

ABSTRACT

The present study examined the phenomenon of category-specific impairment along the animate-inanimate dimension in 57 patients with bilateral (34), right (14) and left (9) temporal necrosis across a range of tasks that tap on the semantic store. Their performance in naming, identification, free and cued recall as well as recognition of pictures of animate (animals, fruits and vegetables) and inanimate (vehicles and household items) together with verification of animate- and inanimate-related sentences were contrasted with 36 age- and education-matched healthy subjects. It was found that 4 patients with bitemporal lesion showed consistent compromised performance in the animate category across all tasks. All of them suffered from lesions in the medial and superior temporal lobes, hippocampus and amygdala. This reflects that these neural structures are most implicated in the semantic representations of the animate category. On the other hand, impairment in the inanimate category was not found in the present study. The findings were inconsistent with previous studies. Such results highlighted that previous studies, subsequent to the limitation of employing single case design, failed to investigate the complete representation of the temporal involvement in category specificity. In addition, for the study of categorical representations in the semantic system, an investigation of the response pattern across tasks that tap on the system, instead on relying solely on naming performance, is crucial to extricate the influence by access impairment.