RUMIYA ZAKARIYYA KARIMOVA

QUETIAPINE AND OLANZAPINE FOR TREATMENT OF PSYCHOSIS IN PEOPLE WITH VASCULAR DEMENTIA

Department of Psychiatry, Azerbaijan Medical University

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რუმია ზაქარია კარიმოვა

ვასკულარული დემენციის მქონე ადამიანებში ფსიქოზის მკურნალობა QUETIAPINE და OLANZAPINE-ით

აზერბაიჯანის სამედიცინო უნივერსიტეტი, ფსიქიატრიის დეპარტამენტი

რეზიუმე

მსოფლიო მოსახლეობის დაბერებასთან ერთად, ასევე იზრდება დემენციით დაავადებული ადამიანების რაოდენობა. დემენციას მრავალი ტიპი აქვს. ვასკულარული წარმოშობის დემენცია მსოფლიოში მე-2 ადგილს იკავებს. არა-კოგნიტური დარღვევების მქონე პაციენტებისთვის რეკომენდებულია რამდენიმე პრეპარატი, თუმცა მათი გამოყენება შეზღუდულია, გვერდითი ეფექტების არსებობის გამო. მრავალი გამოკვლევის თანახმად, არცერთი ნეიროლეპტიკი არ მკურნალობს ამ სიმპტომებს. ჩვენმა კვლევამ შეადარა ოლანზაპინისა და კეტიპინის მოქმედებები არა-კოგნიტურ სიმპტომებზე. კვლევამ აჩვენა, რომ ორივე პრეპარატი მკურნალობს ფსიქოზურ სიმპტომებს მცირე დოზებით. ამ მედიკამენტების ეფექტურობის შედეგები სხვა არა-კოგნიტურ სიმპტომებზე მოცემულია ჩვენს სტატიაში.

Introduction: Although cognitive impairments are the first to be noticed in dementia, it is important to remember that dementia does not only mean memory impairment [1,2]. Thus, behavioral and mental disorders are observed in dementia patients in 92% of cases. They are collectively called non-cognitive disorders. Non-cognitive disorders can be observed both in the prodromal phase of vascular dementia and in other periods as well. In dementia, the main therapy is to treat cognitive impairment. Basic therapy also prevents the development of psychotic disorders and affects these symptoms. However, against its background, psychotic symptoms can develop and worsen. Non-cognitive disorders added to cognitive disorders aggravate the course of the disease. It makes patient care much more difficult. The treatment of these symptoms is an additional cost for the treatment and care of dementia patients [3-5].

Today, there are conflicting opinions and research results about the use of neuroleptics, taking into account the etiology and pathogenesis of dementia. For the first time, according to the results of a long-term study conducted in 2009, it was found that the use of neuroleptics is dangerous for the lives of dementia patients and is often used unnecessarily [6]. In the case of vascular dementia, the situation is even more difficult. Despite the relative effectiveness of neuroleptics in the treatment of behavioral problems and mental disorders in vascular dementia, we face serious safety deficiencies. In general, taking neuroleptics increases the risk of cardiovascular complications (stroke, heart attack, fatal outcomes). The risk of lethality is 1.7 times higher in patients receiving neuroleptics than in the placebo group. However, in an acute situation, there are also studies that prove that neuropeltics prescribed for a short period of time do not affect the mortality rate [47,8]. Nevertheless, in many cases, the use of neuroleptics becomes necessary after comparing the risks and benefits [49]. A meta-analysis of 42 placebo-controlled studies compared the effects of olanzapine, risperidone, and quetiapine. Risperodone and olanzapine were found to have more discontinuations due to failure to achieve the expected effect. In the studies conducted in 2001-2005, it was shown that patients with dementia receiving other neuroleptics except quetiapine had a high mortality rate during the first 6 months [10].

The aim of the study: To compare the effects of quetiapine and olanzapine on the psychotic symptoms of patients with vascular dementia, the side effects observed during treatment, and the reasons for their development.

Materials and methods: The study was conducted in the Republican Psychiatric Hospital of the Ministry of Health of the Republic of Azerbaijan during 2019-2022. Patients treated with the diagnosis of "vascular dementia with psychotic disorders" were included in the study. According to the requirements

of the study, patients with mild dementia and psychotic disorders of various degrees were selected. Patients with moderate and severe dementia were excluded from the study based on the advice of the Ethical Committee of Azerbaijan Medical University. If side effects were observed during the study, the dose was reduced. The patient was withdrawn from the study with the patient's consent if the side effects did not resolve and were bothersome to the patient For the objective evaluation of all the received data, the data were processed statistically.

Results of the study: 77 patients including 32 men and 45 women were included in the study. The average age of the patients was 71±8.1. 38 of the patients were included in the 1st group and 39 in the 2nd group by the Random method. Group 1 was prescribed olanzapine for the treatment of psychotic symptoms, and group 2 was prescribed quetiapine. In order to assess more objectively the course of treatment, the NPI scale was filled out for all patients before treatment and in the 4th week of treatment. Before the treatment, there was no significant difference in the scores on the scales in both groups ($p>0.05$).

