

¹¹¹In-octreotide scintigraphy: A tool to select patients with endocrine pancreatic tumors for octreotide treatment?

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The results of octreotide scintigraphy, performed in two patients with malignant endocrine pancreatic tumors, were compared with the effect of somatostatin-14 and its analogue octreotide on hormonal levels and clinical outcome. Radiolabeled octreotide failed to demonstrate any tumor localisation in a patient with a malignant insulinoma. Nevertheless, IV injection of somatostatin and octreotide resulted in a significant decrease in peripheral insulin levels. Moreover in this patient, chronic treatment with a high dose of octreotide subcutaneously was able to transiently lower the incidence of hypoglycemic events. In a second patient with metastatic PP-oma, ¹¹¹In-octreotide disclosed a pancreatic tumor in the tail of the pancreas and metastatic supraclavicular lymph nodes. In this patient IV administration of somatostatin and octreotide inhibited the hormonal secretion of the tumor but subcutaneous injection of octreotide induced hardly any decrease in plasma PP levels and failed to affect tumor growth. These observations find a possible reason for this in the heterogeneous affinity of the somatostatin receptors in endocrine pancreatic tumors. They indicate that octreotide scintigraphy alone should not be used to select patients with neuroendocrine tumors who can benefit from chronic treatment with the somatostatin analogue.

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