Extravasation of Contrast Media

ACR Manual on Contrast Media

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Treatment

There is no clear consensus regarding effective treatment for contrast medium extravasation. Elevation

of the affected extremity above the level of the heart to decrease capillary hydrostatic pressure and thereby

promote resorption of extravasated fluid is recommended, but controlled studies demonstrating the efficacy

of this treatment are lacking. There is no clear evidence favoring the use of either warm or cold compresses

in cases of extravasation. As a result there are some radiologists who use warm compresses and some who

use cold compresses. Those who have used cold have reported that it may be helpful for relieving pain at the

injection site. Those who have used heat have found it helpful in improving absorption of the extravasation

as well as in improving blood flow, particularly distal to the site.

There is no consistent evidence that the effects of an extravasation can be mitigated effectively by

trying to aspirate the extravasated contrast medium through an inserted needle or angiocatheter, or by local

injection of other agents such as corticosteroids or hyaluronidase.

Outpatients who have suffered contrast media extravasation should be released from the radiology

department only after the radiologist is satisfied that any signs and symptoms that were present initially

have improved or that new symptoms have not developed during the observation period. Clear instructions

should be given to the patient to seek additional medical care, should there be any worsening of symptoms,

skin ulceration, or the development of any neurologic or circulatory symptoms, including paresthesias.

Surgical Consultation

Surgical consultation prior to discharge should be obtained whenever there is concern for a severe

extravasation injury. An immediate surgical consultation is indicated for any patient in whom one or more

of the following signs or symptoms develops: progressive swelling or pain, altered tissue perfusion as

evidenced by decreased capillary refill at any time after the extravasation has occurred, change in sensation

in the affected limb, and skin ulceration or blistering. It is important to note that initial symptoms of a

compartment syndrome may be relatively mild (such as limited to the development of focal paresthesia).

In a previous edition of this manual, it was recommended that surgical consultation should be obtained

automatically for any large volume extravasations, particularly those estimated to be in excess of 100 ml;

however, more recently it has been suggested that reliance on volume threshold is unreliable and that the

need for surgical consultation should be based entirely on patient signs and symptoms. If the patient is

totally asymptomatic, as is common with extravasations in the upper arm, careful evaluation and appropriate

clinical follow-up are usually sufficient.

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Steven Borislow, MD  
Medical Director, Imaging Centers  
University of Pennsylvania Health System  
Division of Community Radiology