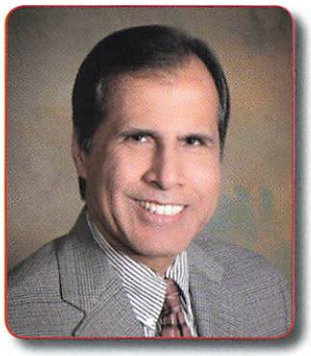
The Dow Link
Dow Graduate Association of North America

Coronary Artery Disease in Desis



The term Desis (a.k.a. South Asians) is used to describe people from the countries of the Asian subcontinent i.e. India, Pakistan, Bangladesh, Nepal, Bhutan and Sri Lanka. People from these countries have been migrating to different parts of the world over the last 200 years. The present discussion concerns these populations particularly in the U.K and U.S.A where most of the Pakistani medical diaspora is settled.

In the above South Asian countries, the prevalence of ischemic heart disease has progressively increased during the last 60 years, particularly among the urban population.

In the United States, South Asians exhibit the highest prevalence of CAD and coronary risk factors as compared to Caucasians. These risk factors include central obesity, glucose intolerance, hypertension, high triglyceride levels, high Lipoprotein-a (pronounced L-P-Little A), low levels of high density lipoprotein (HDL), high prothrombotic factors and high homocysteine levels. Metabolic syndrome is often mentioned in this regard and is simply a constellation of insulin resistance which results in hyperglycemia, hyperinsulinemia, along with hypertension, and high lipids.

These factors contribute to South Asians having a risk of coronary artery disease 3-4 times higher than white Americans and 6 times higher than the Chinese. They are prone at a much younger age and the pattern is more severe and diffuse. There is also a higher incidence of hospitalization, morbidity and mortality than other ethnic groups. In the United Kingdom, the first acute myocardial infarction among Indians at age less than 40 years is reported 10 times higher than the local White population. To top it all, young South Asians often exhibit three vessel coronary disease with poor prognosis compared to other communities. Similar observations have been made in South Asian expatriates living in the Middle East compared with the local Arab population

Even the above risk factors do not explain the wide difference. Other issues that may explain the high incidence may be the migration-stress factor i.e. stress of seeking and maintaining the new job, stress of coping with new job expectations and the stress of competing with the peer group. Newly found economic affluence is associated with sedentary life-style and higher consumption of calories, saturated fats, salt, (Nehari, paa'ya and Brain Masala) tobacco and alcohol contributing to obesity, dyslipidemia, hypertension, hyperuricemia and diabetes mellitus. The constant lamenting of the homesick Mrs. are likely to add fuel to the fire. Males, of course are more prone to the above risk factors but post-menopausal females need special attention as they constitute a distinct sub-group at high risk for heart disease.

A word about genetic link since answers for all maladies are being sought at the subcellular level. Lipoprotein-a is now recognized as an independent risk factor for CAD. Lp-a is ten times more atherogenic than LDL. South Asians tend to have higher levels, even newborns. The combination of high Lp-a, high LDL, low HDL and high triglycerides constitute the deadly quartet. As if this was not enough, there is another villain who goes by the name of apolipoprotein-B (pet name Apo-B) which is high in us poor Desis resulting in the formation of small dense LDL which is more khatarnaak than its more bulky (bhola) twin.

All the above promote plaque formation in the arteries, Once the plaque ruptures and blocks the flow of blood, the Desi is suddenly out of luck. He has a higher plasminogen activator inhibitor (PAI-I) and higher serum fibrinogen levels which increase blood viscosity and promote thrombosis, thereby placing him at a disadvantage compared to his gora counterpart.

Although coronary artery disease is a fatal disease with no known cure, it is also highly predictable, preventable and treatable with existing technology (stent angioplasty and coronary artery bypass surgery).

Prevention of these disabling and at times life threatening occurrences of cardiovascular and cerebrovascular diseases can only be by way of educating our people as soon as they arrive here, knowing fully well that they have thus far been treated by their mohalla daktar (or worse hakeem) with a soda salicilas and/or mixture carminative concoction and a pat on the back. One strategy calls for stimulating local APPNA chapters to arrange weekend screening camps where Body Mass Index (BMI), blood pressure, diabetes and lipids can be tested (free chicken tikka can serve as a bait to get the desi to show up). In my clinical practice, I encourage men to wear a trouser with belt at home so that middle age spread around the waist can be detected earlier than it would be with a shalwar. (I still have not figured out what to tell Desi women!)

In the presence of excessive risk factors, patients should be convinced to get a stress test with nuclear imaging and at least a coronary calcium score which is cheap ($200 for self pay patients) and has a high predictive value. For the budget conscious uninsured Desi, both the above tests can be done at a discount while visiting Pakistan. They might even walk away with a 64 slice CT angiogram with three dimensional pictures of the coronary tree at a fraction of the cost compared to here. In asymptomatic cases this could be a life saver. Last but not least, do tell them to buy health insurance coverage before going to the cardiologist. Insurance companies know exactly how to find out if they have been advised to get a bypass!

It took me more than 30 years to finally figure out why in Pakistani movies, Waheed Murad coming home after graduating is always met by his mom, his dad having died likely a sudden death due to CAD!

The writer is a practicing cardiologist in Houston.

Amin H. Karim, M.D. (Dow 1977)