Multiple reasonably tolerated percutaneous coronary interventions in a patient with iodide mumps

Although some adverse reactions to radiocontrast media may be IgE-mediated hypersensitivity, most are due to pharmacologic toxicity or other pseudoallergic causes. Radiocounter media agents are all tri-iodinated benzene derivatives, and although iodine sensitivity was once believed to be a major cause, adverse reactions to contrast are now thought to be largely unrelated to iodine content. An exception is iodide sialadenopathy, or iodide mumps, which is characterized by acute or delayed swelling of the submandibular or parotid glands after exposure to iodinated radiographic contrast media. The condition was originally described in 1956 in a case series of patients who developed symptoms after intravenous urography. Despite its seemingly rare occurrence, iodide sialadenopathy may actually be underdiagnosed; a study performed by McCullough et al assessing for the incidence of immediate and delayed reactions to contrast media found symptoms consistent with parotitis in approximately 1% to 2% of the 1,381 patients evaluated.

Although most iodine is renally excreted, the remainder is excreted through salivary, sweat, and lacrimal glands. The exact mechanism of iodide mumps is unclear, but it has been postulated that iodine accumulation in the salivary secretions leads to mucosal edema, ductal obstruction, and subsequent sialadenitis. Pancreatitis has been reported in rare instances. Further supporting the role of iodine in the pathogenesis of iodide sialadenopathy, a study examining the role of iodine in radiocontrast media reactions found 2 patients with histories of likely iodide sialadenopathy to have reproducible submandibular swelling on oral ingestion of potassium iodide.

Because iodide mumps is not thought to be mast cell or leukocyte mediated, premedication with antihistamines and/or corticosteroids has not been found to be successful. Other unsuccessful treatments include hyperhydration, given the renal excretion of iodine, and blocking thyroid iodine uptake. Kalaria et al reported an expedited resolution of swelling in one patient with the use of dialysis, suggesting that this intervention could be considered to hasten improvement of severe cases. With no proven prophylactic treatment available, avoidance of contrast media is the only preventive measure for patients with a history of iodide mumps. However, avoidance may not be possible for patients with significant coronary artery disease who require repeated percutaneous coronary interventions. Although iodide sialadenopathy associated with percutaneous coronary intervention has generally been reported as self-limited, the safety of repeated angioplasty in such patients has not been assessed. Herein, we describe a woman with a history of iodide mumps and significant coronary artery disease requiring percutaneous coronary intervention on 3 separate occasions.

The patient was a 76-year-old woman with a history of coronary artery disease who presented with unstable angina. She additionally reported a history of anaphylaxis, characterized by facial edema, diarrhea, and vomiting. She received 150 mL of iopamidol (a nonionic, low-contrast agent). The procedure was uneventful; however, approximately 12 hours after completion she developed bilateral submandibular swelling that was nonindurated, nonerythematous, and mildly tender to palpation. The patient was otherwise able to tolerate oral intake and was discharged home.

References


Disclosures: Authors have nothing to disclose.
Funding: This study was funded by the Jeffrey Modell Foundation.
angioedema, or renal disease. Laboratory evaluation revealed a normal complete blood cell count with differential, a basic metabolic panel with a creatinine level of 1.04 mg/dL (which was baseline for the patient), and a normal C-reactive protein level and erythrocyte sedimentation rate. The patient’s submandibular swelling resolved without intervention within 4 days.

Two months later the patient underwent a second percutaneous coronary intervention with 100 mL of iopamidol contrast media. The patient was again premedicated with prednisone and diphenhydramine before the procedure, yet similarly developed submandibular swelling the following day, which resolved within 3 days without intervention. The patient then had a third percutaneous coronary intervention 2 months later for which she received 150 mL of iopamidol contrast agent. She was once again premedicated with prednisone and diphenhydramine but subsequently developed submandibular swelling approximately 12 hours after this procedure, which resolved within 2 to 3 days without intervention.

Although there is no definitive diagnostic test available, our patient’s case is consistent with iodide mumps based on her history of bilateral submandibular swelling hours after receiving contrast media and absence of response to corticosteroid and antihistamine premedication. This diagnosis was further supported by a recurrence of symptoms on additional exposure to iodinated contrast. Although this patient had a history of contrast anaphylaxis, it is possible that the initial event, which included a description of facial swelling, was actually an episode of iodide sialadenopathy. Regardless, the patient received premedication with antihistamine and corticosteroid in accordance with anaphylaxis history, with sialadenopathy recurring on each subsequent exposure to iopamidol. Thus, this case clearly indicates that premedication with antihistamines and corticosteroid, as used for most other contrast reactions, is not effective for iodine mumps. Because significant coronary artery disease may necessitate repeated cardiac catheterization requiring iodinated contrast media, the consulting allergist-immunologist may be asked to weigh the benefits of angioplasty with the risks of iodide sialadenitis. Notably, no fatalities or needs for emergency airway management have been reported in association with iodide mumps. Therefore, in most cases, the benefits of percutaneous coronary intervention may outweigh the risks of iodide sialadenopathy. This case reveals that repeated percutaneous coronary intervention can be relatively safe in a patient with a history of iodide mumps. In our patient, only mild self-limited episodes of sialadenitis occurred on repeated iodinated contrast exposure. Importantly, subsequent exposures to iodinated contrast did not result in successively worsened symptoms. Before each iodinated contrast exposure, the patient was noted to have normal renal function, which may have ensured the limited severity of sialadenitis via effective kidney excretion of iodide. In patients with chronic kidney disease or acute kidney injury, dialysis may be required to reduce the severity or duration of iodide mumps.

Boletus dermatitis: a new variant of flagellate erythema

A 56-year-old patient presented with itchy skin lesions that had reportedly appeared overnight. She recalled having eaten grilled mushrooms in an Italian restaurant 3 days ago. The patient did not take any medication, had no history of atopic or allergic diseases, and was otherwise in good health. In particular, she did not have fever, lymphadenopathy, muscle weakness, or symptoms that were reportedly associated with mushrooms in an Italian restaurant. Physical examination revealed whiplash-shaped, erythematous plaques arranged in a parallel on the trunk and extremities. On therapy with class 3 antihistamines and corticosteroid, as used for most other contract reactions, is not effective for iodine mumps.

Because significant coronary artery disease may necessitate repeated cardiac catheterization requiring iodinated contrast media, the consulting allergist-immunologist may be asked to weigh the benefits of angioplasty with the risks of iodide sialadenitis. Notably, no fatalities or needs for emergency airway management have been reported in association with iodide mumps. Therefore, in most cases, the benefits of percutaneous coronary intervention may outweigh the risks of iodide sialadenopathy. This case reveals that repeated percutaneous coronary intervention can be relatively safe in a patient with a history of iodide mumps. In our patient, only mild self-limited episodes of sialadenitis occurred on repeated iodinated contrast exposure. Importantly, subsequent exposures to iodinated contrast did not result in successively worsened symptoms. Before each iodinated contrast exposure, the patient was noted to have normal renal function, which may have ensured the limited severity of sialadenitis via effective kidney excretion of iodide. In patients with chronic kidney disease or acute kidney injury, dialysis may be required to reduce the severity or duration of iodide mumps.

References


Disclosures: Authors have nothing to disclose.