

6-year trends in sleep medication and adverse events among 31,922 patients including dementia at Kyushu University Hospital, Japan.

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Background

- Orexin receptor antagonists, such as suvorexant and lemborexant, are considered to have a lower risk of falls and delirium compared to GABA receptor agonist.
- Few studies have examined recent trends in sleep medication prescriptions and the incidence of falls and self-removal of drains in Japanese clinical settings.

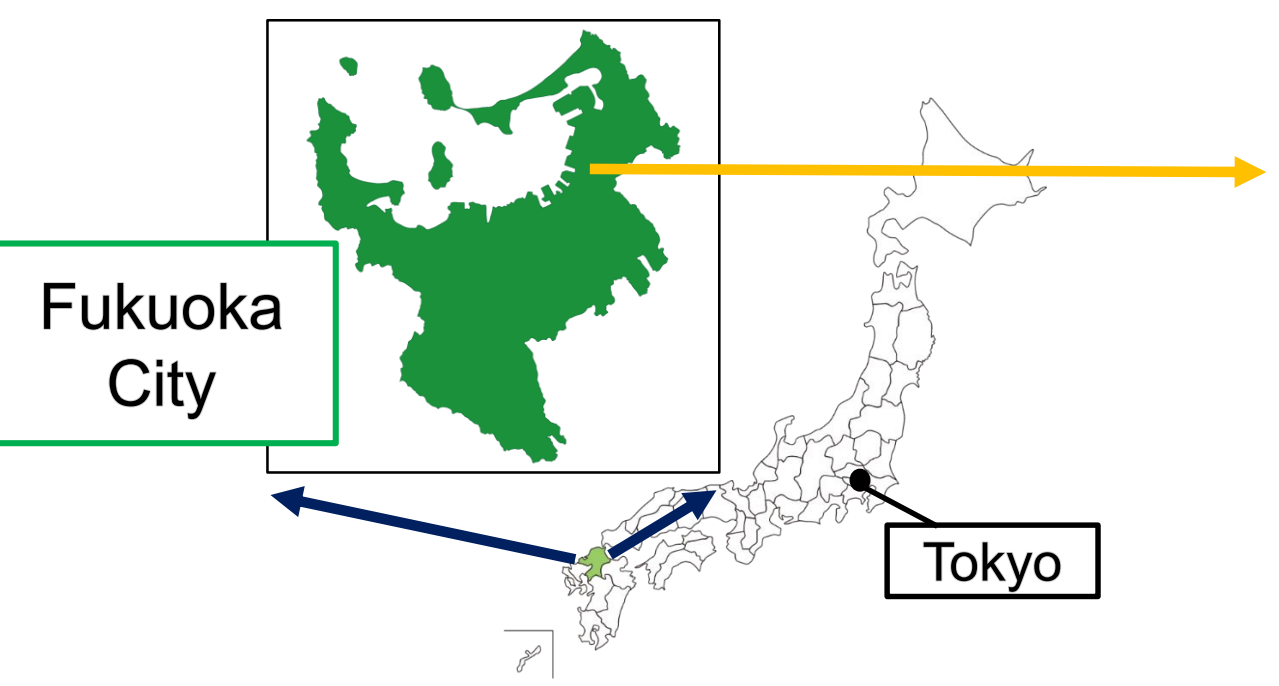
Objectives

- To investigate sleep medication prescriptions over a 6-year period for all patients including those with dementia who admitted to Kyushu University Hospital, as well as trends in adverse inpatient events, such as fall and delirium, in the hospital over the same period.

Methods

Study populations

- This study included 31,922 patients (44,378 prescriptions) who were hospitalized at Kyushu University Hospital (Fukuoka, Japan) between April 1, 2019, and March 31, 2025, and were prescribed sleep medication during their hospital stay.



Data collection

- Data on prescribed sleep medications, dementia status, and psychiatric liaison interventions were extracted from medical records.
- Additionally, information on falls, delirium, and self-removal of drains and tubes was collected from in-hospital incident reports.

Statistical analysis

- Annual counts of inpatient falls and self-removal of drains were compared using Pearson's χ^2 test.
- A trend over time was assessed using the linear regression model.

The present study was approved by the Ethics Committee of the Faculty of Medical Sciences, Kyushu University.

