

CONTRAST REACTION PREPARATION

RCI - revised Aug. 2010 -- G. Decker, MD

ACR full document: ACR-ContrastManual

REACTION	SYMPTOMS	PREPARATION
MILD	Nausea, Vomiting, Vertigo, Sneezing, Hives, Pruritis - requiring no more than Benadryl	Nothing or Benadryl
MODERATE	Hives or Pruritis requiring more than Benadryl; Protracted nausea and vomiting.	ELECTIVE: Prednisone 50 mg po @ 13hr, 7hr and 1hr before contrast. and Benadryl 50mg po,im or iv, 1hr prior. OR Medrol 32mg po @ 12hr and 2hr before contrast.
MODERATE	History of Asthma or care of Allergist.	EMERGENT: 1. Solumedrol (Methylprednisolone) 40 mg IV q4h till contrast. and Benadryl 50 mg iv. ----- OR 2. Solucortef 200mg iv q4h prior and Benadryl 50 mg iv. ----- OR 3. If allergic to SoluMedrol, Decadron 7.5 mg iv q4h and Benadryl 50 mg iv.
SEVERE	Shock, Bronchospasm, Laryngospasm, Convulsions, low BP, Cardiac arrythmia, Angina, Pulmonary edema.	1. Consider other diagnostic procedure. 2. Confer with referring Physician. 3. Treat as for Moderate.

Excerpted from the ACR web document: To see full document, go to:
http://www.acr.org/secondarymainmenucategories/quality_safety/contrast_manual/patientselection.aspx

Premedication for possible reactions:

A. No scientific evidence currently exists which documents the efficiency of pre-medication of patients at high risk for contrast reactions prior to using non-ionic agents. However, cross reactivity does exist between ionic and non-ionic agents, hence the following policy:

- 1) No history of previous reactions: no meds.
- 2) Mild or moderate reaction to ionic or mild reaction to non-ionic contrast: no meds required, may treat with Benadryl (25 mg. p.o. or IM) if patient is very apprehensive.
- 3) Moderate reaction to non-ionic contrast:
 - a. Elective procedure

Two frequently used regimens are:

1. Prednisone – 50 mg by mouth at 13 hours, 7 hours, and 1 hour before contrast media injection, plus Diphenhydramine (Benadryl[®]) – 50 mg intravenously, intramuscularly, or by mouth 1 hour before contrast medium [12]

or

2. Methylprednisolone (Medrol[®]) – 32 mg by mouth 12 hours and 2 hours before contrast media injection. An anti-histamine (as in option 1) can also be added to this regimen injection [34]. If the patient is unable to take oral medication, 200 mg of hydrocortisone intravenously may be substituted for oral prednisone in the Greenberger protocol.

b. Emergent procedure: (In Decreasing Order of Desirability)

1. Methylprednisolone sodium succinate (Solu-Medrol[®]) 40 mg or hydrocortisone sodium succinate (Solu-Cortef[®]) 200 mg intravenously every 4 hours (q4h) until contrast study required plus diphenhydramine 50 mg IV 1 hour prior to contrast injection [35].

2. Dexamethasone sodium sulfate (Decadron[®]) 7.5 mg or betamethasone 6.0 mg intravenously q4h until contrast study must be done in patient with known allergy to methylpred-nisolone, aspirin, or non-steroidal anti-inflammatory drugs, especially if asthmatic. Also diphenhydramine 50 mg IV 1 hour prior to contrast injection.

3. Omit steroids entirely and give diphenhydramine 50 mg IV.

Note: IV steroids have not been shown to be effective when administered less than 4 to 6 hours prior to contrast injection.

- 4) Severe reaction: Consider alternate diagnostic procedures; confer with referring physician regarding prophylaxis if exam is considered essential. If the exam is to be performed, pretreat with the same regimen as used for moderate reactions.