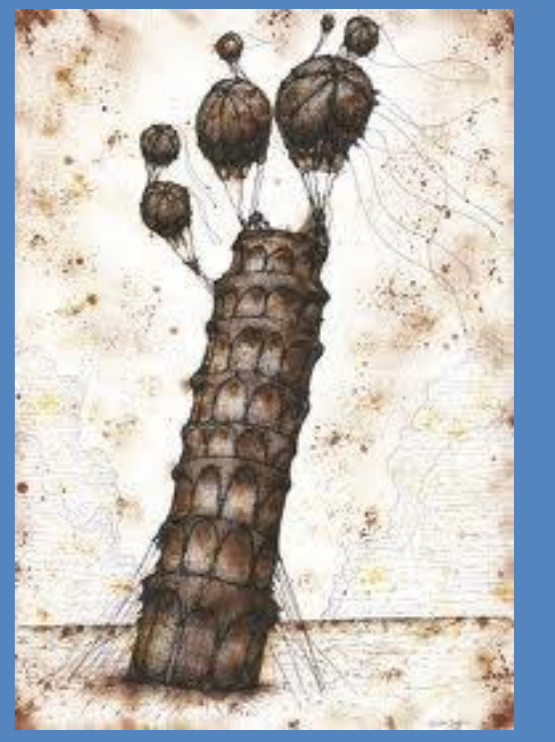


PSYCHOGENIC AMNESIA? A CASE REPORT



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Introduction: Psychogenic amnesia can be described as a neurocognitive disorder presenting with an isolated loss of retrograde memory, despite a preserved or mildly impaired ability to learn new information, usually without direct evidence of significant brain damage on conventional neuroimaging. We describe a 45-year old woman who acquired a persistent retrograde amnesia (RA) covering her whole life and concerning, primarily, episodic autobiographical memory with a minor impairment of semantic and procedural memories, despite a complete preservation of anterograde memory.

Case report: Six months before, she had a motorcycle accident with a minor head trauma; it caused her a continuous and poor responsive pain to the right shoulder for which it was diagnosed a mixed anxiety-depressive disorder. Then she developed an acute confusional state, that resolved spontaneously with a residual memory defect. When she was referred to us, neurological examination was normal (except for a dense retrograde amnesia). There was no evidence of a psychiatric history. Neuropsychological evaluation (table 1) revealed a dense RA for autobiographical and public facts and events. She had lost her sense of personal identity and, interestingly, she did not know the meaning of common abstract words (e.g. accusation, ambition, impulse). Procedural memory was impaired as she was no more able to sing, swim, and dance. Investigations (EEG, cranial CT and MRI) failed to show any brain damage; only the PET study with (18F) FDG (fig.1) revealed a mild bilateral reduction of metabolism in medial temporal lobe. A psychiatric evaluation identified a hysterical personality background with mood oscillations. Interestingly, (18F) FDG PET, repeated after 1 year, resulted normal; in parallel, she had relearnt more autobiographic events but lacking the associated emotional feeling, documented on a subsequent neuropsychological examination.

Discussion:

The etiological mechanisms involved in isolated or disproportionate retrograde amnesia include psychosocial mechanisms, primarily implicated in the so-called psychogenic amnesia. Patients with psychogenic amnesia have been reported for more than a century and this term has traditionally been used to describe episodes of memory loss (especially retrograde amnesia) which are precipitated by psychological stresses or trauma experiences in the absence of an identifiable brain damage. The diagnosis usually relies on several clinical features excluding other possible causes of amnesia. However, several functional studies have identified changes in brain function affecting regions with crucial roles in memory processing without evidence of structural brain damage. A proposed speculation is that, in patients with psychogenic amnesia, memories are repressed or blocked for a biochemical alteration in memory systems so that the retrieval of autobiographical events can't correctly occur.

Conclusion:

Psychogenic amnesia is a category that could label those patients whose amnesia can be traced back to a lesion that affect brain function, probably in the circuits of memory retrieval, without a clear organic or psychological cause. Therefore, in our case, retrograde amnesia can represent an example of psychogenic amnesia, precipitated by a traumatic event and favoured by a hysterical personality structure.

Table 1: Neuropsychological profile. CS=Corrected scores; EQ=equivalent scores. ROCF: Rey-Osterrieth complex figure test; RAVLT: Rey Auditory Verbal Learning Task

