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Short Communication

Statin in stroke: Are we using it properly?

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Stroke is on the rise in every corner of the world, especially in the young population. Dyslipidaemia is a risk factor for stroke which we can modify confidently if we pay more attention towards it. It is nowadays more prevalent in young population owing to a sedentary lifestyle, change in diet pattern, prevalence of smoking and alcoholism. The familial dyslipidaemia syndrome is an additional risk factor for the young population. The study from south India found that over 85% of the urban population and 78.5% of rural residents have dyslipidaemia.[1] But are we using statin to enough extent to tackle this issue in the young population? In fact, lack of use of risk scores is leading to underutilization and inappropriate dosing of statins.[2] The USPSTF (US Preventive Services Task Force) recommends that clinicians should prescribe a statin for the primary prevention of cerebrovascular disease for adults aged 40 to 75 years who have one or more risk factors for cardiovascular disease (i.e., dyslipidaemia, diabetes, hypertension, or smoking) and an estimated 10-year risk for cardiovascular disease of 10% or greater.[2] If the 10 year cardiovascular risk is 10-19%, besides healthy life-style measures, moderate intensity statins (atorvastatin 10-20 mg/ rosuvastatin 5-10 mg/pravastatin 40-80 mg/ simvastatin 20-40 mg) is recommended.[3] If the 10 year cardiovascular risk is more than equal to 20 %, besides healthy life-style measures, high intensity statin is recommended (atorvastatin 40 -80 mg/rosuvastatin 20-40 mg).[3] No differences between the statins was noted in efficacy for preventing recurrence of CCVD (cardio-cerebrovascular disease) events and/or death in these patients.[4] According to the Canadian Cardiovascular Society, a target LDL cholesterol level of less than 2.0 mmol/Litre or a 50% reduction is targeted for people who are being treated to reduce the risk of stroke and death. A target of less than 1.8 mmol/Litre is recommended. The guidelines already recommend statin therapy for those with LDL-C greater than or equal to 160 mg/dl amongst 20-39-year-old population and if there is a family history of early atherosclerotic cardiovascular disease.[5] Eating foods low in saturated fats, trans fat, and cholesterol and high in fibre can help prevent high cholesterol. LDL-C is the most useful serum lipid marker for predicting the risk of stroke. When statin use is insufficient for LDL lowering, we need to add ezetimibe and PCSK9 inhibitors as complementary therapies. Besides LDL-C-reduction effects, statins have several pleiotropic effects such as improvement of endothelial function, upregulation of nitric oxide, anti-oxidation, suppression of inflammatory response, and stabilization of atheroma. There was a concern that statin might increase risk of intracerebral haemorrhage. However, recent studies found statins do not increase the risk of intracerebral haemorrhage in individuals with earlier stroke. On the contrary, statins can reduce the risk of recurrent intracerebral haemorrhage (ICH) in patients of spontaneous ICH.[6] Thus, we need not withhold or reduce the dose of statin in apprehension of ICH. However, further research is needed in this special group of population as in a

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recent meta-analysis it was found that there was an evidence for a small increased risk of haemorrhagic stroke events with LDL-C–lowering therapies though no clear evidence was noted with triglyceride-lowering therapies.[7] Even in treatment of stroke patients there is a tendency to use low dose statin (40mg-80 mg/day is recommended) and lipid profile is not being followed up at scheduled interval (levels should be measured 4 to 12 weeks after starting LDL-C lowering therapy and then every 3 to 12 months thereafter). The young population needs to be counselled regarding the gravity of the situation and primary prevention areas of focus include lifestyle measures (healthy diet, physical activity, being tobacco-free, stress reduction and limiting alcohol, recreational drugs), screening and management of medical risk factors such as hypertension, dyslipidemia, diabetes, and atrial fibrillation. We need to think about health policies to screen for dyslipidaemia in the young population and start treatment at earliest to reduce the incidence of vascular events. Follow up of this targeted population with lipid levels at proper intervals and ensuring of drug-adherence is necessary to save lives.

Conflict of Interest

None.

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