

## Brief Communication

### Coronary Artery Disease in the Medical Faculty: Wake-Up Call

Shridhar Dwivedi, Amitesh Aggarwal, Vishal Sharma

#### Abstract

The rising trend of cardiovascular diseases particularly coronary artery disease (CAD) among physicians is a matter of serious concern. They are noted to have higher prevalence of cardiovascular risk factors compared to the general population. The scenario may not be much different among the teaching faculty in a medical college. We carried out a retrospective study of 19 medical teachers of University College of Medical Sciences who suffered acute CAD episode during 1989 -2007. The mean age was  $51.73 \pm 9.8$  years with all patients being males. The incidence of early onset CAD (age  $\leq 45$  yrs) in the study was 21%. There was high percentage of smokers (63.15%) and 34% had been taking regular alcohol. Central obesity was noted in 89.47% while 68.4% had hypertension, 36.8% diabetes mellitus and 21.5% had a family history of CAD. Although these figures do not give a prevalence estimate of CAD amongst medical faculty, they do reflect the significant presence of early coronary artery disease among physicians. It is imperative that physicians as a community need to wake up to the cardiovascular risks facing them on account of faulty life style and job stress.

#### Introduction

“Physician himself falling ill, youth embracing renunciation and a begging jeweller are not to be relied upon” so goes an apt vernacular proverb. Viewed in this background the rising trend of cardiovascular diseases particularly coronary artery disease (CAD) among physicians is a matter of growing concern. In a recent commentary, pertinent questions have been raised regarding the cardiovascular health of physicians[1]. Contrary to the wishful expectations one is sad to note that the young physicians of the country are not paying adequate attention to their health. They are noted to have higher prevalence of cardiovascular risk factors (smoking/ tobacco use, obesity, metabolic syndrome, hypertension and impaired glucose tolerance) compared to the general population[2]. It is surmised that the scenario may not be much different among the teaching faculty in a medical college set up. In order to test this hypothesis we carried out a retrospective study of the medical teachers who suffered acute CAD episode and got admitted in the coronary care unit of the GTB Hospital attached to University College of Medical Sciences in the 18 year history of our institution. The importance for such a study needs no overemphasis because medical teachers are considered to be role

models not only for the future physicians but so also for the public at large.

#### Materials and Methods

A total of 19 teachers who were admitted for acute coronary syndrome during 1989 -2007 form the basis of this study. The diagnosis of acute coronary syndrome was based on ECG, cardiac enzymes, echocardiography, and/or coronary angiography. The clinico-biochemical risk profile of all cases was entered on a structured proforma which included details of major risk factors like smoking, hypertension (blood pressure  $\geq 140/90$  mm/hg), central obesity (waist circumference male  $\geq 90$  cm, female  $\geq 80$  cm), diabetes mellitus (known diabetes/fasting  $\geq 110$  mg/dL or post prandial  $\geq 200$  mg/dL), stress, family history of coronary artery disease in first degree relatives and presence of dyslipidemia (cholesterol  $\geq 200$ mg/dL, HDL  $< 40$ mg/dL, LDL- cholesterol  $\geq 100$ mg/dL, triglycerides  $\geq 150$ mg/dL), wherever available. Consumption of alcohol was also noted and alcohol intake more than 30 ml per day was labelled as moderate alcohol consumption. Stress was scored using the Perceived Stress Scale and patients with moderate to high scores were taken as having stress.

Department of Medicine, Division of Cardiology /Preventive Cardiology, University College of Medical Sciences, University of Delhi, GTB Hospital, Delhi.

**Corresponding Author:** Dr. Shridhar Dwivedi, Professor and Head, Department of Medicine, Division of Cardiology /Preventive Cardiology, University College of Medical Sciences, University of Delhi, GTB Hospital, Delhi.

## Observations

In the past 18 years, we witnessed 19 cases of documented CAD amongst members of our medical faculty. Their clinical and risk profile is shown in Table 1. Data on lipid parameters was insufficient for deducing conclusions.

