

Does the Clinical Presentation of Schizophrenia Differ in Elders from Adults? A Cross Sectional Study

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Abstract

Introduction: As the population is aging, better understanding of the clinical presentation of schizophrenia in later life seems to be a clinical priority. Our aim is to study the clinical manifestations of schizophrenia in the older adult patients.

Methods: 102 schizophrenia patients met our inclusion criteria and entered the study. They were divided to two groups based on their age: group 1(18 years old to 64 years old) and group 2 (65 years old and older). There were 53 patients in group 1 and 49 patients in group 2. The patients were evaluated for schizophrenia pattern of presentation and clinical profile by Positive and Negative Syndrome Scale (PANSS). The two groups were compared according to their total score and subscale scores of PANSS.

Results: The mean age of the patients in group 1 (Age<65) was 35.5 ± 7.9 and in group 2 (age ≥ 65) was 72.1 ± 6.1. The total PANSS score and average positive subscale score were significantly lower in the older adult group. But the average negative subscale score and average general psychopathology subscale score did not differ significantly between the two groups.

Conclusion: Our study demonstrates that with aging, schizophrenia patients have improvements in positive symptoms especially disorganization, but negative and cognitive symptoms rates are similar in elderly and younger schizophrenia patients. Furthermore, we found that rate of depressive symptoms was higher in elders with schizophrenia.

Keywords: Schizophrenia • Positive symptoms • Negative symptoms • Elders

Introduction

Schizophrenia is a complex, chronic, and disabling illness that presents with heterogeneity in its clinical appearance, in patterns of psychopharmacological response and in long-term outcomes [1,2]. The prognosis for patients presenting with a first episode of schizophrenia is unclear, however various studies suggest that while up to a third make a good recovery, the remainder suffer from persistent symptoms or a relapsing and remitting course requiring on-going treatment [3,4]. It is estimated that 0.1% to 1.0% of the over 65 population has schizophrenia including up to 12% of all nursing home residents [5,6]. Schizophrenia classically begin in late adolescence and young adult age and the life course of schizophrenia into later adulthood is not well studied, but it is generally recognized that, whereas psychotic symptoms and disorganization tend to remit with time, negativity such as social withdrawal and emotional apathy, increase in frequency and intensity with aging [6,7].

As the population is aging and more schizophrenia patients reach the older adulthood, better understanding of the clinical presentation of this disease in later life seems to be a clinical priority. More knowledge on the clinical profile of older adult patients with schizophrenia would lead to better treatment plans and medication administration.

In this research, our aim is to study the clinical manifestations of schizophrenia in the older adult patients (age more than 65 years old).

Materials and Methods

Participants

All the patients with diagnosis of schizophrenia that were referred

to Ebnesina psychiatry center were evaluated. To enter the study, they must meet the following criteria: 1-Diagnosis of schizophrenia according to DSM-5 criteria; 2- Age more than 18. A board-certified psychiatrist did the beginning evaluations. The patients were excluded if 1- They were on psychiatry medications; 2-They abused substances; 3-They were pregnant; 4-They had uncontrolled medical problems; and 5-They had other psychiatry disorders.

If the patients were on psychiatry medications or if they had used psychiatry medications in the past month, they were excluded. All the patients and their caregiver gave written consent to enter the study. The study protocol was approved by Shiraz medical school ethic committee.

Measurements

To study schizophrenia manifestation and clinical profile, we used the Positive and Negative Syndrome Scale (PANSS). This scale in addition to assessing psychosis-related symptoms, would evaluate general psychopathology (including depression and anxiety) and cognitively related features including "poor attention" and "difficulty in abstract thinking" and involves the use of data from patient reports, caregiver reports, and clinical observations [8,9]. It contains inquiries about some (not all) specific PANSS symptoms in a flexible semi-structured format. It is not a diagnostic tool, but a severity rating tool that rates 30 symptoms of schizophrenia, divided into positive, negative and general psychiatric symptoms, over the most recent week. Each item of this scale would be scored from 1(not present) to 7 (severe).

