



Acute and Stable Ischemic Heart Disease

MINERALOCORTICOID RECEPTOR ANTAGONISTS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED TRIALS

Poster Contributions
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Background: Although mineralocorticoid antagonists (MRA) reduce mortality in patients with heart failure (HF) complicating acute myocardial infarction (MI), it is unclear if it could be beneficial to all patients with MI. To evaluate the utility of MRA in MI patients, we performed a systematic review and meta-analysis.

Methods: MEDLINE, EMBASE and Cochrane CENTRAL were searched from 1965 to June 2016. Relevant conference abstracts were searched from 2000 to June 2016. All randomized trials (RCT) evaluating the effect of MRA after MI were included. Data were analyzed using fixed-effects models.

Results: Of 3992 citations, 8 RCTs (N=10312) were included. Of these 8 trials, 1 trial (N=6642) had heart failure (HF) as an inclusion criterion. Administration of MRA versus placebo or standard therapy after MI reduced overall and cardiovascular mortality (odds ratio [OR] 0.83 [95% confidence interval [CI] 0.73 - 0.94], p=0.004, and OR 0.82 [95%CI 0.71 - 0.93], p=0.003, respectively (I² for both 0%)). Sensitivity analyses of HF and non-HF suggest a potential benefit in both but more data is necessary in non-HF patients (Figure). Overall, MRA therapy increased the risk for hyperkalemia (≥5.5mmol/L) (OR 1.57 [1.37 - 1.79], p<0.0001; I² 70%).

Conclusions: Administration of MRA after acute MI may reduce mortality. However, further data is required in patients presenting without HF. Therefore, a large scale randomized trial is needed to determine if this therapy is beneficial as a routine strategy in MI patients without HF.

Figure Sensitivity analysis comparing all cause mortality in patients treated with either MRA or standard therapy/ placebo among studies requiring heart failure (Killip class III-IV) for inclusion versus studies including also non-heart failure patients

