



IMAGE OF THE MONTH

Characterization of hemangioma by nuclear medicine techniques[☆]



Caracterización de hemangioma mediante técnicas de medicina nuclear

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A 53-year-old woman with sustained dyspepsia and hepatomegaly on ultrasound required investigation of a possible haemangioma. We performed ^{99m}Tc-labelled autologous red blood cell scintigraphy (Fig. 1A), which showed complete absence of tracer in right lobe (RL) of the liver, hepatomegaly and marked heterogeneity (Fig. 1B). Fused SPECT/CT images showed a marked increase in metabolism in the lesion, with zones with no uptake corresponding to infarcts/necrotic areas within the haemangioma (Fig. 1C).

For better definition, we performed ^{99m}Tc-phytate scintigraphy with high intensity in liver parenchymal (Fig. 2A–C), and a complete absence of tracer in the haemangioma. This extends craniocaudally from the 9th right anterior costal margin to 3 cm above the ipsilateral iliac spine, completely occupying the right abdomen. On SPECT/CT the internal necrotic areas can be seen more clearly (Fig. 2D).

Nuclear medicine techniques are useful in the differential diagnosis of haemangioma, of particular relevance in

patients with oncological history. Although colloid scintigraphy appears as a “cold” lesion, with labelled red blood cells the late uptake (1–2 h post-injection) of the tracer is characteristically greater than that of the adjacent liver in the form of focal deposits. The fused images (SPECT/CT) improve sensitivity (80% for lesions larger than 1.9 cm) and specificity (close to 100%).

Authorship

Conception and design of the manuscript: Marta Sánchez-Aguilar.

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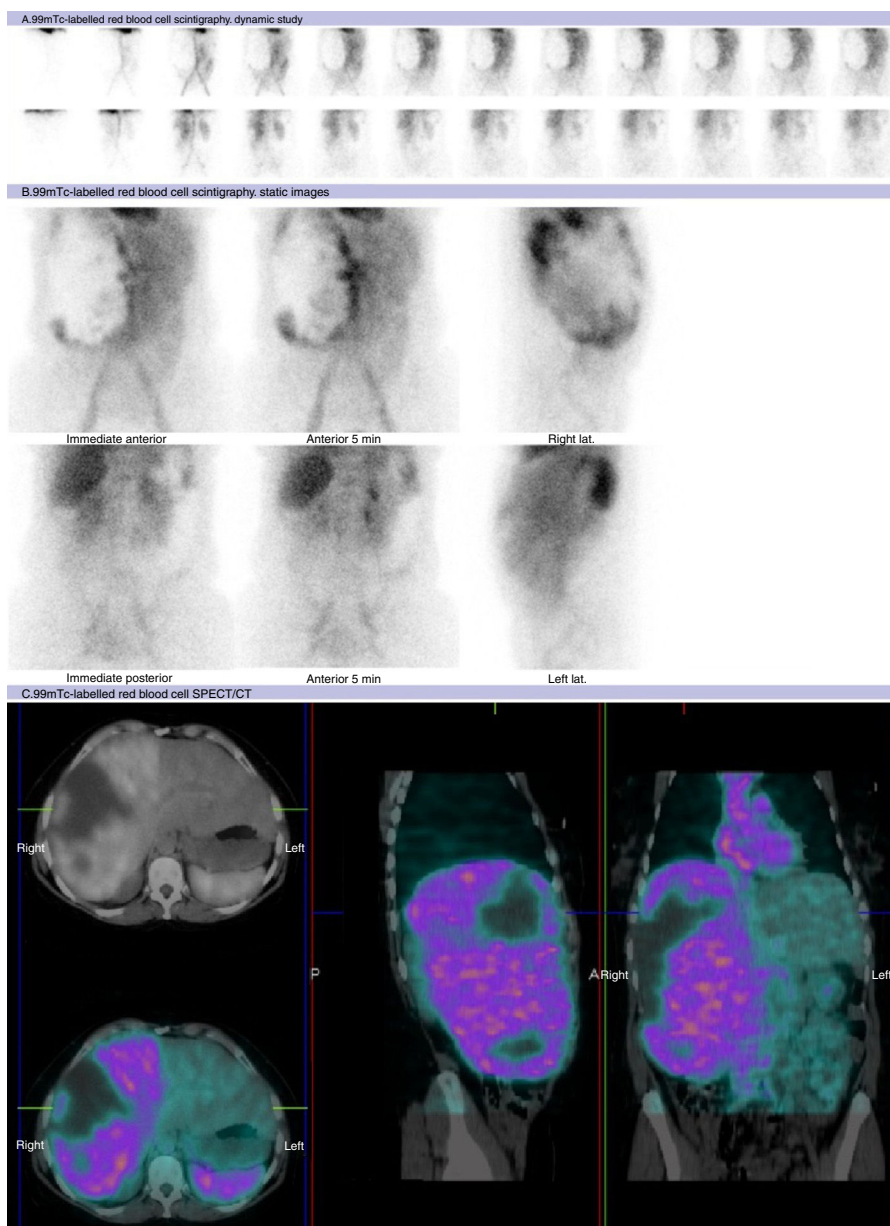


