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# DYSLIPIDEMIA IN ELDERLY PATIENTS WITH TRANSIENT ISCHEMIC ATTACK

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## ABSTRACT

Dyslipidemia is a major vascular risk factor in elderly patients and plays a significant role in the pathogenesis of transient ischemic attacks (TIAs). Age-related metabolic changes, along with endothelial dysfunction and progressive atherosclerosis, increase susceptibility to cerebral ischemia. This article examines the relationship between lipid disorders and the incidence of TIAs in older adults, highlighting the importance of early detection, individualized therapy, and preventive strategies to reduce the risk of stroke. The role of statins, lifestyle interventions, and multidisciplinary management in improving clinical outcomes is also discussed.

**KEYWORDS:** Dyslipidemia, transient ischemic attack, elderly patients, atherosclerosis, cerebral ischemia, statins, lipid profile, stroke prevention, vascular risk, aging.

## INTRODUCTION

Dyslipidemia is one of the most significant modifiable risk factors contributing to the development of cerebrovascular diseases, including transient ischemic attacks (TIAs). In elderly patients, this condition is particularly common and clinically relevant due to age-related metabolic changes, comorbidities such as hypertension and diabetes mellitus, and vascular aging. The interaction between lipid abnormalities and cerebral circulation plays a key role in the pathophysiology of TIAs, and understanding this relationship is essential for effective prevention and management of ischemic events in older adults.

A transient ischemic attack is defined as a brief episode of neurological dysfunction caused by focal brain ischemia without acute infarction. Although symptoms typically resolve within minutes to hours, TIAs serve as an important warning sign for impending strokes. In elderly individuals, the vascular system becomes more fragile, and dyslipidemia further accelerates atherosclerotic processes that compromise cerebral perfusion. Elevated levels of total cholesterol, low-density lipoprotein cholesterol (LDL-C), and triglycerides, as well as reduced high-density lipoprotein cholesterol (HDL-C), are strongly associated with an increased risk of cerebral microemboli, carotid plaque formation, and vessel narrowing, all of which can precipitate TIAs.

Elderly patients often exhibit a mixed pattern of dyslipidemia, characterized not only by elevated LDL-C but also by postprandial hyperlipidemia and increased lipoprotein(a) concentrations. These abnormalities are compounded by age-related hepatic metabolic changes, reduced physical activity, and nutritional imbalances. Furthermore, systemic inflammation and oxidative stress, both common in aging, contribute to endothelial dysfunction

and increase the vulnerability of the brain to transient ischemia. The cumulative effect of these risk factors results in a higher likelihood of both initial TIA and recurrence, particularly in the absence of aggressive lipid management.

Early detection and management of dyslipidemia in elderly patients with TIAs are crucial for stroke prevention. A thorough lipid profile assessment should be part of the standard evaluation following any cerebrovascular event. Statin therapy remains the cornerstone of pharmacological intervention, demonstrating efficacy not only in lowering LDL-C but also in stabilizing atherosclerotic plaques and exerting anti-inflammatory effects. In certain high-risk individuals, especially those with recurrent TIAs or significant carotid stenosis, combination lipid-lowering therapy may be considered. Lifestyle interventions, including dietary modification, regular physical activity, and weight management, play a complementary role and are particularly important in patients with metabolic syndrome.

Given the complexity of managing dyslipidemia in the elderly, therapeutic approaches should be individualized, taking into account potential drug interactions, hepatic or renal insufficiency, and patient adherence. Non-pharmacological support through patient education and regular follow-up can enhance long-term outcomes. Multidisciplinary collaboration among neurologists, cardiologists, and primary care physicians is essential for optimizing care and reducing the burden of stroke in this vulnerable population.

In conclusion, dyslipidemia represents a critical and modifiable contributor to transient ischemic attacks in elderly patients. Its timely identification and management, integrated with broader vascular risk reduction strategies, are central to improving prognosis and preventing progression to major cerebrovascular events. Continued research into age-specific lipid targets and tailored treatment strategies will further enhance our ability to protect brain health in the aging population.

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