Procedure

102 schizophrenia patients met our inclusion criteria and entered the study. They were divided to two groups based on their age: group 1(18

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years old to 64 years old) and group 2 (65 years old and older). There were 53 patients in group 1 and 49 patients in group 2. The patients were evaluated for schizophrenia pattern of presentation and clinical profile by PANSS. A trained clinical psychologist administers the test to all the patients. The two groups were compared according to their total score and subscale scores of PANSS.

Statistical analysis

All analyses were performed using Statistical Package for the Social Sciences (SPSS), 25.0 software (SPSS Inc., Chicago, IL). P value less than 0.05 were considered significant. Characteristics of the whole study group are presented using descriptive statistics including number of observations, means and SD for continuous variables. Frequencies and percentages are presented for categorical variables. For these, Pearson's χ^2 -test was used for categorical variables and Mann-Whitney U-test or T-test was used for continuous variables. Normality was assessed by kolmogorow-smirnov test.

Results

Of 102 patients with schizophrenia that entered our study 53 patients

were in group 1 (Age<65) and 49 were in group 2 (age \geq 65). The mean age of the patients in group1 was 35.5 ± 7.9 and in group 2 was 72.1 ± 6.1 . The demographic data of the patients are depicted in Table 1. The total PANSS score and positive subscale score were significantly lower in the older adult group. But the negative subscale scores and general psychopathology subscale scores did not differ significantly between the two groups (Table 2).

The clinical profile of the schizophrenia patients is depicted in Table 3. Among the positive symptoms studied, conceptual disorganization ($P<0.000$), Excitement ($P<0.000$) and Hostility ($P=0.009$) were significantly lower in the older adult group. Among the negative symptoms, blunted affect ($P=0.019$) was more observed in the older adult group. In the general psychopathology subscales, somatic concern ($P=0.017$), Depression ($P=0.022$), Motor retardation ($P=0.009$) and Disorientation ($P=0.013$) were more common in elders, while Poor impulse control ($P<0.000$) and Preoccupation ($P<0.000$) were more detected in adult group. The mean score of the rest of the symptoms were not significantly different between the groups.

Table 1. Demographic data of the participants.

	Age \geq 65	Age<65	P value
Sex, female (%)	45	51	0.65
Years of education (n)	8.5	14.4	0.00
Marital Status, married (%)	56	23	0.00
Pervious admissions(n)	6.3	2.1	0.00

Table 2. Comparison of PANSS scores of the participants.

0.00	Age \geq 65		Age<65		P value
	Mean	SD	Mean	SD	
PANSS total Score	125.5	15.8	136.9	12.6	0.016
Positive symptoms subscale	33.4	7.6	39.3	5.6	0.008
Negative symptoms subscale	34.8	7.4	33.4	5.7	0.989
General psychopathology subscale	57.1	8.8	60.5	5.8	0.153

Note: PANSS: Positive and Negative Syndrome Scale

Table 3. Comparison of clinical manifestation of schizophrenia between elders and adults.

		Age \geq 65	SD	Age<65	SD	P value
		Mean		Mean		
Positive Symptoms Subscale	Delusion	6.2	1.7	6.6	1.2	0.148
	Conceptual disorganization	4.0	2.3	6.3	1.6	0.000
	Hallucinatory behavior	4.6	2.9	5.1	2.7	0.526
	Excitement	4.6	1.6	5.8	2.1	0.000
	Grandiosity	2.0	2.0	1.8	1.5	0.43
	Suspiciousness /Persecution	6.1	1.3	6.5	0.9	0.076
Negative Symptoms Subscale	Hostility	5.1	1.4	6.5	1.4	0.009
	Blunted Affect	3.3	1.9	2.7	1.8	0.019
	Emotional withdrawal	4.5	1.7	4.2	1.5	0.945
	Poor rapport	5.1	1.7	5.3	1.6	0.417
	Passive/Apathetic social withdrawal	5.9	1.7	6.3	1.0	0.663
	Difficulty in abstract thinking	6.8	0.7	6.7	0.8	0.463
	Lack of spontaneity in flow of conversation	5.1	1.6	4.9	1.4	0.695
	Stereotypical thinking	4.7	2.0	4.9	1.7	0.750