Because the degree of distress on the NPI scale is purely related to the subjective feelings of the patient's relative, we excluded the distress scores in the calculations. We compared the results under the heading of severity by adding up the sum of the degree of expression of symptoms and the frequency of occurrence. Thus, 1-4 points were meant for mild degree, 6-8 points for moderate degree, and 6-12 points for severe degree. Changes in pre- and post-treatment scores for NPI symptom severity are shown in the table below. Apparently, 73 patients had severe seizures before treatment. Of these, 36 were prescribed olanzapine, 37 were prescribed quetiapine. After 4 weeks of treatment, all patients receiving olanzapine showed improvement, i.e. no severe seizures. 7 of the patients receiving quetiapine continued to have severe seizures in the 4th week of treatment. But since $p<0.05$ in both drug groups, the effect of treatment is considered based on the statistical results. Of the 38 patients in group 1, 11 had severe hallucinations, and 2 patients had moderate hallucinations. During the 4th week of treatment, only 3 patients had mild hallucinations. In the 2nd group, 11 patients had hallucinations. Symptoms were mild in 1 patient and severe in 10 patients. After treatment, symptoms continued to be severe in 2 patients, and mild in 2 patients. Looking at other symptoms, quetiapine was more effective than olanzapine in the treatment of anxiety, depression, and euphoria. However, both drugs had no effect in the treatment of apathy (table 1).

Table 1. Severity of symptoms on the NPI scale

	Olanzapine					Quetiapine				
	before		after		P	before		after		P
Delusions	N	%	N	%		N	%	N	%	
Nope	1	2,6	18	52,9	p<0,001	1	2,6	17	43,6	p<0,001
mild degree (1-4 p.)	0	0,0	11	32,4	p<0,001	0	0,0	7	17,9	p=0,006
average (6-8 p.)	1	2,6	5	14,7	p>0,05	1	2,6	8	20,5	P=0,014
severe degree (6-12p.)	36	94,7	0	0,0	p<0,001	37	94,9	7	17,9	p<0,001
total	38	100	34	100		39	100	39	100	
Hallucinations	N	%	N	%		N	%	N	%	
Nope	25	65,8	31	91,2	p<0,005	28	71,8	35	89,7	p=0,041
mild degree (1-4 p.)	0	0,0	3	8,8	p>0,05	1	2,6	2	5,1	p>0,05
average (6-8 p.)	2	5,3	0	0,0	p>0,05	0	0,0	0	0,0	-
severe degree (6-12p.)	11	28,9	0	0,0	p<0,001	10	25,6	2	5,1	p=0,012
Total	38	100	34	100		39	100	39	100	
Agitation/Aggression	N	%	N	%		N	%	N	%	
Nope	12	31,6	33	97,1	p<0,001	18	46,2	35	89,7	p<0,001
mild degree (1-4 p.)	0	0,0	1	2,9	p>0,05	1	2,6	0	0,0	p>0,05
average (6-8 p.)	5	13,2	0	0,0	p=0,036	2	5,1	2	5,1	p>0,05
severe degree (6-12p.)	21	55,3	0	0,0	p<0,001	18	46,2	2	5,1	p<0,001
Total	38	100	34	100		39	100	39	100	

Depression	N	%	N	%		N	%	N	%	
Nope	28	73,7	30	88,2	p>0,05	25	64,1	30	76,9	p>0,05
mild degree (1-4 p.)	0	0,0	0	0,0	-	0	0,0	0	0,0	-
average (6-8 p.)	6	15,8	4	11,8	p>0,05	5	12,8	7	17,9	p>0,05
severe degree (6-12p.)	4	10,5	0	0,0	p>0,05	9	23,1	2	5,1	P=0,024
Total	38	100	34	100		39	100	39	100	
Anxiety	N	%	N	%		N	%	N	%	
None	34	89,5	33	97,1	p>0,05	26	66,7	38	97,4	p<0,001
mild degree (1-4 p.)	0	0,0	0	0,0	-	0	0,0	0	0,0	-
average (6-8 p.)	0	0,0	0	0,0	-	1	2,6	0	0,0	p>0,05
severe degree (6-12p.)	4	10,5	1	2,9	p>0,05	12	30,8	1	2,6	p<0,001
Total	38	100	34	100		39	100	39	100	
Elation/Euphoria	N	%	N	%		N	%	N	%	
None	35	92,1	32	94,1	p>0,05	32	82,1	38	97,4	P=0,028
mild degree (1-4 p.)	0	0,0	1	2,9	p>0,05	1	2,6	1	2,6	p>0,05
average (6-8 p.)	1	2,6	1	2,9	p>0,05	1	2,6	0	0,0	p>0,05
severe degree (6-12p.)	2	5,3	0	0,0	p>0,05	5	12,8	0	0,0	P=0,027
Total	38	100	34	100		39	100	39	100	
Apathy/Indifference	N	%	N	%		N	%	N	%	
None	22	57,9	21	61,8	p>0,05	23	59,0	18	46,2	p>0,05
mild degree (1-4 p.)	0	0,0	4	11,8	p>0,05	3	7,7	9	23,1	p>0,05
average (6-8 p.)	5	13,2	5	14,7	p>0,05	2	5,1	7	17,9	p>0,05
severe degree (6-12p.)	11	28,9	4	11,8	p>0,05	11	28,2	5	12,8	p>0,05
Total	38	100	34	100		39	100	39	100	
Disinhibition	N	%	N	%		N	%	N	%	
None	25	65,8	31	91,2	p=0,009	27	69,2	36	92,3	p=0,01
mild degree (1-4 p.)	1	2,6	2	5,9	p>0,05	1	2,6	2	5,1	p>0,05
average (6-8 p.)	0	0,0	0	0,0	-	0	0,0	0	0,0	-
severe degree (6-12 points)	12	31,6	1	2,9	p=0,002	11	28,2	1	2,6	p=0,002
Total	38	100	34	100		39	100	39	100	
Irritability	N	%	N	%		N	%	N	%	
None	25	65,8	33	97,1	p<0,001	26	66,7	39	100,0	p<0,001
mild degree (1-4 p.)	0	0,0	0	0,0	-	0	0,0	0	0,0	-
average (6-8 p.)	2	5,3	0	0,0	p>0,05	1	2,6	0	0,0	p>0,05
severe degree (6-12p.)	11	28,9	1	2,9	p=0,003	12	30,8	0	0,0	p<0,001
Total	38	100	34	100		39	100	39	100	
Aberrant motor behavior	N	%	N	%		N	%	N	%	
None	9	23,7	30	88,2	p<0,001	16	41,0	31	79,5	p<0,001
mild degree (1-4 p.)	1	2,6	3	8,8	p>0,05	0	0,0	5	12,8	P=0,027
average (6-8 p.)	5	13,2	1	2,9	p>0,05	3	7,7	0	0,0	p>0,05
severe degree (6-12p.)	23	60,5	0	0,0	p<0,001	20	51,3	3	7,7	p<0,001
Total	38	100	34	100		39	100	39	100	

