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Clinical Efficacy and Safety Analysis of Amisulpride Combined with Venlafaxine in Treating Geriatric Depression

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Abstract: *Objective:* To analyze the therapeutic effect of amisulpride (ASP) combined with venlafaxine (VEN) on depression among the elderly. *Methods:* 75 elderly patients with depression who were hospitalized between January 2020 and January 2021 were selected and randomly divided into 2 groups: Group A and Group B. The 38 patients in Group A were treated with ASP combined with VEN, and the 37 patients in Group B were treated with VEN. The effects of the two treatments were compared. *Results:* The treatment in Group A was more effective than Group B ($P < 0.05$). Before treatment, there was no difference in the depression score and coping mechanisms between the two groups ($P > 0.05$). After six weeks of treatment, the depression score of Group A was lower than that of Group B, and the coping mechanism score of Group A was higher than that of Group B ($P < 0.05$). Group A had a lower adverse reaction rate compared to Group B ($P < 0.05$). *Conclusion:* ASP combined with VEN therapy is more effective in treating geriatric depression. It improves their symptoms and coping mechanisms, and the drugs used are relatively safe.

Keywords: Amisulpride; Venlafaxine; Geriatric depression; Clinical efficacy; Safety

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1. Introduction

Geriatric depression is a common psychological disorder. Its pathogenesis is related to aging. Geriatric depression can be caused by physiological, psychological, or social factors. Patients with this form of depression experience negative emotions, low self-esteem, social avoidance, etc., and might even attempt suicide in severe cases [1]. This disease is usually treated by drugs. ASP, as a preparation of eicosapentaenoic acid (EPA), possesses various biological effects, such as anti-inflammatory and antioxidant properties.. VEN is a new type of antidepressant with high selectivity and affinity and has inhibitory effects on serotonin and norepinephrine transporters [2]. In this study, 75 elderly patients with depression were selected to analyze the therapeutic effect of combining the above two drugs.

2. Material and methods

2.1. General information

A total of 75 elderly patients with depression who were admitted to the hospital between January 2020 and January 2021 were selected and divided into two groups (Group A and Group B) by the random number table method. There were 38 cases in group A, and the ratio of male patients/to female patients was 22/16; the patients' ages ranged from 61 to 88 years old, with a mean age of 68.24 ± 2.15 years; the course of the disease ranged from 4 to 73 months, with a mean of 33.15 ± 2.79 months. There were 37 cases in Group B, and the male/female patient ratio was 23/14; the patients' ages ranged from 62 to 89 years old, with a mean age of 68.12 ± 2.29 years old; the course of disease ranged from 3 to 71 months, mean 33.47 ± 2.62 months. After the data were compared, it was recorded as $P > 0.05$.

2.2. Methods

Group A was treated with ASP combined with VEN. One week before the medication, a medication washout was carried out to eliminate the effect of previous antidepressants. The dosage of ASP was set at 100 mg each time, once daily. The initial dose of VEN was 75 mg each time, once a day; after two weeks of medication, the dosage was increased to 150 to 225 mg each time, once a day, and the average daily dose was about 135.00 ± 61.00 mg. Group B was treated with VEN only, with the same dosage as Group A. Antipsychotics or antidepressants could not be taken together during the treatment period, and the treatment cycle was six weeks. All patients signed an informed consent.

2.3. Observation indicators

The severity of depression was evaluated using the Hamilton Depression Rating Scale-17 (HAMD-17), which included 17 items, and each item was scored on a 5-point scale, ranging from 0 to 4 points. Including the following factors: (1) anxiety somatization (5 items), (2) body weight (1 item), (3) cognitive impairment (3 items), (4) retardation (5 items), (5) insomnia (3 items). The degree of depression is scored positively. The coping mechanism was evaluated by the Medical Coping Questionnaire (MCMQ), including confrontation (8 items), submission (5 items), and avoidance (7 items). Adverse reactions such as constipation, nausea, palpitation, drowsiness, and dizziness were observed.

