

## DRIVING SIMULATOR INVESTIGATIONS IN PATIENTS WITH COPD

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**Introduction:** Patients with chronic obstructive pulmonary disease (COPD) have cognitive deficits especially in terms of attention performance. The present study investigated whether simulated driving performance is also impaired in these patients. **Patients and methods:** Driving simulator investigations (C.A.R.<sup>®</sup>) were done in 17 patients with COPD (age:  $55.2 \pm 9.3$  years, Tiffeneau-Index < 70% pred.) und 10 normal controls (age  $55.1 \pm 7.8$  years). The simulation lasted 60 minutes under monotonous driving conditions thus pronouncing the attention aspect of vigilance which is long-term attention under monotonous conditions. **Results:** In the simulated driving situation patients with COPD caused significantly more accidents than normal controls (COPD:  $3.9 \pm 2.7$ , controls  $1.3 \pm 1.5$ ,  $p < 0.01$ ). The number of concentration faults was comparable in both groups (COPD:  $8.5 \pm 4.7$ , controls:  $7.1 \pm 3.2$ , n.s.). **Conclusions:** Compared to healthy controls patients with COPD cause significantly more accidents in the simulated driving situation. Thus the present study proves cognitive deficits in COPD patients with regard to the attention aspect of vigilance. These deficits may have negative impact on driving performance in real traffic in COPD patients.