

Abstract

Findings of past studies are inconsistent regarding the effects of anaesthetic drugs on working memory. Some studies suggest that the drugs decrease the immediate functioning of working memory while others propose no significant effects. This study looked at the effects of propofol and midazolam on verbal working memory functioning of 32 endoscopic patients; by means of a pre- and post-test design. The test battery used to measure verbal working memory consisted of the following subtests: Letter Number Sequencing and Digits Backwards of the WAIS-III, and the D-KEFS Colour- Word Interference conditions 3 and 4. Uncorrected and total errors made in condition 3 of the D-KEFS Colour- Word Interference test significantly increased, while completion time in condition 4 decreased significantly during post-testing. The completion time and corrected errors in D-KEFS Colour- Word Interference condition 3; corrected, uncorrected and total errors in D-KEFS Colour- Word Interference condition 4; and the WAIS-III Letter Number Sequencing and Digits Backwards subtests yielded no significant change. These results demonstrate partial effect of conscious sedation on verbal working memory. This study furthermore found that none of the subtests were subjected to practice effects, which holds value for future research aiming to use the same neuropsychological tests for pre- and post-test designs.