

Unusual patterns of I-131 contamination

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Whole body imaging with radioiodine can detect functioning metastases, which can often be effectively treated with appropriate amounts of radioiodine. Non-physiologic I-131 uptake detected on images is usually interpreted as suggesting functioning thyroid metastases. However, extra-thyroidal I-131 accumulation does not always imply thyroid cancer metastases and has been reported on many occasions, including various non-thyroidal neoplasms, and contamination by body secretions. In order to avoid unnecessary therapeutic interventions it is extremely important to properly distinguish false-positive sites of I-131 localization. Three patients with unusual radioiodine contamination patterns, either presented for the first time or rarely presented in the existing literature, were reported. Reported cases consist of contamination in hair (due to styling hair with sputum), contamination in neck (due to drooling during sleep) and, contaminated chewing gum. False positive contamination sources were clarified by careful examination of patients and further images when necessary.

Key words: I-131 scanning, thyroid cancer, contamination