Sleep and Nightime Behavior Disorders	N.	%	N	%		N	%	N	%	
None	0	0,0	32	94,1	p<0,001	1	2,6	36	92,3	p<0,001
mild degree (1-4 p.)	0	0,0	1	2,9	p>0,05	0	0,0	0	0,0	-
average (6-8 p.)	9	23,7	0	0,0	p=0,002	3	7,7	0	0,0	p>0,05
severe degree (6-12p.)	29	76,3	1	2,9	p<0,001	35	89,7	3	7,7	p<0,001
Total	38	100	34	100		39	100	39	100	
Appetite and Eating Disorders	N	%	N	%		N	%	N	%	
None	37	97,4	34	100,0	p>0,05	32	82,1	37	94,9	p>0,05
mild degree (1-4 p.)	1	2,6	0	0,0	p>0,05	0	0,0	1	2,6	p>0,05
average (6-8 points)	0	0,0	0	0,0	-	1	2,6	0	0,0	p>0,05
severe degree (6-12p.)	0	0,0	0	0,0	-	6	15,4	1	2,6	p>0,05
total	38	100	34	100		39	100	39	100	

For patients with dementia of vascular origin, along with this criterion, perhaps even more, the safety of medicinal products is in the first place. Therefore, we studied side effects of drugs during treatment in a comparative manner. Side effects were not observed in 21 patients who received olanzapine in small doses, and in 25 patients who received quetiapine. The most common side effects are drowsiness, urinary incontinence, gait changes, muscle weakness, and parkinsonism. Considering p>0.05, there was no significant difference between the frequency of side effects observed during the use of olanzapine and quetiapine.

Conclusion: Based on the results obtained from the study, the effect of both drugs on psychotic symptoms (vigilance and hallucinations) in small doses is the same. However, when we look at other non-cognitive symptoms, we see that quetiapine is more effective in the treatment of anxiety, depression, and euphoria at a minimum dose. Both drugs in small doses do not affect apathy. Also, in small doses, the side effects of both drugs appear in the same way.

Limitations: This study has some limitations. This study was not intended to assess regional differences. Despite the obvious limitation of this study due to the small number of samples, we can argue that it shows promising data.

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RUMIYA ZAKARIYYA KARIMOVA

QUETIAPINE AND OLANZAPINE FOR TREATMENT OF PSYCHOSIS IN PEOPLE WITH VASCULAR DEMENTIA

Department of Psychiatry, Azerbaijan Medical University

SUMMARY

Along with the aging of the world population, the number of people suffering from dementia is also increasing. Dementia has many types. Dementia of vascular origin takes the 2nd place in terms of prevalence in the world. When we think of vascular dementia, the first thing that comes to mind is cognitive decline. However, it is the non-cognitive disorders that separate further the patient from society and worry the relatives of the patient more. Today, few drugs are recommended for their treatment. But their use is also limited due to side effects. Even according to many studies, no neuroleptics treat these symptoms. Our study compared the effects of olanzapine and quetiapine on non-cognitive symptoms. It was concluded that both drugs treat psychotic symptoms in small doses. The results of the effects of these drugs on other non-cognitive symptoms are presented in our article.

Keywords: vascular dementia, psychotic symptoms, delusions, hallucinations, neuroleptics.