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Intracranial atherosclerotic disease (ICAD) is a common cause of acute ischemic stroke (AIS). There is a higher prevalence in the Asian, Black, and Hispanic population. Population studies suggest that the South Asians have the highest prevalence.[1]

A common factor related to these different groups is the lack of awareness and participation in primary prevention programs. Preventable risk factors are often recognized after the incident stroke or other vascular events.

The major risk factors related with ICAD include diabetes mellitus (DM), hypertension (HTN), metabolic syndrome, hyperlipidemia, sedentary lifestyle, and smoking.[2] The South Asian dietary habits had been discussed as a cause of the high incidence of DM.[3,4]

Stenting and Aggressive Medical Management for Preventing Recurrent stroke in Intracranial Stenosis trial (SAMMPRIS) demonstrated that aggressive management of the risk factors [dual antiplatelet treatment with aspirin and clopidogrel (DAPT) for 3 months, high-dose statins, control of DM and HTN, and life-style modification] reduced recurrent ischemic stroke and was superior to management with added stenting of the symptomatic intracranial artery (absolute benefit of 8.9%). This benefit persisted up until 3 years of follow-up (7.1%, 6.9%, and 9%). Warfarin Aspirin in Symptomatic Intracranial Disease (WASID) trial that compared aspirin with therapeutic warfarin anticoagulation in symptomatic intracranial stenosis greater than 50% was stopped prematurely. There was a clear superiority of aspirin over warfarin. Comparison of the control arm (Aggressive medical management alone) of SAMMPRIS to the aspirin arm of WASID revealed a greater benefit of the aggressive medical management of the risk factors over aspirin alone.[5,6]

In this comparative analysis, the authors report the differences seen in 2 different populations with ICAD, namely, from Kerala, India and Chicago, United States. The authors provide some insights to the contributing demographics, risk factors, stroke outcomes, and recurrent strokes related to ICAD.[7]

The Kerala cohort was homogenous as compared to the heterogeneous Chicago population. Although the risk factors were not different between the populations, Indian patients were younger and had more severe incident stroke with a higher prevalence of DM. The 3-month outcomes of recurrent ischemic strokes (RIS) were lower in the Indian population possibly because of the significantly higher use of dual antiplatelet therapy (DAPT) and statins. This is consistent with the existing data on stroke prevention in symptomatic ICAD.[6] Interestingly, recurrent transient ischemic attacks (TIA) were higher despite DAPT.[8] Timing of initiation of statins and DAPT was not factored in the analysis. Statin use in improving stroke outcomes is related to whether patients were on statins prior to AIS or statin initiation after stroke onset. Statin naive patients seem to derive maximum benefit, especially if they are started within the first 72 h of stroke onset.[9]

Although primary prevention exists in the United States, it is underutilized by the population at risk. Organized prevention programs are sparse and non-existent in the rural and semi-urban regions of India.

The results of this study reinforce the need for these much-needed prevention programs. Increasing awareness and early recognition and management of risk factors, especially diabetes and hyperlipidemia must be the first step in reducing ICAD-related strokes in this high-risk population.

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