



Cardiac MIBG scintigraphy in pure autonomic failure: A systematic review

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BACKGROUND

Pure autonomic failure (PAF) is an α -synucleinopathy affecting the autonomic nervous system, which may remain confined to the peripheral nervous system or represent a premotor/precognitive phase of Parkinson's disease (PD), dementia with Lewy bodies (DLB), or multiple system atrophy (MSA). Despite the recognized role of cardiac 123I-metaiodobenzylguanidine (MIBG) scintigraphy in central nervous system synucleinopathies, its application in PAF has been described only in a few case reports or small case series.

OBJECTIVES

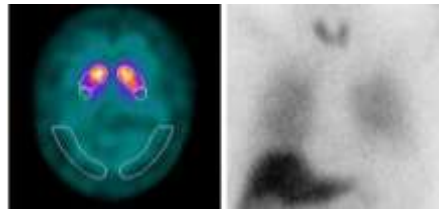
To assess the potential diagnostic and prognostic utility of cardiac MIBG scintigraphy in patients with PAF.

MATERIALS AND METHODS

We conducted a systematic review of case reports and case series describing patients with a clinical diagnosis of PAF who underwent cardiac MIBG scintigraphy, in accordance with PRISMA guidelines. Demographic, clinical, and scintigraphic data were extracted and summarised.

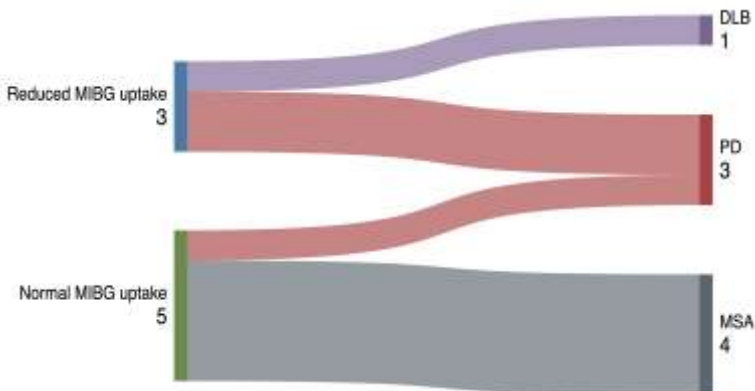
RESULTS

A total of 39 cases were included: 38 from the literature and one unpublished case from our centre. The cohort comprised 28 men and 11 women, with a mean age of 67.6 ± 8.1 years and a mean disease duration of 9.1 ± 6.2 years. Abnormal MIBG scintigraphy was observed in 33 patients (84.6%). Following MIBG scintigraphy, phenoconversion to a central nervous system synucleinopathy was reported in 3 cases with abnormal MIBG uptake (2 to PD, 1 to DLB) and 5 cases with normal MIBG uptake (4 to MSA, 1 to PD).



CONCLUSIONS

MIBG scintigraphy showed abnormal cardiac uptake in most patients with clinical PAF. Conversely, preserved MIBG uptake may be associated with a high probability of phenoconversion, particularly to MSA.



Full study available:



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References:

Consensus statement on the definition of orthostatic hypotension, pure autonomic failure, and multiple system atrophy. The Consensus Committee of the American Autonomic Society and the American Academy of Neurology. Neurology. 1996 May;46(5):1470. <https://doi.org/10.1212/wnl.46.5.1470>



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