



Differentiated Gastroenteropancreatic Neuroendocrine Tumors

Sunitha Cherukuri

Assistant Professor, Pharmaceutics, Brown College of Pharmacy, Kamam, Telangana, India.

***Corresponding Author:** Assistant Professor, Pharmaceutics, Brown College of Pharmacy, Kamam, Telangana, India.

Received Date: June 02, 2022; **Accepted Date:** June 18, 2022; **Published Date:** June 22, 2022

Citation: Sunitha Cherukuri. Differentiated Gastroenteropancreatic Neuroendocrine Tumors, J. Clinical and Medical Case Reports and Reviews, V (2)1(3).

Copyright: © 2022 Sunitha Cherukuri. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Neuroendocrine tumors are a heterogeneous group of malignancy and have an increasing incidence. Different diagnostic imaging tools have been performed to evaluate neuroendocrine tumors such as computed tomography and magnetic resonance imaging. However these anatomical methods cannot give information about somatostatin receptor expression, which is extremely important in the management of neuroendocrine tumors. For this reason, somatostatin receptor imaging with radiolabelled somatostatin analogs has an increasing clinical practice.

Keywords: Gastroenteropancreatic neuroendocrine tumors; somatostatin receptors; emission tomography

Introduction

Neuroendocrine tumors (NETs) are characterized by the heterogeneous nature, frequently indolent course and possibility of multiple and variable anatomic sites of the primary tumor. Somatostatin is a cyclic peptide consisted of 14 amino acids and produced by neuroendocrine, immune, and inflammatory cells. The cerebral cortex, the brain stem, the hypothalamus, the pancreas and the gastrointestinal tract are physiological production sites. SSTRs are a family of G-protein-coupled receptors that comprises five subtypes (SSTR1-5) [1,2]. Well/moderately differentiated NETs are generally overexpress somatostatin receptors (SSTRs) [3]. Because of the overexpression of SSTRs the radiolabeled somatostatin analogs can be used to localize the primary tumor and its metastasis. The imaging of the SST subtype 2 (SST2) has been developed and has had clinical applications [4]. The majority of NETs expresses SSTR types 1, 2, 3, and 5 [5]. SSTR2 is the dominant expressed subtype in pancreatic endocrine or carcinoid tumors [5].

Treatment response

Evaluation of treatment response with response evaluation criteria in solid tumors (RECIST) is difficult in well-moderately differentiated GEP-NETs due to slow growing rate. Clinical evaluation is impossible in most nonfunctioning tumors. Moreover, biochemical markers such as chromogranin A or 5-HIAA have poor sensitivity. Ga-68 somatostatin PET/BT could be more effective by giving molecular and morphological information together in the evaluation of treatment response [6].

Conclusion

Ga-68 somatostatin PET/CT is a successful imaging modality in staging-restaging of well-moderately differentiated gastroenteropancreatic neuroendocrine tumors. In addition to give functional information, it also helps to select good candidates for somatostatin analogs and peptide radionuclide treatment.

References

1. [Patel YC \(1999\) Somatostatin and its receptor family. Front Neuroendocrinol 20\(3\): 157-198.](#)
2. [Hoyer D, Bell GI, Berelowitz M, Epelbaum I, Feniuk W, et al. \(1995\) Classification and nomenclature of somatostatin receptors. Trends Pharmacol Sci 16\(3\): 86-88.](#)
3. [Reubi JC, Waser B, Schaer JC, Laissue JA \(2001\) Somatostatin receptor sst1-sst5 expression in normal and neoplastic human tissues using receptor autoradiography with subtype-selective ligands. Eur J Nucl Med 28\(7\): 836-846.](#)
4. [Reubi JC, Maecke HR \(2008\) Peptide-based probes for cancer imaging. J Nucl Med 49\(11\): 1735-1738.](#)
5. [Papotti M, Bongiovanni M, Volante M, Allia E, Landolfi S, et al. \(2002\) Expression of somatostatin receptor types 1-5 in 81 cases of gastrointestinal and pancreatic endocrine tumors: a correlative immunohistochemical and reverse-transcriptase polymerase chain reaction analysis. Virchows Arch 440\(5\): 461-475.](#)
6. [de Herder WW, Hofland LJ, van der Lely AJ, Lamberts SW \(2003\) Somatostatin receptors in gastroenteropancreatic neuroendocrine tumours. Endocr Relat Cancer 10\(4\): 451-458.](#)



Ready to submit your research? Choose Alcrut and benefit from:

- fast, convenient online submission
- rigorous peer review by experienced research in your field
- rapid publication on acceptance
- authors retain copyrights
- unique DOI for all articles
- immediate, unrestricted online access

At Alcrut, research is always in progress.

Learn more: <https://alcrut.com/en/journals/journal-of-clinical-and-medical-case-reports-and-reviews>



This work is licensed under creative commons attribution 4.0

To submit your article Click Here: [Submit Manuscript](#)

