Vellani et al. Clin Med Img Lib 2017, 3:073

DOI: 10.23937/2474-3682/1510073

Volume 3 | Issue 3 Open Access



## **Clinical Medical Image Library**

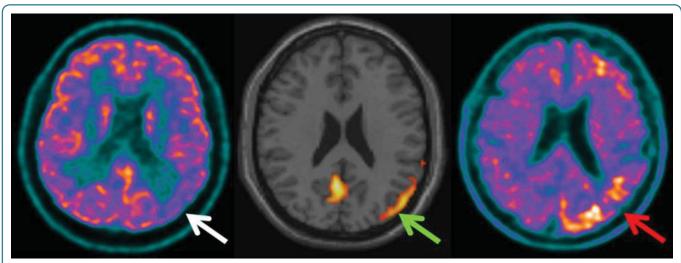
**IMAGE ARTICLE** 

## Subjective Cognitive Decline as a Clinical Manifestation is Not Yet Fully Understood

Cecilia Vellani<sup>1\*</sup>, Elisabetta Brugola<sup>1</sup>, Giuseppe Trifirò<sup>1</sup>, Irene Bossert<sup>1</sup>, Daniela D'ambrosio<sup>2</sup> and Carlotta Benedetta Colombo<sup>3</sup>

- <sup>1</sup>Nuclear Medicine Unit, ICS Maugeri Hospital, Via Maugeri, Pavia, Italy
- <sup>2</sup>Medical Physics Department, ICS Maugeri Hospital, Via Maugeri, Pavia, Italy
- <sup>3</sup>University of Milan, Milan, Italy

\*Corresponding author: Cecilia Vellani, MD, Nuclear Medicine Unit, ICS Maugeri Hospital, Via Maugeri, 27100 Pavia, Italy, E-mail: cecilia.vellani@fsm.it



**Figure 1:** PET-CT with FDG shows a decrease in glucidic metabolism in parietal and occipital lobes, more prominent on the left side (white arrow). The hypometabolism was confirmed also by SPM analysis (green arrow). PET-CT with <sup>18</sup>F-florbetapir shows a diffuse loss of contrast between white and gray matter and, more interestingly, focal areas of increased tracer uptake in frontal and parieto-occipital cortex of the left hemisphere.

We present the case of a 63-year-old man complaining of subjective memory loss (he works as a veterinary physician and had a good performance at neuropsychological tests).

The patient underwent an 18F-FDG PET-CT scan which showed a decrease in glucidic metabolism in parietal and occipital lobes, more prominent on the left side (white arrow). The hypometabolism was confirmed also by SPM analysis (green arrow). Four months later, a PET-CT with

<sup>18</sup>F-florbetapir was performed, showing a diffuse loss of contrast between white and gray matter and, more interestingly, focal areas of increased tracer uptake in frontal and parieto-occipital cortex of the left hemisphere (red arrow).

Most longitudinal studies have shown that patients with subjective memory problems or Subjective Cognitive Decline (SCD) have an increased risk of future cognitive decline or dementia [1,2].



**Citation:** Vellani C, Brugola E, Trifirò G, Bossert I, D'ambrosio D, et al. (2017) Subjective Cognitive Decline as a Clinical Manifestation is Not Yet Fully Understood. Clin Med Img Lib 3:073. doi.org/10.23937/2474-3682/1510073

Received: September 23, 2016; Accepted: October 25, 2017; Published: October 28, 2017

**Copyright:** © 2017 Vellani C, et al. This is an open-access content distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Studies on patients with SCD who underwent annual cognitive assessments show that they are almost three times as likely to be diagnosed with mild cognitive decline or dementia. Interestingly, the first complaints of memory decline occurred on an average of six years before mild cognitive impairment (condition that sometimes, but not always, progresses to dementia) was diagnosed, and about nine years before dementia was diagnosed. Moreover, in case of SCD there is a higher chance of changes in brains on imaging scans, specifically higher levels of beta-amyloid protein [2,3].

## References

- Steve Iliffe (2010) Subjective memory problems. BMJ 340: 1425.
- Perrotin A, Mormino EC, Madison CM, Hayenga AO, Jagust WJ (2012) Subjective cognition and amyloid deposition imaging: a Pittsburgh Compound B positron emission tomography study in normal elderly individuals. Arch Neurol 69: 223-229.
- Engvig A, Fjell AM, Westlye LT, Skaane NV, Dale AM, et al. (2014) Effects of cognitive training on gray matter volumes in memory clinic patients with subjective memory impairment. J Alzheimers Dis 41: 779-791.

