



## Parathyroid scintigraphy findings in chronic kidney disease patients with recurrent hyperparathyroidism

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Résumé en  
anglais

Background Parathyroidectomy (PTX), either subtotal or total with forearm autografting, is a well-established treatment for refractory renal hyperparathyroidism (RHPT). However, 20–30% of patients develop persistent or recurrent disease. Obtaining accurate localization before reoperation is difficult. Patients and methods The study group comprised 21 consecutive adult patients (18 undergoing haemodialysis and 3 with a renal graft) imaged using <sup>99m</sup>Tc-sestamibi/<sup>123</sup>I subtraction scintigraphy. Of the 21 patients, 12 had undergone one previous PTX and the other 9 between two and four parathyroid operations. All patients had symptoms and signs of severe RHPT. The mean serum PTH level was 1,142 pg/ml. <sup>99m</sup>Tc-Sestamibi and <sup>123</sup>I images were recorded simultaneously. Imaging views comprised a planar view of the neck and mediastinum, followed by a magnified pinhole view over the thyroid bed area. If parathyroid ectopy was detected, SPECT or SPECT-CT was performed. The forearm was imaged in case of autograft. Results Parathyroid scintigraphy was negative in one patient and positive in the other 20 (sensitivity 95.2%). One patient had uptake corresponding to two unresected parathyroid glands. Recurrence at the site of the partially resected gland or autograft was seen in 11 patients. However, six of them had a second <sup>99m</sup>Tc-sestamibi focus corresponding to a supernumerary parathyroid gland. Seven other patients had a supernumerary parathyroid gland as the sole cause of relapse. Three of the supernumerary glands showed major ectopy (intrathyroidal, low mediastinal, undescended within the vagus nerve). One patient had parathyromatosis with multiple parathyroid nodules scattered over the left side of the neck. Reoperation was possible in 13 patients, with no false-positive findings. Conclusion Many patients referred with the hypothesis of hyperplasia of a subtotally resected parathyroid gland or autograft were found to harbour a supernumerary parathyroid gland missed at the initial surgery.

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