Contrast Media Premedication

The purpose of this policy is to define MRG’s recommendations for pre-medicating patients prior to contrast media administration.

Scope

This policy applies to patients who have a known or suspected allergy to contrast media and will need contrast administration during an imaging exam or procedure that is under the general or direct supervision of a MRG radiologist. A copy of this policy will be distributed to all facilities.

Policy


Oral administration of steroids is preferable to IV administration, and prednisone and methylprednisolone are equally effective. It is preferred that steroids be given beginning at least 6 hours prior to the injection of contrast media regardless of the route of steroid administration whenever possible. It is unclear if administration for 3 hours or fewer prior to contrast reduces adverse reactions. Supplemental administration of an H-1 antihistamine (e.g., diphenhydramine), orally or intravenously, may reduce the frequency of urticaria, angioedema, and respiratory symptoms.

Additionally, ephedrine administration has been suggested to decrease the frequency of contrast reactions, but the use of this medication is not advised in patients with unstable angina, arrhythmia, or hypertension. In fact, inclusion of ephedrine in a routine premedication protocol is not recommended.

- Specific Recommended Premedication Regimens
  - Several premedication regimens have been proposed to reduce the frequency and/or severity of reactions to contrast media.

- Elective Premedication
  - 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.

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- 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.

Note: If the patient is unable to take oral medication, 200 mg of hydrocortisone intravenously may be substituted for oral prednisone.
Emergency Premedication (In Decreasing Order of Desirability)

- 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 (Benadryl®) – 50 mg IV 1 hour prior to contrast injection.

- 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 methylprednisolone, aspirin, or non-steroidal anti-inflammatory drugs, especially if asthmatic. Also diphenhydramine 50 mg IV 1 hour prior to contrast injection.

- 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.