68 year-old male
Progressive cognitive impairment

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Clinical statement

• 68 y/o male
• Progressive cognitive impairment
• Frontal syndrome
• Parkinsonism
• Positive VDRL
• AD? Lewy body disease? FTD?
74 year-old female
Cognitive impairment with frontotemporal profile in neuropsychological study

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• Brain SPECT is indicated for further evaluation in a patient with cognitive impairment and clinical features that may support different etiologies.

• Images were acquired in a dual head gammmacamera 60 min. p.i. of 99mTc-ECD (925 MBq).

• 128 steps, 25 seconds each. 128×128 matrix. 2.9 mm pixel size. No scatter correction was performed.

• OSEM reconstruction (5 cycles 2 subsets). Prefiltering with Butterworth order 10, cut-off frequency 0.25. Attenuation correction 12 cm-1. Transaxial slices parallel to AC-PC line.
Bilateral posterior parietal-temporoparietal and bilateral precuneus-posterior cingulate hypoperfusion (white arrows).
Bilateral prefrontal and temporal hypoperfusion. (white).
Bilateral occipital (mesial and lateral) hypoperfusion (red).
Preservation of primary sensori-motor cortex (red).
Interpretation

- Images are consistent with LBD.
Discussion

• Posterior cortical involvement with mesial extension and primary sensorimotor cortex preservation (similar pattern to AD).
• Occipital hypoperfusion with lateral and mesial involvement.
• Prefrontal hypoperfusion usually more prominent in early stages than AD.
• Bilateral temporal hypoperfusion, sometimes with less mesial involvement than AD (not seen in this patient).
• Occasional basal ganglia hypoperfusion (not clear in this patient).
Conclusion

• Occipital involvement is the most typical feature in LBD. It has been added to the new clinical guidelines as a suggestive criteria.

• LBD is a frequent cause of dementia but difficult to diagnose.

• 3 major criteria (cognitive fluctuations, hallucinations and parkinsonism) are present in the minority of the patient.
Teaching points

- Brain SPECT in the diagnosis of LBD
- Differential diagnosis between AD, LBD and FTD.
References

