triggered pathogenesis of *Dhamanipratichay*.<sup>[7-10]</sup>

## CONCUSSION

*Dhamani pratichay* is associated with vitiation of *Kapha dosha*, which involves accumulation of *Medadhatu* at arterial walls resulting narrowing down the lumen and thickening of vessels that further affects flow of blood through the artery. The prevention of disease is important than treatment. The knowledge of causative factors helps to avoid them thus prevents chances of disease progression. The dietary habits, smoking/drinking habits, predominance of *Prakriti* and natural habitat (*Desh*), etc. are factors which affects disease prevalence.

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