

## 갑상선암 환자에서 방사성 옥소로 오염된 목도리에 의한 위양성 소견

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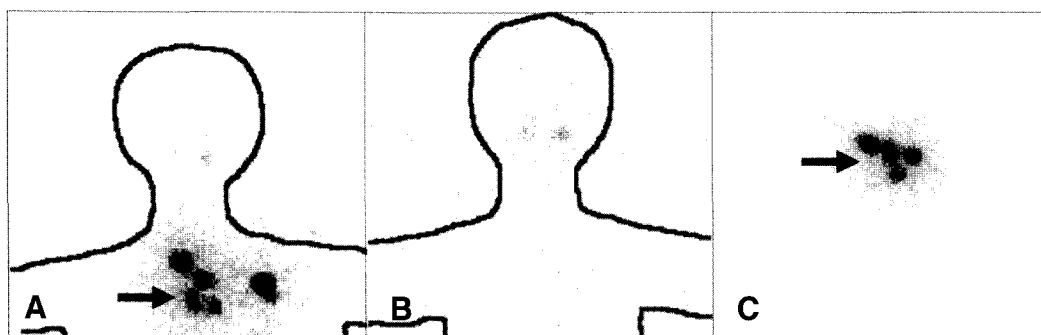
### False-positive I-131 Scan by Contaminated Muffler in a Patient with Thyroid Carcinoma

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A 39-year-old female patient who had undergone a total thyroidectomy for a papillary thyroid carcinoma underwent a whole body scan with I-131. The I-131 scan was performed 72 hours after administering 185 MBq (5 mCi) of an I-131 solution. The anterior image of the head, neck, and upper chest showed multiple areas of increased uptake in the mediastinal area considering of functional metastasis. However, radioactivity was not evident in the image taken after removing her clothes and muffler. The image obtained after placing the muffler on the pallet showed that the radioactivity was still present. It is well known that artifacts on an I-131 scan can be produced by styling hair sputum, drooling during sleep, chewing gum, and paper or a cloth handkerchief that is contaminated with the radioactive iodine from either perspiration or saliva. This activity might be mistaken for a functional metastasis. Therefore, it is essential that an image be obtained after removing the patient's clothes. In this study, artifacts due to a contaminated muffler on the I-131 scan were found. These mimicked a functional metastasis of the mediastinal area in a patient with a papillary thyroid carcinoma. (Nucl Med Mol Imaging 2006;40(1):51-52)

**Key Words:** I-131 scan, artifact, contamination, differentiated thyroid carcinoma



**Fig. 1.** Anterior image (A) of a 39-year-old female patient with a papillary thyroid carcinoma obtained 72 hours after the oral intake of a 185 MBq (5 mCi) I-131 solution showed multiple areas of increased uptake in the mediastinal area (arrow). The anterior image taken after removing her clothes and muffler (B) showed no radioactivity. Image of placing only the muffler on the pallet (C) demonstrates multiple focal intense activity caused by contamination with radioactive iodine (arrow).

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