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Positive gallium-67 and thallium-201 scans in thymic rebound after chemotherapy for lymphoma

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It is a diagnostic problem to distinguish thymic rebound or rebound thymic hyperplasia from thymic malignancy, but it is frequently made more difficult because most patients have had previous malignancies. Recently we evaluated a six-year-old girl with thymic rebound after chemotherapy for lymphoma, by both gallium-67 and thallium-201 scans. On gallium-67 scan, intensive uptake was seen in the anterior mediastinum. CT revealed a triangular-shaped, homogeneous mass in the anterior mediastinum. On early scan of thallium-201 study, slight accumulation was seen in the anterior mediastinum and was enhanced in delayed scans. Considering the clinical state and imaging results, thymic rebound after chemotherapy was the most likely diagnosis, and follow-up observation was done without therapy. During the course, there were no signs of relapse. Some reports have described both positive and negative thallium-201 accumulation in thymic rebound. Although more experience with similar cases is necessary, it is likely that thallium-201 also tends to accumulate in thymic rebound as well as gallium-67.

Key words: gallium-67, thallium-201, thymic rebound