2.4. Efficacy evaluation criteria

The HAMD-17 score was used to measure the therapeutic effect. A score reduction of 75% without clinical symptoms was considered a full recovery, a score reduction of 50% to 75% with mild symptoms indicated significant improvement, and a score reduction of 25% to 49% with apparent symptoms indicated slight improvement. If the HAMD-17 score was reduced by less than 25% with severe symptoms, the treatment was deemed ineffective.

2.5. Statistical analysis

The data were processed using SPSS 28.0 software. The measurement data were analyzed by a *t*-test, and the count data were analyzed by a χ^2-test. $P < 0.05$ indicated statistical significance.

3. Results

3.1. Total efficacy

The total efficacy of Group A was significantly higher than Group B ($P < 0.05$).

Table 1. Comparison of the total efficacy between the two groups (*n* [%])

Group	Number of cases	Full recovery	Significant improvement	Slight improvement	No effect	Total efficacy
Group A	38	18 (47.37)	11 (28.95)	7 (18.42)	2 (5.26)	94.74 (36/38)
Group B	37	12 (32.43)	10 (27.03)	6 (16.22)	9 (24.32)	75.68 (28/37)
χ^2	-	-	-	-	-	5.442
P	-	-	-	-	-	0.020

3.2. Depression scores

There was no difference in depression scores between the groups before treatment ($P > 0.05$). After six weeks of treatment, the depression score of Group A was lower than that of Group B ($P < 0.05$).

Table 2. Comparison of depression scores between the two groups (mean ± standard deviation /min)

Group	Number of cases	Somatization of anxiety		Body weight		Cognitive impairment		Retardation		Insomnia	
		Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
Group A	38	14.21 ± 1.36	8.02 ± 1.04	3.04 ± 0.31	0.76 ± 0.12	9.15 ± 1.84	6.15 ± 1.05	13.98 ± 1.86	7.42 ± 1.61	9.02 ± 1.33	5.12 ± 0.84
Group B	37	14.15 ± 1.34	10.15 ± 1.08	3.06 ± 0.28	0.99 ± 0.15	9.42 ± 1.80	8.13 ± 1.07	13.91 ± 1.83	9.42 ± 1.64	9.04 ± 1.28	7.16 ± 0.89
t	-	0.192	8.701	0.293	7.343	0.642	8.088	0.164	5.329	0.066	10.211
P	-	0.848	0.000	0.770	0.000	0.523	0.000	0.870	0.000	0.947	0.000

3.3. Coping mechanisms

There was no difference in coping mechanism scores between the groups before treatment ($P > 0.05$). After six weeks of treatment, Group A's coping mechanism score was higher than Group B's ($P < 0.05$).

Table 3. Comparison of coping style scores between the two groups (mean ± standard deviation /min)

Group	Number of cases	Confronting		Submission		Avoidance	
		Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
Group A	38	21.26 ± 2.41	28.12 ± 2.49	11.26 ± 1.95	16.54 ± 1.83	18.33 ± 1.67	23.48 ± 2.25
Group B	37	21.29 ± 2.32	25.04 ± 2.43	11.28 ± 1.92	14.02 ± 1.80	18.39 ± 1.65	20.14 ± 2.23
t	-	0.055	5.420	0.045	6.011	0.156	6.455
P	-	0.956	0.000	0.964	0.000	0.876	0.000

3.4. Adverse reaction rate

Group A's adverse reaction rate was lower than Group B's ($P < 0.05$).

Table 4. Comparison of adverse reaction rates between the two groups (*n* [%])

Group	Number of cases	Constipation	Nausea	Palpitation	Drowsiness	Dizziness	Incidence rate
Group A	38	0	1 (2.63)	0	1 (2.63)	0	5.26 (2/38)
Group B	37	1 (2.70)	3 (8.11)	1 (2.70)	2 (5.41)	1 (2.70)	21.62 (8/37)
χ^2	-	-	-	-	-	-	4.341
P	-	-	-	-	-	-	0.037

