

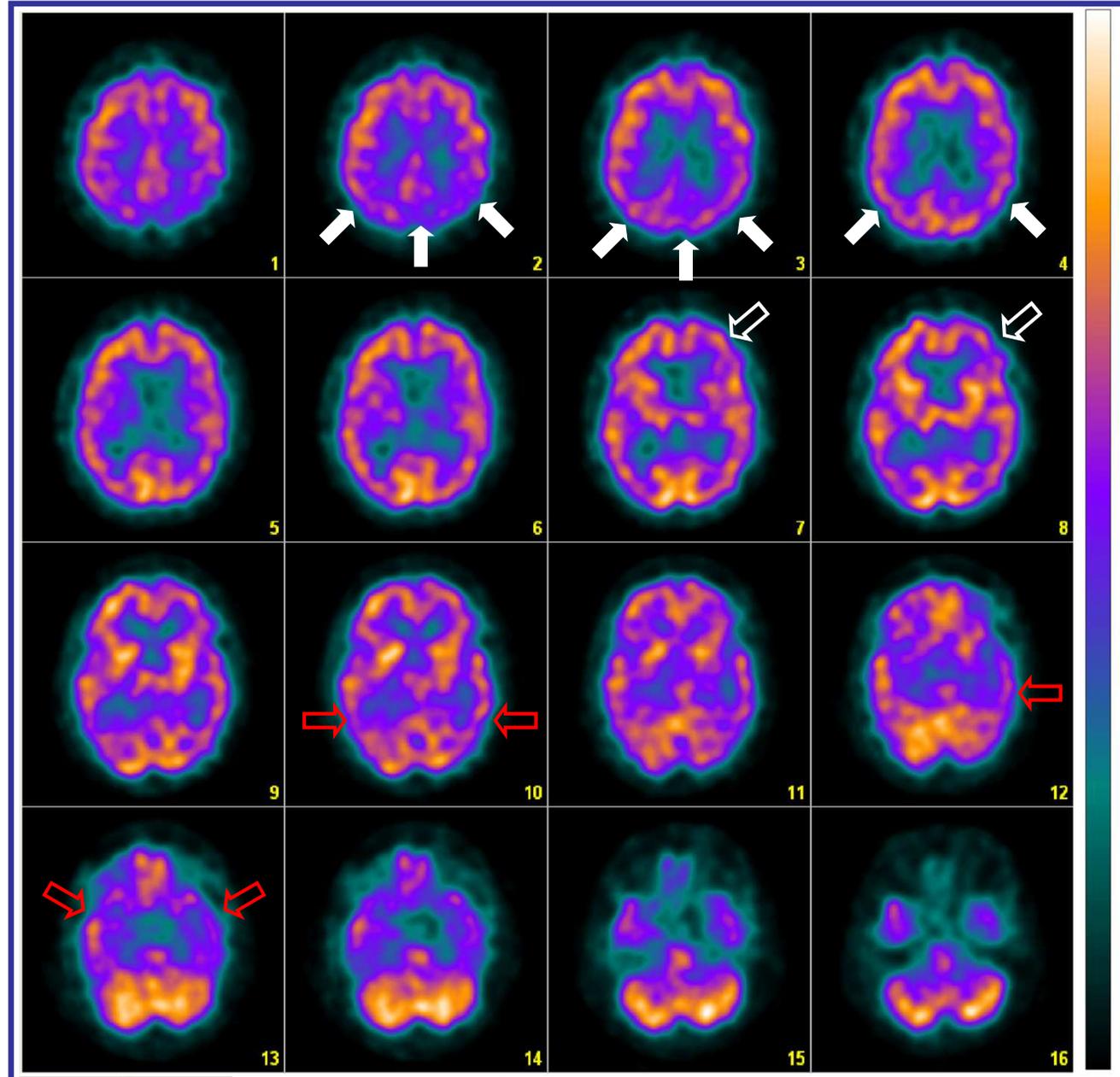


## Clinical statement

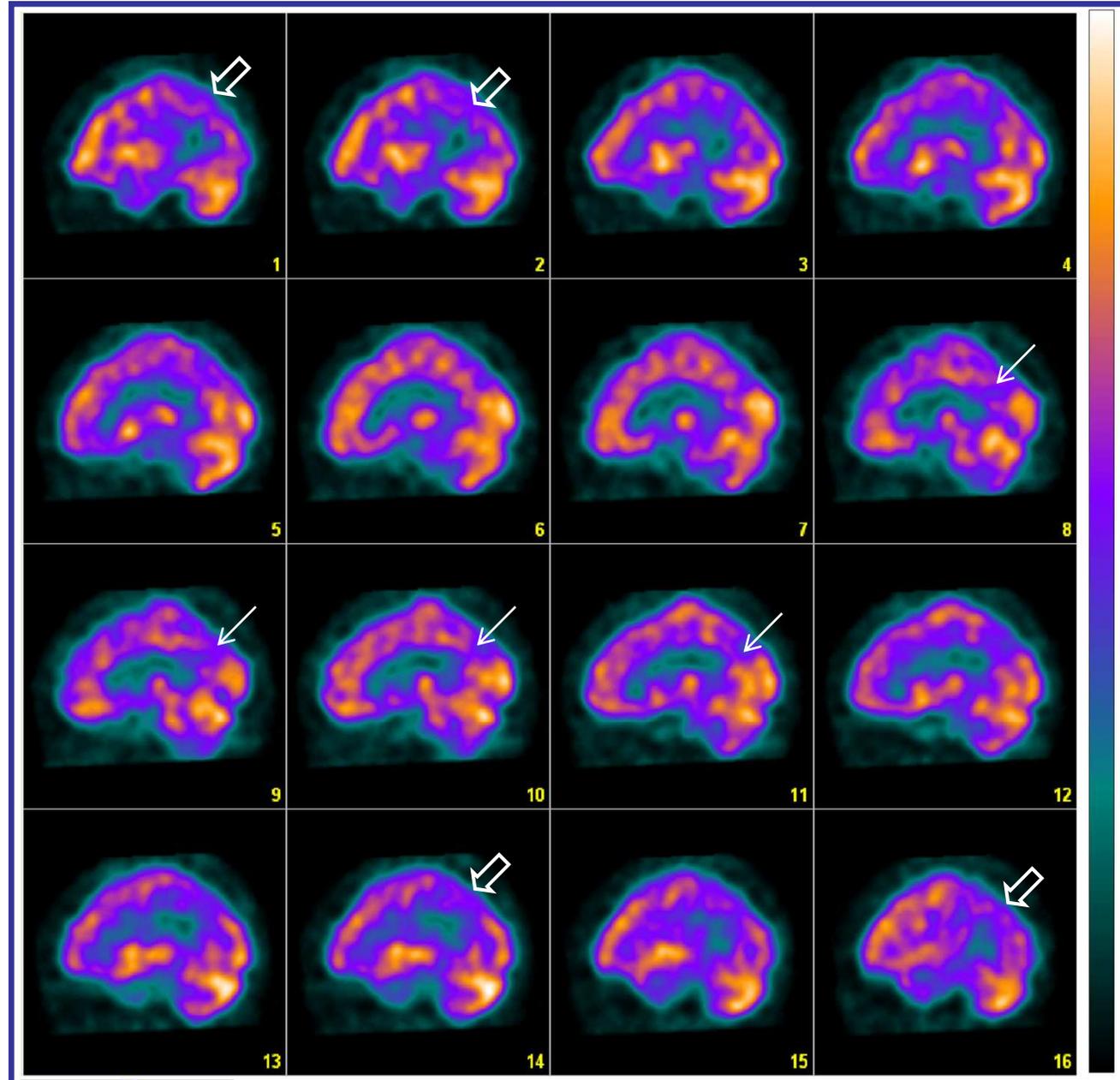
- 64 y/o female.
- Bipolar disorder
- Cognitive impairment 4 years of evolution with slow progression.
- Depressive symptoms. Confabulation. Cognitive decline.
- CT scan: atrophy

- Brain SPECT is indicated for further evaluation in a patient under 65 years old with progressive cognitive impairment and history of psychiatric pathology.
- Images were acquired in a dual head gammacamera 60 min. p.i. of  $^{99m}\text{Tc}$ -ECD (925 MBq).
- 128 steps, 25 seconds each.  $128 \times 128$  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  $12 \text{ cm}^{-1}$ . Transaxial slices parallel to AC-PC line.

Bilateral posterior  
 parietal-  
 temporoparietal,  
 bilateral precuneus-  
 posterior cingulate  
 hypoperfusion  
 (white arrows).  
 Bilateral temporal  
 hypoperfusion left  
 side predominance  
 (red).  
 Left inferolateral  
 prefrontal  
 hypoperfusion  
 (white).  
 Spared primary  
 cortex, basal  
 ganglia, thalami  
 and cerebellum.



Sagittal slices are very useful to delineate precuneus and posterior cingulate involvement (thin arrows). Posterior parietal hypoperfusion is also seen bilaterally (white).



# Interpretation

- Images are consistent with AD.

## Discussion

- Patients with AD often do not have the typical clinical presentation. This issue is more common in younger patients.
- Psychiatric diseases like depression, bipolar disorder or psychotic syndromes usually have neuropsychological symptoms and may present with cognitive impairment mimicking dementia.
- Clinical evaluation including neuropsychological tests may have difficulties in this kind of patients and differential diagnosis with degenerative dementia may not be reliable.

## Conclusion

- Etiological diagnosis of cognitive impairment can be difficult in adult patients with psychiatric pathology.
- Recognition of a dysfunctional pattern consistent with degenerative dementia in these patients can help implementing adequate treatment.
- Prognosis of the patient changes dramatically if degenerative dementia is ruled out.

## Teaching points

- Brain SPECT in the diagnosis of dementia in adult patients with cognitive impairment and psychiatric pathology

## References

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