Figure 1 ^{99m}Tc -labelled autologous red blood cell scintigraphy (A: dynamic study, B: static images, C: late images, D: fused SPECT/CT images), showing a marked increase in metabolism in RL (C) in relation to haemangioma, with respect to the rest of the liver which has homogeneous uptake. Within the haemangioma, areas of complete absence of uptake can be seen, probably related to infarcts or necrotic areas within the lesion.

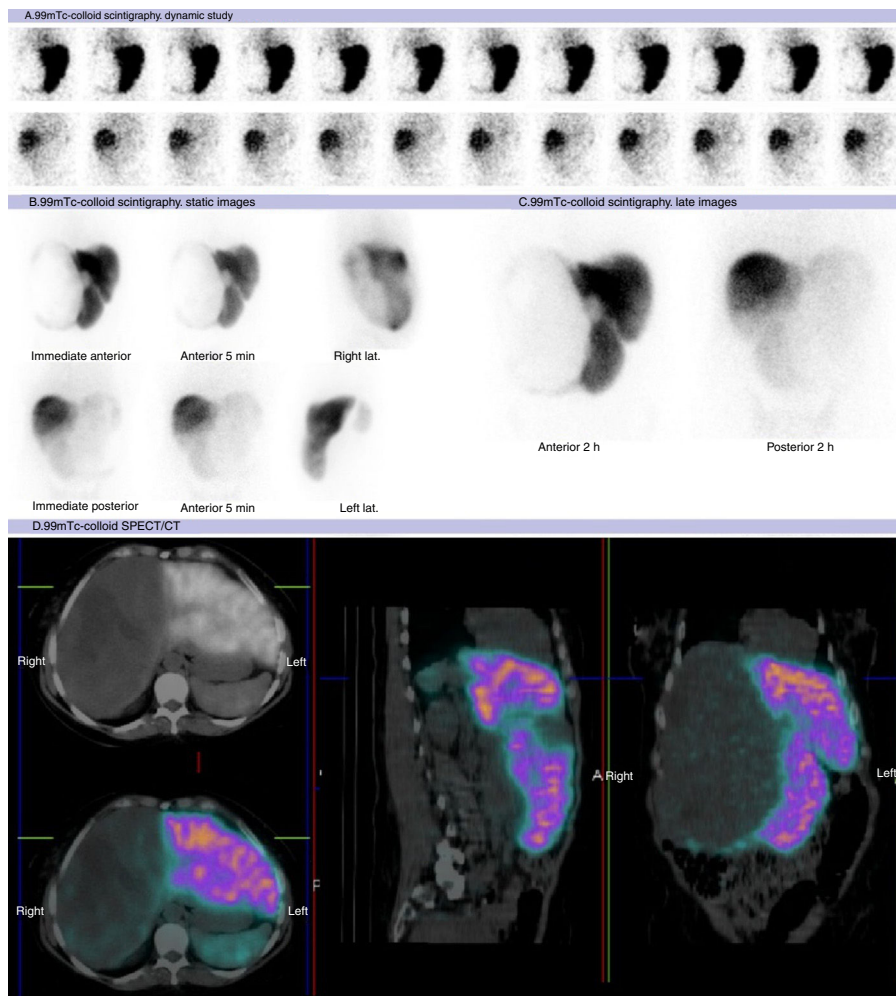


Figure 2 ^{99m}Tc-phytate scintigraphy (A: dynamic study, B: static images, C: fused SPECT/CT images) corroborates the nature of the lesion due to the complete absence of metabolism with higher density areas within it corresponding to infarcts, as seen in SPECT/CT (D).