

Adverse Drug Reactions with Iodinated Oral Contrast

Introduction

It is well documented, though not widely understood, that iodinated oral contrasts (particularly ionic) are absorbed systemically and can cause adverse drug reactions (ADRs). The ADRs can be severe to the point of being life threatening due to anaphylactic or other anaphylactoid type reactions.

Although absorption can occur in a normal, healthy bowel, such absorption is minimal. Clinically significant absorption is usually only noted in patients with inflamed bowel due to IBD, radiotherapy, diverticulitis or other intestinal pathologies. In addition, any perforation of an otherwise healthy bowel may result in leakage of the contrast into the peritoneal cavity and rapid subsequent absorption. Although there are certain indicators as to which patients might have a sensitivity to iodine-based contrast agents (e.g. shellfish allergy), reactions can occur unexpectedly.

Considerations

In today's litigious society, healthcare professionals must consider minimizing the potential adverse consequences of any form of treatment they administer. As the ADRs associated with ionic iodinated oral contrast agents become more widely recognized, doctors who insist on using such agents should reserve them solely for use in non-atopic patients who are known not to have inflamed bowel. Considering the large portion of the population over the age of 60 with diverticulae (who may not be symptomatic), a clinician would be well advised to have a good understanding of each patient's potential for adverse reactions before choosing to use oral iodine in this group.

There are many other examples of situations that can produce inflammatory change in the gastrointestinal tract that could, for the cautious physician, form exclusion criteria for the use of oral ionic iodinated contrast. Such examples include:

- Previous radiotherapy that might have impinged on bowel
- Smoking
- Alcohol consumption
- Gastroenteritis
- Highly spiced diet
- Family history of polyposis

Even having gone through such an extensive list of exclusion criteria, it is still possible for a patient to have an ADR!

An Alternative Approach

The alternative for the physician is to use a specially developed CT oral contrast agent using pharmacologically inert barium sulfate such as the E-Z-EM CT Oral Contrast line*. Not only will the patient's safety be optimized by using a less immunoreactive barium sulfate†, but the range of available formulations and flavors** may help maximize patient acceptability and compliance††. The final evidence is that even E-Z-CAT®, the original E-Z-EM CT oral contrast, demonstrates superior opacification to oral iopamidol, arguably the best available iodinated oral contrast††.

Fact Box

What are Anaphylactoid Reactions?

Anaphylactic reactions are severe, rapid reactions mediated by immunoglobulin E (IgE). They occur when the body has been previously "sensitized" to an allergen by a prior exposure. Rather than the first exposure generating immunity as might be expected from a "normal" antibody/antigen reaction (prophylaxis), a paradoxical reaction occurs on second (and subsequent) exposure, which is far more severe than the original reaction (anaphylaxis).

If a reaction has a clinical manifestation similar to anaphylaxis, but IgE does not mediate the mechanism, then the reaction is said to be "anaphylactoid".

Because the observed clinical effect is always noted but the immunological status is not, such reactions are always referred to as anaphylactoid unless there is suitable evidence to prove them anaphylactic.

In practical terms, the mechanism of the reaction is rarely investigated since the symptoms and treatment of the condition are the same whether IgE is a mediator or not.

*E-Z-EM manufactures and markets a wide range of CT oral contrast products. All products in the range have essentially similar clinical properties, and the decision to choose one over another is based on non-medical criteria such as convenience or taste preference. Not all products manufactured by E-Z-EM are available in all global markets. Brand names used for E-Z-EM CT oral contrast products in various global territories include SMOOTHIE, READI-CAT®, E-Z-CAT®, E-Z-CAT® DRY and BARICAT®.

** Not all flavors are available in different countries - refer to local E-Z-EM distributor/agent.

† Barium sulfate formulations are contraindicated for patients with known gastro or intestinal perforations or hypersensitivity to barium sulfate products. Rarely, severe allergic reactions of an anaphylactoid nature have been reported during the administration of barium sulfate agents.

†† Data on file.



Visualize a healthier world

E-Z-EM, INC.

Global Headquarters

1111 Marcus Avenue, Suite LL-26
Lake Success, NY 11042 USA
PHONE: 516-333-8230
TOLL FREE: 1-800-544-4624 (US only)
FAX: 516-302-2919
www.ezem.com

E-Z-EM Ltd.

International Office

Avonbury Business Park
Howes Lane, Bicester
OX26 2UA, United Kingdom
Orderline: 0800 18 17 33 (UK only)
Phone: +44 (0) 1869 366900
Fax: +44 (0) 1869 366999
Email: information@ezem.co.uk