

— Interesting Image —

Unusual Tc-99m MDP Uptake in the Keloid Developed after Subtotal Gastrectomy

Seok Tae Lim, M.D.,¹ Soon-Ah Park, M.D.,¹ Myung-Hee Sohn, M.D.^{1,3} and Chang-Yeol Yim, M.D.^{2,3}

Departments of Nuclear Medicine¹ and Internal Medicine,² and Institute for Medical Sciences,³ Chonbuk National University Medical School, Chonju, Korea

A 63-year-old male who had subtotal gastrectomy for early gastric cancer three months ago underwent Tc-99m bone scintigraphy for the evaluation of skeletal metastases. He had no symptoms such as fever, tenderness, or wound discharge. On physical examination, the surgical scar along the midline of the upper abdomen had keloid formation and there was no radiographic evidence of calcification. Bone scintigraphy (Fig. 1A & 1B) demonstrated an unusual linear increased uptake along the midline of the upper abdomen that corresponded to the skin incision for subtotal gastrectomy.

Usually, an incisional scar will not be visualized in Tc-99m methylene diphosphate (MDP) scintigraphy beyond two weeks after surgery.¹⁾ Upon reviewing the literature, there were only a few reports where localization of Tc-99m MDP in surgical scars were found two months after surgery.²⁾ It was also reported that a few cases with Tc-99m MDP uptake in the keloid scar developed after surgery.

Although there are several potential mechanisms that may explain the uptake of Tc-99m MDP in

scar tissue, the primary mechanism in older scars is suggested to be a result of pathological calcification.²⁾ Siddiqui et al³⁾ suggested it could be due to microscopic calcification in small resolving hematomas. However, the primary mechanism in keloid scar is not well-known. We should obtain oblique or lateral views to differentiate the uptake in healing surgical scars from the artifactual uptake.^{1,4)}

Key Words: Keloid, Tc-99m MDP, Bone scintigraphy, Incisional scar, Subtotal gastrectomy

References

- 1) Shih W, Deland FH, Domstad PA, Dillon ML. Unusual persistence of Tc-99m MDP uptake in the incisional scar after thoracotomy. *Clin Nucl Med* 1984;9:596-7.
- 2) Prince JR. Localization of Tc-99m diphosphonate in a surgical scar: a speculative case report and a review of the literature. *Eur J Nucl Med* 1979; 4:69-71.
- 3) Siddiqui AR, Stokka CL. Uptake of Tc-99m methylene diphosphonate in a surgical scar. *Clin Nucl Med* 1980;5:274.
- 4) Poulouse KP, Reba RC, Eckelman WC, Goodyear M. Extra-osseous localization of Tc-99m pyrophosphate. *Br J Radiol* 1975;48:724-6.

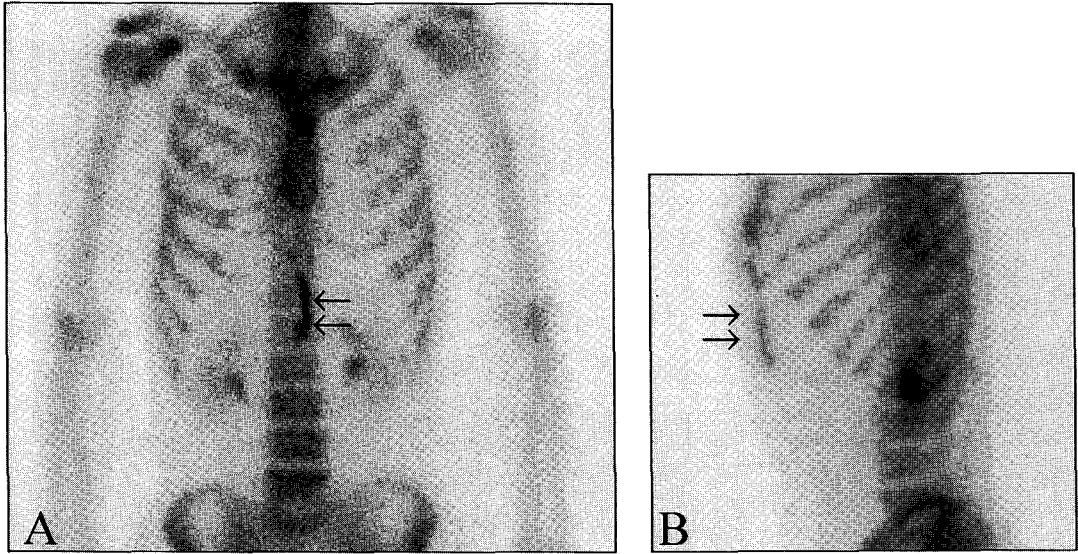


Fig. 1. The anterior image (A) of Tc-99m MDP bone scintigraphy shows an unusual linear increased uptake along the midline of the upper abdomen that corresponded to the skin incision for subtotal gastrectomy. The left lateral view (B) obtained additionally to differentiate any other abnormal uptake demonstrates that the unusual uptake was superficial in healing surgical scar such as keloid.