

## Glow in the dark

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**Objective:** To highlight the importance of radiation safety and handling of radioactive secretions following <sup>131</sup>I-meta iodobenzylguanidine (<sup>131</sup>I-mIBG) use in the treatment of neuroblastoma.

**Methods:** We report a 4-year-old girl with stage 4 neuroblastoma, on whom's single-photon emission computer tomography (SPECT) scan we demonstrate four extra-corporal areas of radioactivity confirming radiation uptake in the four corners of her 'comfort blanket' that had been used to cover her during the scan. It transpired that she had been sucking on the four corners of this blanket.

**Results:** The patient's secretions remain radioactive for some time following scintigraphy, as evidence of radioactivity in the patient's comfort blanket.

**Conclusions:** Radioactive uptake of <sup>131</sup>I-mIBG in the salivary glands of patients has previously been reported. This illustrative case emphasizes that patient's secretions remain radioactive following treatment and highlights the importance of careful handling of radioactive secretions.

**Keywords:** <sup>131</sup>I-meta iodobenzylguanidine (<sup>131</sup>I-mIBG); salivary uptake; radiation safety; neuroblastoma; SPECT scan

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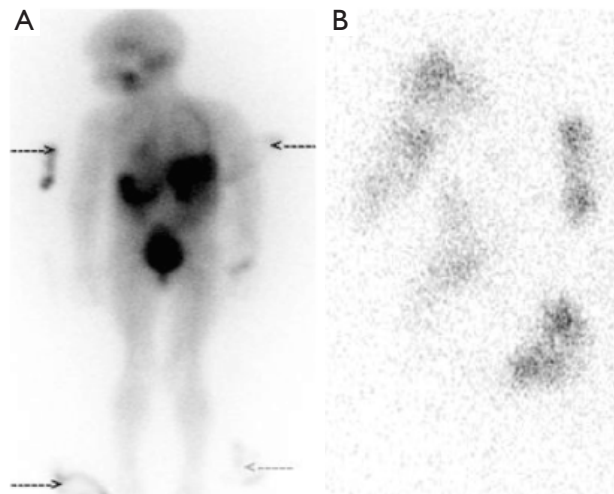
### Image of the month

A 4-year-old girl with stage 4 neuroblastoma had a single-photon emission computer tomography (SPECT) scan three days after a therapeutic administration of radioactive <sup>131</sup>I-meta iodobenzylguanidine (<sup>131</sup>I-mIBG). *Figure 1A* illustrates four radioactive areas (see arrows) outside her body contours in addition to the radioactive uptake in the metastases. It transpired that the child had been sucking at the four corners of her 'comfort blanket' throughout her treatment, which had also been used to cover her during the scan, resulting in radioactive contamination of the corners of the blanket. The blanket was scanned separately, confirming the nature of external abnormalities (*Figure 1B*).

Molecular radiotherapy with <sup>131</sup>I-mIBG for

neuroblastoma has been in clinical use for nearly 30 years. In this time, its role has changed from being an exclusively palliative treatment to one where the intent of treatment is often curative (1). Uptake of <sup>131</sup>I-mIBG has been reported by Nakajo *et al.* in the salivary glands of patients undergoing scintigraphy for the location of suspected pheochromocytomas. This uptake of radioactivity was not due to free <sup>131</sup>I derived from the <sup>131</sup>I-mIBG but rather to uptake of <sup>131</sup>I-mIBG by sympathetic neuronal elements in the salivary glands (2).

This illustrative case emphasizes that patient's secretions remain radioactive for some time following treatment and highlights the importance of careful handling of radioactive secretions.



**Figure 1** (A) Single-photon emission computer tomography (SPECT) scan three days after a therapeutic administration of radioactive  $^{131}\text{I}$ -meta iodobenzylguanidine ( $^{131}\text{I}$ -mIBG) for neuroblastoma. Arrows point to four radioactive areas outside the body contours in addition to the radioactive uptake in the metastases; (B) scan of the child's 'comfort blanket', showing radioactive contamination of the corners of the blanket from the child's saliva.

*Disclosure:* The authors declare no conflict of interest.

## References

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