



Remimazolam may be suited for diagnosis of nonconvulsive status epilepticus

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To the Editor:

Nonconvulsive status epilepticus (NCSE) is a state of continuous or intermittent seizure without convulsions. NCSE is now recognized with increased frequency, especially in the intensive care unit, and is associated with poor prognosis [1]. However, the symptoms of NCSE are diverse, ranging from higher brain dysfunction to coma. Thus, it is difficult to distinguish NCSE from common impaired consciousness encountered in the intensive care unit, such as that associated with general condition and sedatives, or delirium. When NCSE is suspected, a benzodiazepine trial with continuous electroencephalography monitoring contributes to its definite diagnosis. This method involves intravenous administration of midazolam 1 mg, followed by assessment of changes in clinical symptoms and electroencephalography; therefore, a fast-acting benzodiazepine agent would be the ideal choice for the trial [2]. However, benzodiazepine trials with midazolam are hesitated in patients who already have impaired alertness or are at risk of respiratory depression [3].

To address this issue, we focused on remimazolam, which is an ultrashort-acting benzodiazepine with a fast onset of action and has a low incidence of respiratory depression [4]. To the best of our knowledge, there have been no reports of the use of remimazolam as an antiepileptic drug, but being a member of the benzodiazepine class suggests that it has potential antiepileptic effects. Therefore, remimazolam may be more suitable than midazolam for benzodiazepine trials in the diagnosis of NCSE, due to its rapid onset and short duration of action. Based on our clinical experiences

in general anesthesia, remimazolam 1–3 mg would have the same potency as midazolam 1 mg. However, in Japan, the use of remimazolam for purposes other than general anesthesia is currently outside the approved indications, making it unfeasible. Propofol may also be useful in the diagnosis as well as the treatment of NCSE [5], but the strengths of remimazolam compared to propofol are its minimal hemodynamic impact and the presence of an antagonist, flumazenil. Further reports on usefulness of remimazolam as benzodiazepine trial, especially in the diagnosis of NCSE, are awaited.

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