¹²³I-Metaiodobenzylguanidine ‘superscan’ in an adult patient with neuroblastoma

Víctor Andrés Marín Oyaga · Juan Ignacio Cuenca Cuenca ·
Juan Luis Tirado Hospital · Rosa Fernández López · Isabel Borrego Dorado ·
Ricardo Vázquez Albertino

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Neuroblastoma is extremely rare in patients over 10 years old [1]. ¹²³I-MIBG has a high sensitivity for the diagnosis of primary and metastatic neuroblastoma [2].

A 29-year-old man with a neuroblastoma IIB was referred to us for an extension study after adrenalectomy. Bone scan with ^{99m}Tc-HDP (a) showed several pathological lesions suggestive of metastatic spread. ¹²³I-MIBG whole-body scintigraphy (b) and SPECT/CT showed marked uptake of the radiopharmaceutical in the bone marrow throughout the axial skeleton and in the proximal humeri and femora compatible with metastatic spread in the bone marrow and an abnormal distribution of tracer uptake excluding the usual sites such as the liver and kidney parenchyma. ¹⁸F-FDG PET/CT (c) showed a hypermetabolic retroperitoneal adenopathic conglomerate with involvement of the bone and bone marrow. These findings were confirmed by bone marrow biopsy and restaging the patient to stage IV, which changed the therapeutic approach.

The term ‘superscan’ is used to describe a pattern of increased uptake of ^{99m}Tc-diphosphonate in the axial skeleton, with decreased uptake in soft tissue and kidneys due to bone metastatic spread. Only one case has been reported in an adult with neuroblastoma and a ¹²³I-MIBG

‘superscan’ study due to the extensive involvement of the bone marrow [3].

Conflicts of interest None.

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V. A. Marín Oyaga (✉) · J. I. Cuenca Cuenca ·
J. L. Tirado Hospital · R. Fernández López ·
I. Borrego Dorado · R. Vázquez Albertino
Department of Nuclear Medicine,
Virgen del Rocío University Hospital,
Av. Manuel Siurot,
41013 S/N, Seville, Spain
e-mail: vicmar40@hotmail.com