

Effects and cost of Gastrodin injection on dizziness and vertigo: a propensity score-matched cohort study based on real-world data

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Objective

Gastrodin injection has shown clinical effects on dizziness and vertigo. However, there is little known about the effectiveness and costs of combining Gastrodin injection with conventional treatment on dizziness and vertigo in daily practice. This study aimed to evaluate the effect and cost of Gastrodin injection on the treatment of dizziness and vertigo by comparing it with Ginkgo Biloba Leaves injection in the real-world practice.

Methods

- We used the data from 131 hospitals across China, from January to December 2018.
- Patients were selected by a single diagnosis of dizziness and vertigo in primary diagnostic according to ICD-10 diagnostic coding.
- The hospitalization days, hospitalization cost, and treatment effects (death, ineffectiveness, improvement, cure) were analyzed and compared between patients with an exposed group (Gastrodin injection) and a non-exposed group (Ginkgo Biloba Leaves injection).
- Propensity Score Matching (PSM) was used to control confounding factors.

Results

Before PSM:

- 1,529 patients were included in the exposed group, while 528 patients were included into the non-exposed group.
- There were significant differences in region, hospital level, and hospital department between the two groups.

After PSM:

- 329 patients were finally included in each group with no difference at baseline.
- The hospitalization days were not statistically different between two groups ($P=0.08$).
- The average hospitalization cost of the exposed group ($6,463.88\pm 3,885.48$ CNY) was lower than that of the non-exposed group ($7,165.25\pm 3,275.85$ CNY) with significant difference ($P=0.01$).
- Furthermore, the cure rate of the exposed group (42.9%) was higher than the non-exposed group (25.5%) with significant differences ($P=0.00$).

Conclusions

This study demonstrates that Gastrodin injection treatment is superior to the treatment of Ginkgo Biloba Leaves injection in terms of cure rate and hospitalization cost.