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<sup>131</sup>I THERAPY WITH LITHIUM IN PATIENTS WITH GRAVES' DISEASE. I. Morimoto, M. Izumi, S. Yamashita, S. Otagara, I. Kubo, H. Hirayu, M. Taura, B. Watanabe, K. Sato, T. Usa, R. Maeda and S. Nagataki Department of 1st Internal Medicine, Nagasaki University School of Medicine. Nagasaki

Lithium inhibit release of thyroid hormones without inhibiting thyroidal uptake of <sup>131</sup>I. Therefore lithium enhance iodine content of the thyroid gland and alleviate hyperthyroidism. This action of lithium lead us to use lithium with adjunct to <sup>131</sup>I therapy. Three untreated patients with Graves' disease were given tracer dose of <sup>131</sup>I. One week later, administration of 600mg of lithium daily was started and continued for 5 weeks. Thereafter 100mg of iodide was given daily for 6 months. Two weeks after the beginning of lithium therapy, 1mCi of <sup>131</sup>I was given. Biological half lives of these three patients before lithium therapy were 11.5, 12 and 11 day respectively. These values were prolonged almost horizontal by lithium but exact number could not measured due to disappearance curves. Effective half lives before lithium therapy were 4.5, 4.8 and T<sub>4</sub> in the first two of them became normal at the end of lithium therapy. The radiation doses of <sup>131</sup>I therapy were increased by lithium therapy to 1.8, 1.5 and 1.9, respectively, got remission for 5 years at present. The other patient given 690 rad did not get remission.

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CHRONIC THYROIDITIS WITH TRANSIENT HYPERTHYROIDISM AND LOW RADIOIODINE UPTAKE. M. Onguchi, T. Michigishi, N. Tonami and K. Hisada Department of Nuclear Medicine, Kanazawa University Hospital, Kanazawa

Seven cases of transient hyperthyroidism, including three cases after delivery, were found in chronic thyroiditis. This form of chronic thyroiditis was characterized by a painless, nontender thyroid gland, elevated serum levels of thyroxine and triiodothyronine, a lack of laboratory findings supporting inflammatory changes (e.g. normal ESR and negative CRP), a low radioiodine uptake, and a spontaneous resolution. The radioiodine uptake test was essential to differentiate this form of chronic thyroiditis from Graves' disease. From our results, this form of transient hyperthyroidism with chronic thyroiditis may be identical to so-called atypical subacute thyroiditis.

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REPORT ON A CASE OF FOLLICULAR CARCINOMA OF THE THYROID WITH FUNCTIONING LUNG METASTASES AND CLINICAL HYPERTHYROIDISM  
H. Matsuda, T. Kamei, E. Matsumoto, T. Yamazaki, I. Tatsuono Department of Radiology, Kanazawa National Hospital

Functioning thyroid carcinoma is not a rare occurrence, but hyperthyroidism of this origin is extremely rare. Since Leiter et al. (1946) reported two patients with adenocarcinoma of the thyroid with functioning metastases and thyrotoxicosis, about 30 such cases have been reported. The case we reported is an example of hyperthyroidism resulting from a functioning lung metastases of follicular carcinoma of the thyroid gland. A 59-year-old office clerk was seen on Jan.29,1980. For 6 month he had noticed exertional palpitation and shortness of breath. He had lost 13 Kg in weight in spite of a good appetite. He had a history of enucleation of thyroid nodule, of which microscopic finding was follicular carcinoma, four years before. A chest X-ray showed multiple pulmonary small nodules. Triosorb was 48% and T<sub>4</sub> 16.5µg/dl. TSH was less than 2µl/ml. I-131 scan revealed not only remnant thyroid tissue but also significant uptake throughout both lungs. Following total thyroidectomy, the patient was treated with 200mCi of I-131. One year after receiving therapeutic radioactive iodine, his chest X-ray was almost normal and he was euthyroid.