Results

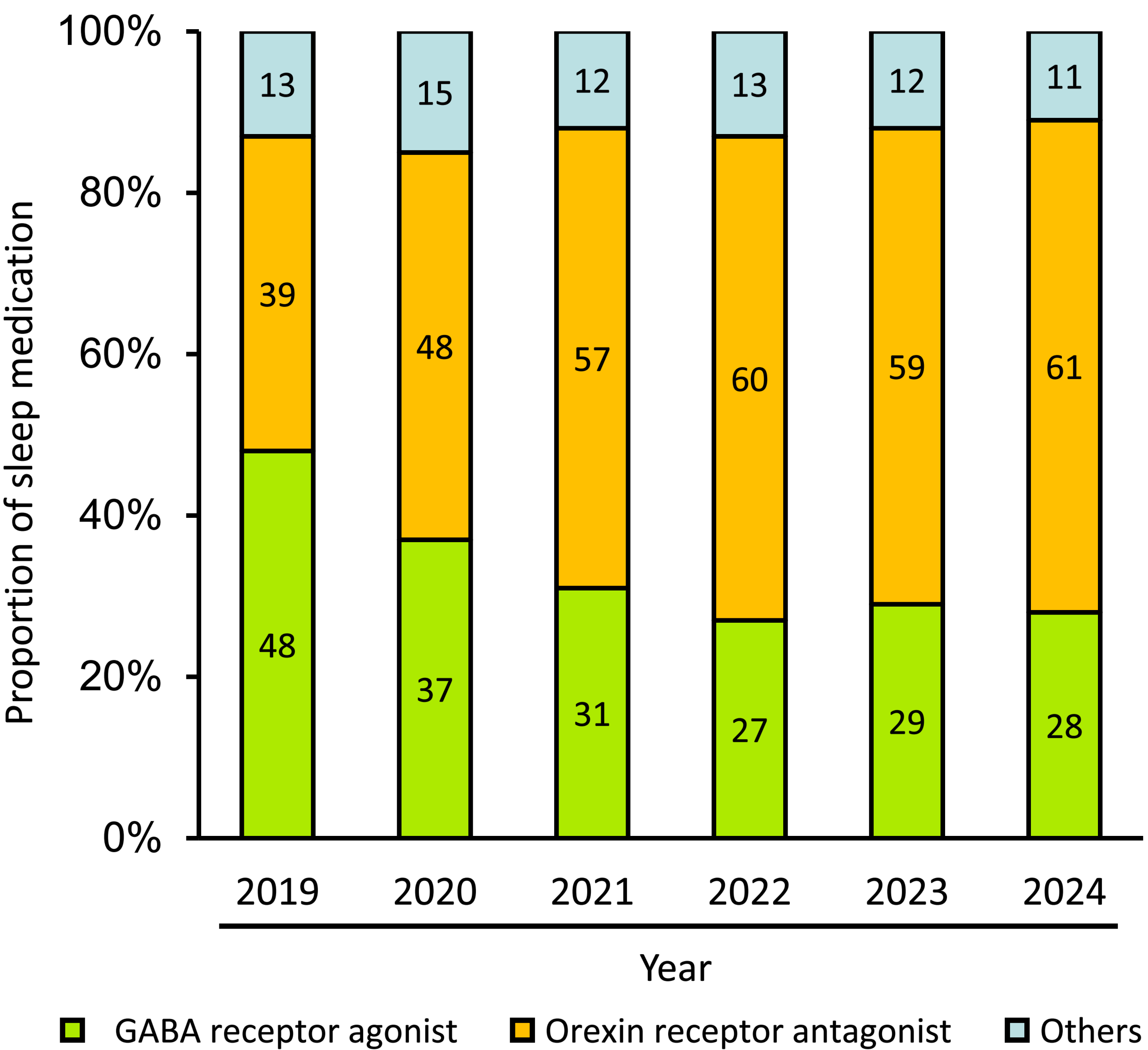


Figure 1. The proportion of sleep medication prescribed to all inpatients at Kyushu University Hospital from 2019 to 2024.

