

EFFECTS OF AMANTADINE IN SPEEDING THE RECOVERY OF CONSCIOUSNESS IN COMA, VEGETATIVE STATE AND MINIMALLY CONSCIOUS STATE

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Background: Several pharmacological treatments have been recently reported to speed the recovery of consciousness in some patients with vegetative and minimally conscious state.

Objective: To investigate the effects and the safety profile of amantadine in patients with disorders of consciousness (DOCs).

Material and Methods: All patients with coma, VS and MCS, consecutively admitted to the Operative Unit for Severe Acquired Brain Lesions of the Foligno Hospital within a 1-year period and treated with amantadine were included in the study. Patients were assessed before and after the start of the treatment through the Coma Recovery Scale – Revised Italian version to check any consciousness improvement along the follow-up period. Side effects of amantadine were also recorded.

Results: Ten patients (6 females and 4 males; mean age 59.6±16.1 SD years, range 36-79; time interval from injury to evaluation 80.4±42.4 SD days) were included in the study. Demographic and clinical characteristics of patients are reported in the table. The patients began receiving amantadine at a dose of 50 mg/day, which was progressively increased to 100 mg twice daily for 14 days. The dose was increased to 300 mg/day in one patient not showing side effects. During the observation period, 4 patients remained in VS, 4 patients moved from VS to MCS, 1 patient moved from coma to VS and 1 patient remained in MCS. The most frequent side effect was the development of muscle rigidity, followed by psychomotor agitation, dyskinesias, vomiting and prolongation of the QT interval on the electrocardiogram. Side effects lead to treatment discontinuation in one patient only.

Discussion Our results are in line with previous literature findings suggesting that amantadine may encourage the recovery of consciousness in some patients with DOCs. Side effects are common but mild and rarely lead to a treatment discontinuation

Conclusions Although the little sample of this study does not allow to draw conclusions about a causal relationship between the start of the treatment and the observed improvement, amantadine seems to increase the chances of recovery in a subgroup of patients with DOCs. The precise mechanism by which amantadine may exert these beneficial effects is still unclear. Future studies are necessary in order to identify which patients with consciousness impairment are more likely to benefit from the treatment with amantadine and which dosage is more advantageous.

References

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	Sex	Age	Primitive injury	Diagnosis before treatment	Diagnosis after treatment
1	F	60	SAH	VS	MCS
2	F	65	SDH	VS	MCS
3	F	75	TBI	VS	MCS
4	F	39	SAH	MCS	MCS
5	M	77	SAH	VS	VS
6	F	79	AE	VS	VS
7	M	36	TBI	VS	VS
8	F	70	TBI	VS	VS
9	M	50	SAH	VS	MCS
10	M	45	AE	COMA	VS

SAH: subarachnoid hemorrhage; SDH: subdural hematoma; TBI: traumatic brain injury; AE: anoxic encephalopathy