

Tc 99m octreotide in Neuroendocrine tumors: a different Radiotracer from traditional 111 In: Our experience.

Tuesday, 29 October 2019 23:44 (15 minutes)

Background: tumours deriving from cell types expressing somatostatin receptors may be imaged by somatostatin receptor scintigraphy. The most common radiotracer to bind to octreotide is 111 In which is not produced in our country, as well as in other Latin American countries, the cost is very high and the availability of this tracer is rare, and also, its half life is very long, we have stated labeling Octreotide with Tc99m, Which is a more available, cheaper and its short half-life let us work easily. The basic mechanism is the union to receptors SST 2 and 5, is conserved. We have 27 cases studied during 4 years with this method, and the objective of this work is to share the results of our experience. We had cases of carcinoid small bowel tumor, ileocecal carcinoid tumor, stage IV paraganglioma, Meckel type carcinoid tumor, pulmonary carcinoid tumor and septal appendectomy, carcinoid tumor of the cecum and terminal ileum, insular and trabecular carcinoid ovarian tumor and thymoma.

Methodology: we analyzed 27 cases during January 2014 until March 2019 with Tc99m Octreotide. The dose administered was 30 mCi, three hours after the injection, we made whole body images, SPECT the thorax and abdomen. After 20 hours we performed a second round of images with a single-headed GE Gamma Camera. Of the 27 cases studied, we ruled out 5 cases because we could not do the correct follow-up. We divided the results into 18 positives and 4 negatives for the studies of neuroendocrine tumors. We correlated our results with the biopsy, when possible (21 cases studied) and the clinical follow-up of 5 cases (especially in the negative studies for active neuroendocrine tumors).

Results and discussion: of the 4 negative scintigraphy, 2 were negative at the close of this study. Of the 18 positive cases, 18 were confirmed by biopsy and follow-up and 1 patient died of this disease or its complications. These results show 18 true positives, 2 true negatives, with a method that shows a sensitivity of 94.5% and a specificity of 100%.

Conclusion: Tc-99m Octreotide appears to be cheaper, more available, with less radiation dose for patients, performed during a day and more easily performed (with low energy and high-resolution collimator) as an alternative to 111 In octreotide scintigraphy. With a very good sensitivity and specificity.

Primary author: AGOLTI, Mariela (Centro Medicina Nuclear Clinica Modelo .Parana)

Co-authors: ARUGA, Camila (Centro de Medicina Nuclear - Clinica Modelo); SOLARI, Lucrecia (Centro de Medicina Nuclear- Clinica Modelo)

Presenter: AGOLTI, Mariela (Centro Medicina Nuclear Clinica Modelo .Parana)