Some authors consider that the characteristics of amnesia do not depend on lesion site, although others claim there are neuropsychologic differences between amnesias due to hippocampal, diencephalic, and basal forebrain lesions. As to the latter, literature is scarce and controversial. The opportunity to thoroughly study J.S., a man with a high IQ and amnesia, enabled us to reinforce the second hypothesis.

J.S. is a 47-year-old man who underwent surgery for a pituitary neuroendocrine tumor, the resulting lesion involving only the basal forebrain. We gave him a complete neuropsychologic battery for amnesia and executive functions.

J.S. showed severe amnesia with a flat learning curve, a rapid forgetting rate and good recognition, a temporal gradient of several years for remote memory, preserved semantic and procedural memory. Most of the tests for executive functions were normal, although he did have a significant personality change after surgery.

This patient is different from patients with hippocampal or diencephalic lesions, and is similar to other patients reported with basal forebrain lesions. The main difference is the relation between his flat learning curve and preserved recognition, both for visual and verbal material [1].

1)
Osimani A, Vakil E, Blinder G, Sobel R, Abarbanel JM. Basal forebrain amnesia: a case study. Cogn Behav Neurol. 2006 Jun;19(2):65-70. PubMed PMID: 16783128.