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POSTER PRESENTATION

Early Inclisiran for Intensive Lipid Lowering After Acute Coronary Syndrome: A Systematic Review and Meta-Analysis

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Background

Patients with acute coronary syndrome (ACS) remain at high residual risk, with most failing to achieve stringent low-density lipoprotein cholesterol (LDL-C) targets despite statin therapy. We aim to assess the efficacy of early inclisiran initiation, a small interfering RNA targeting PCSK9, during hospitalization or within the first months post-discharge in patients with recent ACS.

Methods

- **Databases:** PubMed, Scopus, Web of Science, and Embase, searched for studies evaluating inclisiran in ACS patients.
- **Primary outcome:** percentage LDL-C change from baseline.
- **Secondary outcomes:** absolute change in LDL-C, achievement of LDL-C <55 mg/dL, and safety.
- **Analysis:** random-effects meta-analyses performed using OpenMetaAnalyst software.
- **Subgroups:** background lipid-lowering therapy (add-on to stable statin vs. de-novo combination) and baseline LDL-C levels.

Results

Six studies involving 328 patients were included. Early inclisiran after ACS achieved:

−57.7%
Pooled LDL-C reduction
95% CI −66.0 to −49.3

−74.1
Absolute reduction (mg/dL)
95% CI −96.7 to −51.4

87.4%
Reached LDL-C <55 mg/dL
pooled proportion

4.9%
Injection-site pain
no new safety signals

Subgroup / sensitivity analysis	LDL-C change	95% CI
Add-on to stable statins	**−48.6%**	−55.8 to −41.3
De novo combination or higher baseline LDL-C	**−68.2%**	−83.8 to −52.7
Sensitivity analysis (excluding 8-day follow-up study)	**−58.6%**	−70.2 to −47.1

Heterogeneity was high (I^2=89.8% for percentage change; I^2=98.3% for absolute change).

Conclusions

Early inclisiran initiation after ACS provides substantial LDL-C lowering and high rates of target attainment. The greatest benefit was observed with aggressive early combination therapy in patients with elevated baseline LDL-C. Larger controlled studies are needed to confirm these findings and define the role of inclisiran in post-ACS lipid management.