

Abstract

Efficacy and safety of statin therapy in the very old people (mean age ≥ 80 years): a narrative review

In real-world clinical practice, patients to be treated with statins are mostly 80 years and older. These older patients have multiple comorbidities, are polymedicated and are often acutely ill. The benefit to risk profile of statins may be different in the very elderly adults, because of age associated changes in pharmacokinetics and pharmacodynamics, multimorbidity and polypharmacy. People over 80 years often have been excluded from clinical trials. To facilitate the decision making for or against a statin treatment in the very old population, literature for efficacy, safety, adherence and cost-benefit in this population (mean age 80 and over) were collected and summarized in this article.

The narrative review was based on a literature research in PubMed. with the key words "Hydroxymethylglutaryl-CoA Reductase Inhibitors", "Aged, 80 and over", "Stroke, and Coronary Disease" and the exclusion criteria "Study population with a mean age of under 80 years" and "Studies written in another language than English, French and German".

All of the 8 studies (4 studies investigating efficacy for secondary prevention, 1 study the safety of statin use and 3 studies analysed the prescriber practise) meeting the inclusion criteria are observational studies. No randomized controlled trial (RCT) met inclusion criteria.

Investigations to the prescriber practise have found that a wide use of statins in very old patients are for primary prevention despite the lack of solid evidence and controversial data. Whereas the efficacy of statin treatment for secondary prevention in the very old patients has been suggested in three observational studies. Some studies found no reduction in all-cause mortality and higher frequency of cancer occurrence in patients with lower LDL-levels. One other study investigating the safety in patients 80 and over found more susceptibility to side effects, especially with aggressive treatment. In comparison to data observed in earlier trials with younger patients, side effects as elevated liver enzymes, myalgia but also gastrointestinal intolerances occurred more often in the very old population. There are not sufficient data to make any solid recommendation regarding initiation or continuation of lipid-lowering therapy for people ≥ 80 years old with known CVD. From practical point of view patients over 80 could benefit from statin therapy as the indication is secondary prevention and the patients life expectancies not too short and the regime isn't that aggressive (lower doses). Because of significantly higher mortality from cancer and infection among the patients in the highest total cholesterol, while the risks for cardiovascular death were independent from total cholesterol, the indication for primary prevention has to be seen critical. Randomised controlled trial (RCT) are needed in patients aged 80 years and over.
