**Evidence** **Table E-31. Summary of the characteristics and outcomes of studies comparing ascorbic acid and other interventions for the prevention of contrast-induced nephropathy**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, year** | **Comparison** | **N** | **Population** | **Age, range of mean** § | **No. female (%)**‡ | **Mean follow up** | **CM**  **Route\*** | **Definition of CIN\*** | **Study limitations†** |
| Albabtain, 2013[4](#_ENREF_4) | IV Normal Saline vs. Oral Ascorbic Acid + IV Normal Saline vs. Oral NAC + IV Normal Saline vs. Oral NAC + Oral Ascorbic Acid + IV Normal Saline | 243 | SrCr ≥1.3 mg/dl or on diabetes medication | 61 | 66 (27) | 4-5 days | LOCM (Ioxaglate)  IA | A3 | L |
| Boscheri, 2007[18](#_ENREF_18) | Placebo + IV Normal Saline vs. Oral Ascorbic Acid + IV Normal Saline | 143 | Chronic renal failure and stable SrCr >120 umol/l | 71 | 40 (28) | 6 days | IOCM (Iodixanol)  IA | A1 | L |
| Brigouri, 2007[22](#_ENREF_22) | IV Normal Saline + oral NAC vs. IV NaHCO3 + oral NAC vs. IV Normal Saline + IV ascorbic acid + oral NAC | 326 | CKD with stable Cr at  2.0 mg/dL and/or estimated glomerular filtration rate 40 | 70 | 61 (19) | 7 days | IOCM (Iodixanol)  IA | A1 | L |
| Brueck, 2013[23](#_ENREF_23) | Placebo + IV Normal Saline vs. NAC + IV Normal Saline vs. Ascorbic Acid + IV Normal Saline | 499 | SrCr ≥1.3 mg/dl | 75 | 181 (36) | 72 hours | LOCM (NR)  IA | A3 | L |
| Dvorsak, 2013[33](#_ENREF_33) | IV Normal Saline + placebo vs. IV Normal Saline + ascorbic acid | 81 | Stable serum creatinine >107 umol/L | 71 | 22 (27) | 4 Days | LOCM (Iopamidol)  IA | A1 | M |
| Jo, 2009[52](#_ENREF_52) | Oral NAC + IV 0.45% Saline vs. Oral Ascorbic acid + IV 0.45% Saline | 212 | CrCl ≤60 ml/min or SrCr ≥1.1 mg/dl | 65 | 47 (22) | 6 months | IOCM (Iodixanol)  IA | A3 | L |
| Spargias, 2004[103](#_ENREF_103) | Placebo + IV Normal Saline vs. Oral Ascorbic Acid + IV Normal Saline | 231 | SrCr ≥1.2 mg/dl | 64-67 | 18 (8) | 5 days | LOCM/IOCM (NR)  IA | A3 | L |
| Zhou, 2012[120](#_ENREF_120) | IV Normal Saline vs. IV and Oral Ascorbic Acid + IV Normal Saline | 156 | eGFR <60 ml/min/1.73 m2 or SrCr ≥1.1 mg/dl | 71 | 58 (37) | 2 days | LOCM (Iopromide, Iohexol)  IOCM (Iodixanol)  IA | A3 | M |

**Evidence** **Table E-31. Summary of the characteristics and outcomes of studies comparing ascorbic acid and other interventions for the prevention of contrast-induced nephropathy (continued)**

CIN=contrast induced nephropathy; CKD=chronic kidney disease; CM=contrast media; Cr=creatinine; CrCl=creatinine clearance; eGFR=estimated glomerular filtration rate; IA=intra-arterial; IOCM=iso-osmolar contrast media; IV=intravenous; LOCM=low-osmolar contrast media; mg/dl=milligram per deciliter; ml/min/1.73m2=millimeter per minute per 1.73 meter squared; ml/min=milliliter per minute; N=sample size; NAC=N-acetylcysteine; NaHCO3=sodium bicarbonate; No.=number of; NR=not reported; SrCr=serum creatinine; umol/l=micromole per liter

\* CIN definitions: rise in serum creatinine relative to baseline: ≥25% (A1); ≥0.5 mg/dl (A2); ≥25% or ≥0.5 mg/dl (A3); ≥50% (A4), B: >25% reduction in creatinine clearance

† Study limitations: L=low risk of bias; M=moderate risk of bias; H=high risk of bias

‡ Percent females in entire study population

§ Some studies only reported mean age per arm, not one mean for whole population. This column shows range of the means across all arms.