Case Report

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Myocardial scintigraphy with 123I-MIBG in a patient with Parkinson's

Summary: The meta-iodo-benzyl-guanidine (MIBG) is an analog of guanethidine, and a false neurotransmitter that is captured by adrenergic neurons and resembles norepinephrine. Myocardial perfusion imaging with iodine-MIBG is a scintigraphic examination able to evaluate the cardiac sympathetic nervous system in physiological and pathophysiological conditions. The indications for the exam range from ischemic heart disease to congestive heart failure (CHF), diabetes mellitus (DM) and any other medical condition that culminates with cardiac denervation, such as Parkinson's disease. Case report: MR, 78, male, caucasian. Patient with vertigo when diagnosed with Parkinson's in 2011. The Patient underwent clinical treatment without remission, and his clinical picture of atypical parkinsonism suggested alternative mechanisms to nigrostriatal degeneration. The past medical history includes arterial hypertension , previous smoking, COPD. Medications in use included L-DOPA and others. The pacient had a previous brain scintigraphy demonstrating decreased presynaptic dopamine transport in the projection of the basal ganglia, more prominent in the right side. The scintigraphic images with I-123 MIBG showed functional impairment of the adrenergic nervous system of the heart with increased sympathetic tone. The pacient presented a cardiac washout of 91.70% (VN ≤ 27%), and early heart / mediastinum ratio of 1.19 (normal value ≥ 1.80) and late heart / mediastinum ratio of 1.01 (normal value ≥ 1.80). Conclusion: Parkinson's disease can cause not only a motor disorder, but also cardiovascular dysautonomia. Thus, based on this case, we conclude that the worsening in the clinical condition and in the evolution of PD is directly related to the level of cardiac denervation. In this context, the heart scintigraphic study is of great value in monitoring these patients.