
Statins in Children with Familial Hypercholesterolaemia



Familial hypercholesterolaemia is typically characterised by severely elevated low-density lipoprotein (LDL) cholesterol levels and premature cardiovascular disease. While the short-term efficacy of statin therapy in children is well established, there is still a lack of longer follow-up studies to evaluate specific changes in the risk of cardiovascular disease in these patients.

A study was conducted to evaluate the use of statin therapy in children. 214 patients with familial hypercholesterolaemia were included in the study and were followed up for 20 years. These same patients were previously participants in a placebo-controlled trial evaluating the 2-year efficacy and safety of pravastatin. An additional 95 unaffected siblings were also included in the new review. All study patients completed a questionnaire, and were required to provide blood samples. They also underwent measurements of carotid intima-media thickness. Study researchers compared the incidence of cardiovascular disease among the patients with familial hypercholesterolemia with their 156 affected parents.

Findings showed that the mean LDL cholesterol level in the patients decreased from 237.3 to 160.7 mg per decilitre — a decrease of 32% from the baseline level. LDL cholesterol <100 mg per decilitre was achieved in 20% of the patients. Mean progression of carotid intima-media thickness over the entire follow-up period was 0.0056 mm per year in patients with familial hypercholesterolaemia and 0.0057 mm per year in siblings. Overall, the researchers observed that the cumulative incidence of cardiovascular events and of death from cardiovascular causes at 39 years of age was lower among the patients with familial hypercholesterolaemia compared to the affected parents.

Results from this study suggest that the initiation of statin therapy during childhood in patients with familial hypercholesterolaemia slows the progression of carotid intima-media thickness and reduces the risk of cardiovascular disease in adulthood.

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