

High potency statins and rates of admission for acute kidney injury

A study by the Canadian Network for Observational Drug Effect Studies (CNODES)

Key Messages

Patients using high potency statins to lower their cholesterol levels have an increased risk of acute kidney injury (AKI), compared to those using low potency statins.

Implications

Patients may be exposed to unnecessary risk of kidney damage by taking high dose statins. Statin choice needs to be a decision between physician and patient, taking medical history and other factors into account.

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Link to publication
(Dormuth et al. 2013)

<http://www.bmj.com/content/346/bmj.f880.long>

What is the issue?

- Statins are effective cholesterol-lowering drugs, but their use has been linked to sudden loss of kidney function, or acute kidney injury (AKI).

What was the aim of the study?

- This study, conducted by the Canadian Network for Observational Drug Effect Studies (CNODES), explored the association between high potency statins and AKI in patients with and without chronic kidney disease, compared to patients using low potency statins.

How was the study conducted?

- CNODES conducted nine population-based cohort studies and a meta-analysis with health records from seven Canadian provinces and two international databases. The study included over 2 million patients, aged 40 years or older and newly treated with a statin.
- CNODES investigators performed as-treated, nested case-control analyses in cohorts of patients without chronic kidney disease and with chronic kidney disease to measure hospitalization rates for AKI in users of high vs. low potency statins.

What did the study find?

- About 1 in 500 patients included in the study were hospitalized for AKI within up to two years of using low potency statins.
- Patients using high potency statins who did not have chronic kidney disease were 34% more likely to be hospitalized with AKI in the first 120 days of treatment, compared to those using low potency statins. The rate of hospitalization for AKI did not significantly increase for patients with chronic kidney disease.
- Patients and physicians need to carefully consider the risks and benefits of high dose statin therapy.
- CNODES has the ability to analyze a large amount of anonymous patient data to reliably address questions about drug safety and effectiveness. The results of this study are consistent with previous research.

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