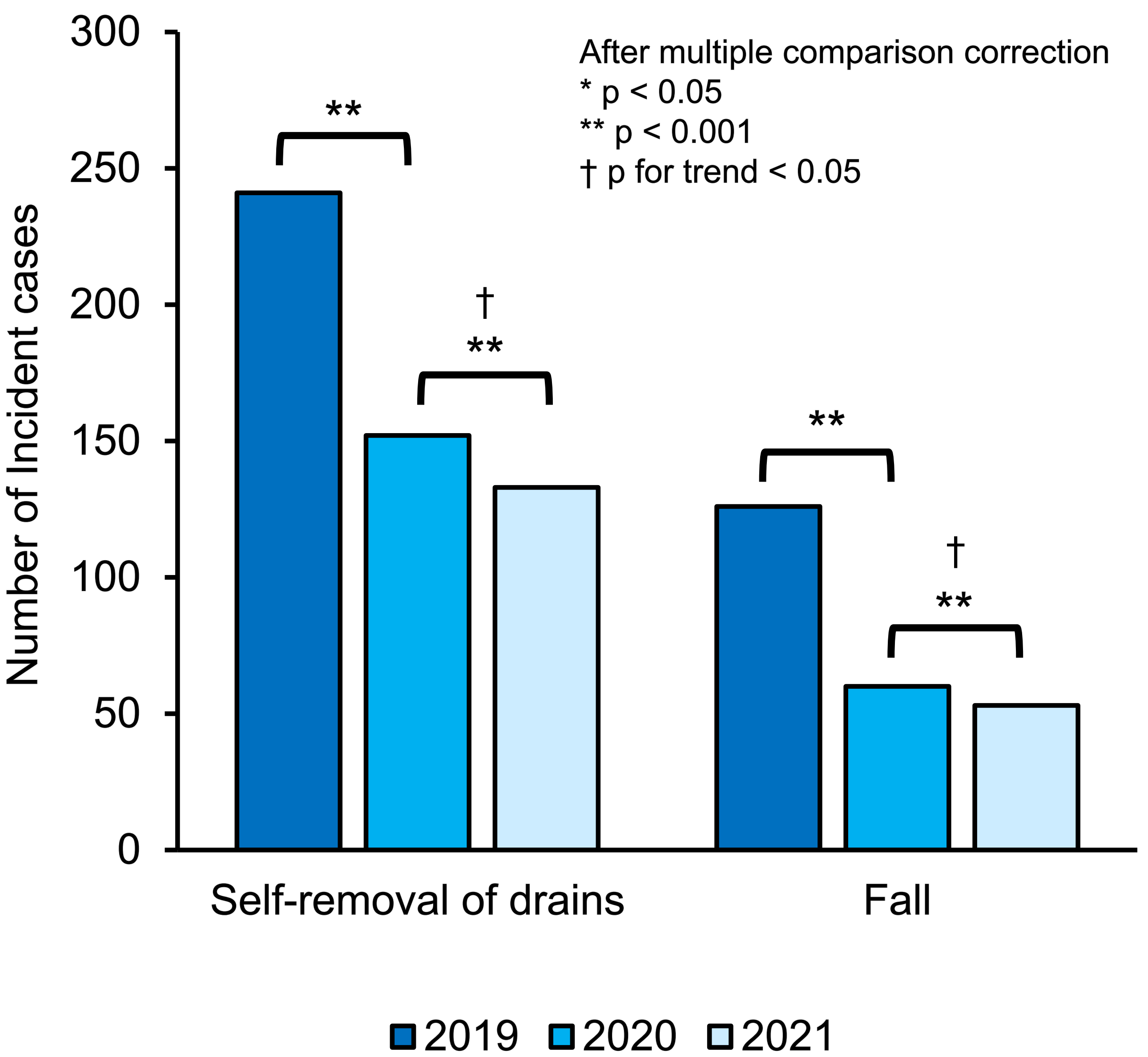


Figure 2. The Number of Incident cases that occurred among inpatients at Kyushu University Hospital from 2019 to 2021.

Summary of results

- The proportion of GABA receptor agonist prescriptions decreased from 48% in 2019 to 28% in 2024, while the proportion of orexin receptor antagonist prescriptions increased from 39% to 61% over the same period.
- The number of self-removal of drains and falls significantly decreased from 2019 to 2021 (all $p < 0.001$; p for trend < 0.05 for both).

Conclusion

- The present study demonstrated that a shift in sleep medication prescriptions from GABA receptor agonists to orexin receptor antagonists were observed among 31,922 hospitalized patients, even in general medical departments.
- The observed decreasing trend in the number of incidents, such as falls and delirium in patients with dementia, suggests that changes in hypnotic prescription patterns may have contributed to these improvements.