General Psychopathology Subscale	Somatic Concern	2.6	1.6	1.2	0.9	0.017
	Anxiety	2.4	2.6	2.2	2.0	0.445
	Guilt feelings	1.0	0.3	1.0	0.0	0.298
	Tension	1.6	1.5	1.0	1.4	0.562
	Mannerism and posturing	1.8	1.8	1.6	1.4	0.910
	Depression	2.5	2.1	1.7	1.5	0.022
	Motor Retardation	2.8	1.8	1.5	1.1	0.009
	Uncooperativeness	5.7	1.7	5.6	1.6	0.652
	Unusual thought content	1.9	1.7	1.8	1.8	0.212
	Disorientation	2.6	0.9	1.1	0.3	0.013
	Poor attention	4.0	1.2	3.8	1.1	0.127
	Lack of judgment and insight	7.0	0.1	7.0	0.0	0.298
	Disturbance of volition	6.9	0.5	6.9	0.4	0.358
	Poor impulse control	4.3	1.7	6.3	1.4	0.000
	Preoccupation	4.1	1.9	6.4	1.0	0.000
	Active social avoidance	6.2	1.6	6.5	0.5	0.110

Discussion

In our cross-sectional study, we compared the clinical manifestation of schizophrenia in elders (mean age: 72.1) with adults (mean age: 35.5). We found that overall positive symptoms were less severe in elders ($P=0.008$). The negative symptoms and general psychopathology did not differ significantly.

In review of literature, we found several studies indicating positive symptom improvement in schizophrenia patients on long-term follow-up into later life [10-15]. In line with these studies, our result demonstrates that elders with schizophrenia had lower rate of positive symptoms. Among the positive symptoms, especially disorganization has been shown to decrease with age [16]. Consistently, we found conceptual disorganization to be significantly less in our older adult patients. A study on one hundred ninety-eight persons aged 55 and older living in the community who had developed schizophrenia before age 45 years, found that Thirty-two percent experienced auditory verbal hallucination that is lower than reported in younger adults [17]. Another study has shown a stable rate of hallucination over time in follow ups in schizophrenia patients [18]. In our study, the elderly had the same rate of auditory hallucinations than the younger participants.

Several studies have reported that positive symptoms of schizophrenia decline in later life and negative symptoms dominate the presentation in elders [5,11,12]. On the other hand, there are research indicating that negative symptoms in older patients with schizophrenia expresses in similar magnitude seen in patients with younger age [10,19]. Our results showed no significant difference in the rate of negative symptoms between the older adult and adult groups.

Raji, et al. in their study compared people with schizophrenia. Age 19 years to 79 years, with their healthy age peers. They concluded that cognitive deficits occur around the time of onset and do not progress beyond what is observed due to effect of aging over the entire span of adult life [20]. Consistently, our results shows that the cognitive subscales (Attention, Abstract thinking, Emotional expression) are not more declined in elders with schizophrenia.

Chen and Li in their study found that the prevalence of depressive symptoms in elderly patients with schizophrenia was 48.5% which is higher than the prevalence of depressive symptoms reported in younger schizophrenia patients [21-24]. In line with their study, our results show that depressive symptoms are more common in elders with schizophrenia.

Conclusion

Our study demonstrates that with aging, schizophrenia patients have improvements in positive symptoms especially disorganization, but

negative and cognitive symptoms rates are similar in elderly and younger schizophrenia patients. All patients with schizophrenia who were referred to the Ebnesina psychiatry centre were evaluated. Furthermore, we found that rate of depressive symptoms was higher in elders with schizophrenia when compared to the adults with schizophrenia.

Limitations

Our study is a cross-sectional survey. Longitudinal research that follow schizophrenia patients from younger age to elderly are more reliable to study the effects of age on schizophrenia' characteristics. Our sample size is small. Furthermore, our research has been done only in one site.

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