Neuropsychological assessment	Amnesic phase	Follow-up
	CS (ES)	CS (ES)
Anterograde memory		
Digit span	6 (4)	6(4)
Corsi span	5.5 (4)	5.5 (4)
RAVLT: immediate recall	42.8 (4)	38.8 (3)
RAVLT: delayed recall	7.2 (3)	6 (5.2)
ROCF: immediate recall	15.3 (3)	14.3 (4)
ROCF: delayed recall	17.1 (4)	14.6 (3)
Prose memory: immediate recall	4.8 (2)	5.1 (2)
Prose memory: delayed recall	4.8 (2)	5 (2)
Memory with interference		
Ten seconds	6	8
Thirty seconds	7	9
Retrograde memory		
Famous events questionnaire	28.3 (0)	32.3(0)
Face identification	3.67 (0)	3.51 (0)
Face familiarity	6274.51 (0)	6164.51 (0)
Crovitz-Schiffman	57.03	48.03
Semantic memory		
WAIS: Information subtest	12 (8)	16 (10)
WAIS: Vocabulary subtest	22 (5)	26 (7)
Attention		
Attentional matrices	51.25 (4)	39.2 (2)
WAIS: Digit symbol substitution test	40 (10)	37 (10)
Stroop interference test		
Time	10.25 (4)	11.25 (4)
Errors	0 (4)	0 (4)
Trail-making test		
Test A	36 (4)	42 (4)
Test B	108 (3)	105 (3)
B-A	72 (3)	63 (3)
Executive function		
Raven's matrices	32.8 (4)	32.8 (4)
Word fluency (letter)	46.1 (4)	39.1 (4)
Modified card-sorting test		
Perseverative errors	0 (4)	0 (4)
Categories	6 (4)	6 (4)
Constructional praxis		
ROCF copy	35.5 (4)	35.5 (4)

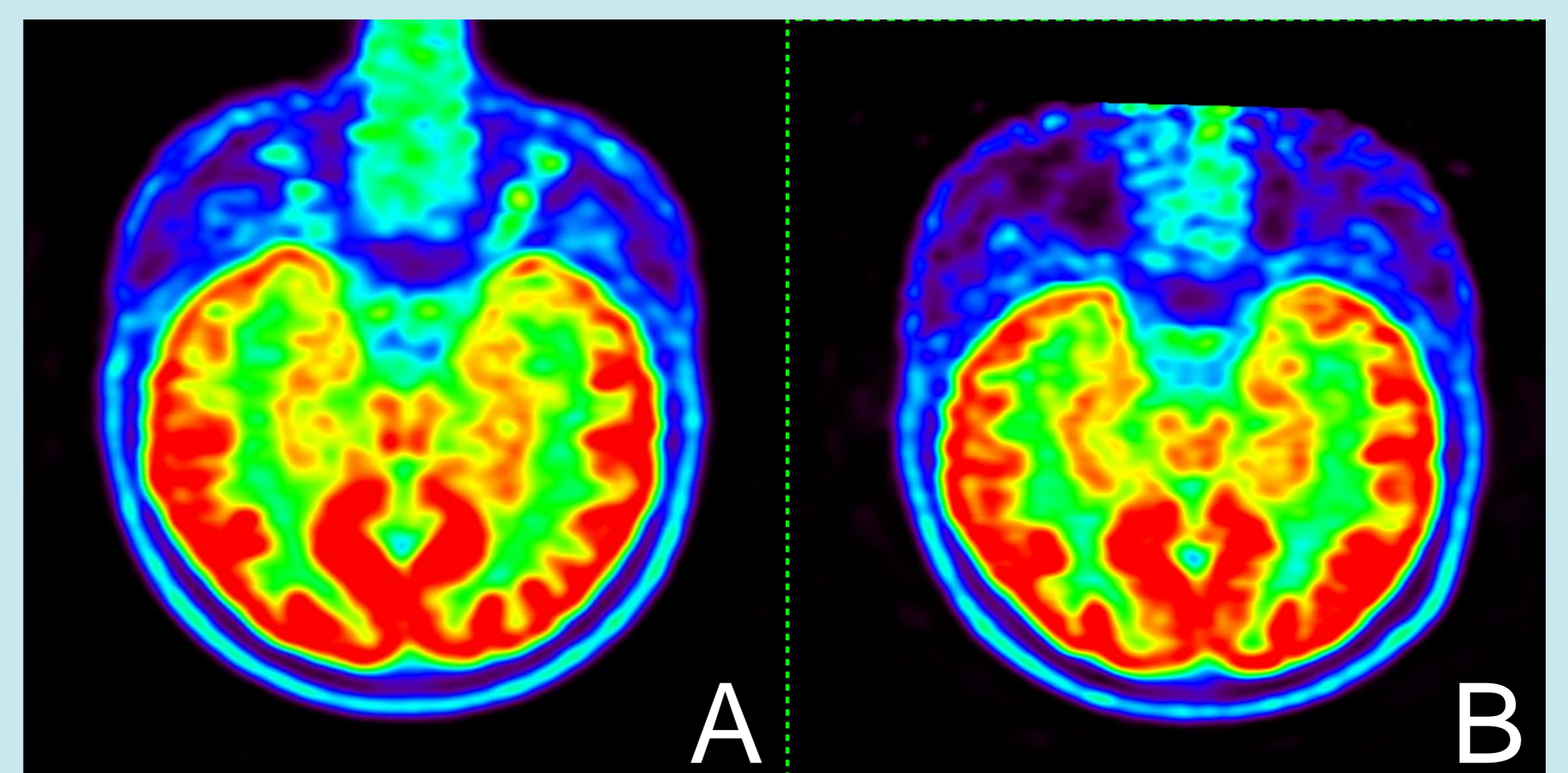


Figure 1: 18 F-FDG PET Brain: baseline (A) and after 1-year of follow-up (B)

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