

Guideline for Prevention of Contrast- Induced Nephropathy

Contrast induced nephropathy (CIN) is a common cause of acute renal failure occurring within 48-72 hrs of exposure to intravascular radiographic contrast material. The purpose of this guideline is to provide information on predisposing risk factors and pre-procedural prophylactic treatments that have been shown to decrease the incidence of this disorder in hospitalized patients.

General Recommendations:

Contrast media should be low or hypo-osmolar at a weight adjusted dose as follows: 5 ml X body weight (kg) / serum creatinine (mg/dl).

- **Assess patient for risk factors for CIN**

- **Risk Factors for CIN:**

1. **Pre-existing renal dysfunction**
2. **Age > 60 years**
3. **Diabetes mellitus**
4. **Renal Transplant**
5. **Reduced effective circulating arterial volume (hypovolemia, Ejection fraction < 30%, cirrhosis)**
6. **Concurrent use of nephrotoxic medications (Aminoglycosides, Amphotericin B, NSAIDS, ACEIs, Tacrolimus, Cyclosporine)**
7. **High contrast volume / osmolality**

- **Consider prophylaxis for any patient with at least one risk factor**

- **For urgent procedures (< 12 hrs): Sodium bicarbonate hydration or N-acetylcysteine IV PLUS NS hydration**

- **For planned or routine procedures (> 12 hrs): Oral N-acetylcysteine PLUS NS hydration**

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