

## Iodide Mumps



Noola B, MD  
email : bbnoola@yahoo.com

Busabong Noola, MD<sup>1,2</sup>

<sup>1</sup> Department of Radiology, Phramongkutklo Hospital, Bangkok, Thailand.

<sup>2</sup> Imaging Center, Bangkok Hospital, Bangkok Hospital Group, Bangkok, Thailand.

### Keywords:

iodine mumps, adverse contrast reaction, salivary gland, submandibular gland

Iodide mumps, a swelling of the salivary glands after a contrast medium injection, is a rare adverse reaction. This article considered a case of a 57-year-old male with a history of renal cell carcinoma who developed progressive swelling of the bilateral submandibular glands several hours after an intravenous (IV) contrast enhanced computed tomography (CT) imaging study was conducted during a routine tumour surveillance. After supportive medical treatment, the swelling of the glands gradually regressed and returned to normal within a few days.

### Case Report

A 57-year-old male patient had a history of renal cell carcinoma and a right nephrectomy for six months. He was sent for a follow up CT scan for routine tumor surveillance. Prior to the surgery, he had had experience of IV contrast enhanced CT imaging without any kind of complication. This CT study was done by intravenous administration of 100 ml. low-osmolality nonionic iodinated contrast media. After finishing the study, no acute adverse reaction was observed within 30 minutes. Several hours later, though, the patient developed progressive swelling of both submandibular glands without any other symptoms. He came back to the hospital and a diagnosis of iodide mumps was given. After supportive treatment by corticosteroids and antihistamine, the swelling of the glands gradually regressed and returned to normal within a few days.

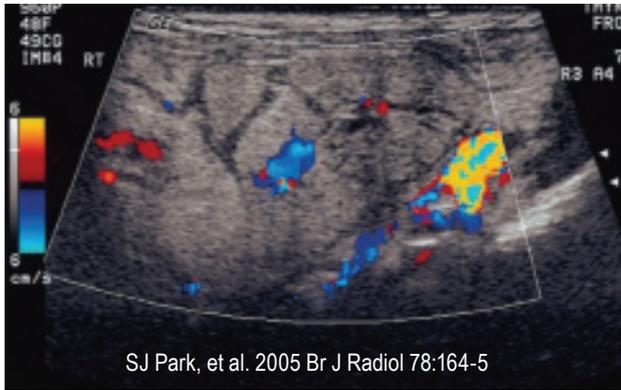
### Discussion

Iodide mumps is an abnormal swelling of the salivary glands linked to an intravascular administration of iodine containing contrast material. This adverse reaction is rare. There are fewer adverse reactions when low-osmolality agents are administered. That said, the incidence of iodism, including iodide mumps, is the same for low and high osmolar contrast agents.<sup>1</sup> The ultrasound findings of the iodide mumps showed a diffuse swelling of the bilateral submandibular glands with prominent internal low echoic septa without increased vascularity<sup>2</sup> (Figure 1).

The prognosis of iodine mumps is relatively benign. The onset varies from within a few minutes to up to 5 days after contrast medium administration.<sup>3</sup> Associated adverse reactions with iodide mumps are facial nerve paralysis, severe allergic vasculitis, skin erythema, enlargement of the thyroid and lacrimal glands. However, no life threatening reaction has been reported.<sup>3</sup> The current management of iodide mumps is supportive therapy. In almost half of the reported cases recovery occurred without treatment.<sup>3</sup>

In this case, the reaction is classified as a delayed adverse reaction because the symptoms occurred several hours after contrast exposure. Most of delayed contrast reactions are cutaneous symptoms such as urticarial and/or a persistent rash. Other rare delayed adverse reactions

like iodine mumps and acute polyarthropathy have been reported.<sup>4</sup> Although the pathogenesis of delayed reactions is not well understood, it appears that many are T-cell-mediated reactions. Predisposing factors for delayed reactions include previous experience of delayed reactions and interleukin-2 therapy.<sup>5</sup>



**Figure 1:** The color Doppler ultrasound shows a diffuse swelling of the submandibular gland with prominent internal low echoic septa and without increased vascularity.<sup>2</sup>

## Conclusion

Intravenous iodinated contrast agents are generally safe. Though the frequency of side effects has fallen significantly since the introduction of nonionic, monomeric contrast agents, side effects remain an important issue. Iodide mumps is a rare adverse reaction which is non-life threatening and requires only supportive measures and reassurance. Knowledge about this condition is important for appropriate management. Since the reaction may be due to T-cell-mediated hypersensitivity, the recurrence of a reaction may happen with re-exposure to contrast media. To avoid a more severe reaction, intravenous iodinated contrast agents should be avoided in patients who have already experienced an adverse reaction.

## References

1. Berman HL, Delaney V. Iodide mumps due to low-osmolality contrast material. *AJR Am J Roentgenol* 1992;159:1099-100.
2. Park SJ, Hong HS, Lee HK, et al. Ultrasound findings of iodide mumps. *Br J Radiol* 2005;78:164-5.
3. Christensen J. Iodide mumps after intravascular administration of a nonionic contrast medium. *Acta Radiol* 1995;36:82-4.
4. Adverse Events of Iodinated Contrast Media: ACR Manual on contrast Media-Version 8, 2012. Available from <http://www.acr.org/>.
5. Webb JA, Stacul F, Thomsen HS, et al. Late adverse reaction to intravascular iodinated contrast media. *Eur Radiol* 2003;13:181-4.