4. Discussion

Geriatric depression is a condition in which people aged 60 and above suffer from persistent, severe depression, and present behaviors that affect their daily life [3]. The number and functionality of neurons decrease with age, and the secretion of various neurotransmitters also changes, so the probability of suffering from depression is higher. The onset of the disease is relatively slow, with no obvious symptoms in the initial stages. As time passes, the symptoms gradually increase, such as negative emotions, loss of interest, fatigue, insomnia, etc [4]. Clinically, this disease is managed through medications. However, many types of drugs can be used, with different therapeutic effects

VEN is a new type of antidepressant. It reduces depressive symptoms by inhibiting the reuptake of norepinephrine and serotonin [5]. Compared to traditional antidepressants, VEN has fewer adverse reactions in elderly patients. Besides, it does not affect their cognitive abilities and balance. The medicine can regulate neurotransmitter levels, improve nervous system function, and stimulate the release of endogenous opioids, making the patients feel happier and more comfortable [6]. However, the efficacy of the drug alone is mediocre, but it can be used together with ASP. ASP is an antidepressant that works differently from other antidepressants. ASP increases the release of dopamine receptors (D2 and D3) and 5-hydroxytryptamine, which help restore the physiological functions of the nervous system [7]. In addition, ASP can increase the release of dopamine and serotonin and their concentration in the nervous system, which will help relieve depression. The drug can also improve patients' cognitive ability, attention, and learning ability, and reduce various complications caused by depression, which will lead to an improvement in their quality of life [8].

The results showed that Group A's treatment was more effective. Group A had a lower depression score and a higher coping mechanism score. Besides, the adverse reaction rate of Group A was lower than Group B ($P < 0.05$). The combination of ASP and VEN proved to be more effective in treating geriatric depression as it better relieved the patients' symptoms, and improved their disease coping mechanism. Besides, it also resulted in fewer adverse reactions. The two drugs complement each other, regulating patients' nervous system function comprehensively and relieving their symptoms. Therefore, combining medications these two results in improved efficacy and reduced toxicity, demonstrated by the fewer side effects.

5. Conclusion

In summary, ASP combined with VEN is more effective in managing geriatric depression. Besides, this treatment is safe and comes with many benefits.

Disclosure statement

The authors declare no conflict of interest.

References

[1] Xiong J, 2021, Clinical Effect of Escitalopram Combined with Amisulpride in Treating Elderly Patients with Depression. Chinese Modern Drug Application, 15(17): 226–228.

[2] Cai X, 2020, Clinical Study of Escitalopram Combined with Amisulpride or Olanzapine in Treating Senile Depression. Chinese Medicine Guide, 18(18): 174–175.

[3] Huang P, Li Z, 2020, Study on the Efficacy and Safety of Milnacipran Combined with Amisulpride in the Treatment of

Senile Depression. China Practical Medicine, 15(13): 150–151.

[4] Lian Y, Li Y, 2020, The Effect of Escitalopram Combined with Amisulpride in Treating Elderly Patients with Depression. Journal of Practical Clinical Medicine, 24(9): 27–29.

[5] Wang L, Yin Z, Xia B, et al., 2022, Clinical Efficacy and Safety of Venlafaxine Combined with Mirtazapine in Treating Refractory Elderly Depression. Chinese Journal of Gerontology, 42(24): 6011–6013.

[6] Li K, He Y, Wang D, 2022, Efficacy of Venlafaxine Combined with Agomelatine in Treating Elderly Patients with Depression and its Effect on Serum Brain-Derived Neurotrophic Factor. Nervous Diseases and Mental Health, 22(3): 184–188.

[7] Qiao L, 2021, Clinical Effect Analysis of Shugan Jieyu Capsules Combined with Venlafaxine Tablets in Treating Senile Depression. Chinese Modern Medicine Application, 15(1): 208–210.

[8] Liu W, Zou C, Fan M, et al., 2021, The Effect of Repetitive Transcranial Magnetic Stimulation Combined with Venlafaxine on the Curative Effect and Cognitive Function of Elderly Depression. Contemporary Medicine, 27(8): 25–27.