**Table 1 - Clinical Features of the group**

Total cases (1990-2008)	19
Mean age (years)	51.73 ± 9.8
Early onset CAD	4 (21%)
Sex	All males
Tobacco use	12 (63.15%)
Alcohol	6 (34%)
Central obesity	17 (89.47%)
Diabetes mellitus	7 (36.84%)
Hypertension	13 (68.42%)
Stress	9 (47.37%)
Family history of CAD	4 (21.05%)
Presentation-	
Sudden cardiac death	1 (5.26%)
Myocardial infarction	12 (63.15%)
Unstable angina	6 (31.58%)
Treatment-	
Conservative	6 (31.58%)
PTCA	9 (47.37%)
CABG	2 (10.52%)
Second PTCA	1 (5.26%)

## Discussion

In a previous study carried out at our centre we found a high prevalence of central obesity (83.06%), hypertension (31.06%) and smoking (15.06%) among the young resident doctors[3]. The situation is no different in other Asian countries like Iran where 11.11% of resident doctors and 7.57% of attending physicians were smokers[4].

The incidence of early onset CAD (age ≤45 yrs) in the

present study was 21% which is an alarming figure when compared to the general population where it is 12-15%. The youngest was a 27 year old junior physician, a known hypertensive, having distinct central obesity and family history of hypertension. In spite of all these risk factors he continued to overlook his health by not taking any therapy. The situation becomes more poignant considering the fact that there was strikingly high percentage of smokers (63.15%) in this series. The very first case in the current series was that of a 56 year old faculty who was smoker, known hypertensive and diabetic with central obesity. Confronted with an acute stress situation he had a sudden cardiac death.

This is a strange irony that even amongst those, who are well aware of the ill effects of tobacco and/or smoking, had been smoking only to suffer coronary artery disease. Much more distressing part was the fact that at least 3 faculty members were smoking even after revascularisation procedure; one who had CABG and two who underwent PTCA. Besides these 19 cases of CAD, five faculty members continued to use smokeless forms of tobacco (gutka/ pan masala, etc) despite suffering from one of the vascular diseases like hypertension or diabetes. This is an important issue because not only they are putting themselves at further vascular risk but also setting an unhealthy example before their students [5].

An evidently high percentage (89.47%) of teachers showed features of central obesity possibly due to lack of physical activity. Professional stress was another important risk factor which needs to be addressed adequately in order to prevent high prevalence of CAD among medical teachers. Reasons of stress could be long working hours, lack of professional satisfaction, financial worries, malpractice suits, etc. What we have observed during the span of 18 years is only the tip of the iceberg because many of our colleagues would have gone undetected and/or unreported despite having hypertension, diabetes, silent coronary and asymptomatic metabolic syndrome. Although these figures do not give a prevalence estimate of CAD amongst medical faculty, they do reflect the significant presence of early coronary artery disease among physicians. It is imperative that physicians as a community need to wake up to the cardiovascular risks facing them on account of faulty life style and job stress. Small measures like daily exercise, some

form of meditation and/or relaxation, low fat diet, low salt and high fibre diet and above all freedom from tobacco in all its forms, will go a long way in ensuring better health for the healthcare professionals. As a duty to our society which perceives physicians as role models, we certainly need to win this battle against smoking and the increasing bulge.

#### Key Points

- There is a rising trend of cardiovascular diseases particularly coronary artery disease (CAD) among physicians.
- They are noted to have higher prevalence of cardiovascular risk factors compared to the general population.
- In our representative retrospective study of 19 medical teachers, incidence of early onset CAD (age  $\leq$  45 yrs) in the study was 21% with 63.1% smokers, 89.47% centrally obese, 68.4% hypertensive, 36.8% having diabetes mellitus and 34% taking regular alcohol in moderate quantity.
- It is imperative that physicians as a role model to the society need to wake up to the cardiovascular risks facing them on account of faulty life style.

#### References

1. Ghosh AK, Joshi SR. Physician's Health: Time to take Care (Editorial). *J Assoc Physicians India* 2008; 56:13-14.
2. Ramachandran A, Snehlata C, Yamuna A, Murugesan N. High prevalence of cardiometabolic risk factors among young physicians in India. *J Assoc Physicians India* 2008; 56: 17-20.
3. Dwivedi S, Chaturvedi A, Prakash A. Central obesity, smoking and hypertension in young resident doctors. *J Assoc Physicians India* 1999; 47:116.
4. Ahmadi J, Khalili H, Jooybar R, Namazi N, Aghaei PM. Cigarette smoking among Iranian medical students, resident physicians and attending physicians. *Eur J Med Res* 2001; 6:406-8.
5. Dwivedi S, Sharma V. Cardiovascular Hazards of Tobacco. In: Hazra DK, editor - *Clinical Medicine Update*. Vol- XI. Agra. Indian Academy of Clinical Medicine, 2008:112-23.