Clinical Assessment of Positive Negative Symptoms Age of Onset and Gender in a Sample of Egyptian Patents Having Schizophrenia for More than Two Years.

M. A. Owida A. K. Wilson, Mona Tawfik, I. Abdel-Aal, I. M. Yuossef, and M. A. Fatah Ahmed

To assess the age of onset, gender and positive/negative symptoms of schizophrenia, the current study was carried out. The sample was comprised 45 outpatients diagnosed as having schizophrenia according to ICD-10 diagnostic criteria for research for more than two years and free of depression and of past or present history of organic mental disorders, substance use disorders and major medical illnesses. Patients were assessed through semi-structured clinical psychiatric interview, Hamilton Rating Scale for Depression, scale for the assessment of positive symptoms and scale for the assessment of negative symptoms.

Our results showed that the mean age of the sample was 32.96±11.84 years, two thirds were males and one third were females. Age of onset of schizophrenia was at about 24.02±10.57 years. Males tended to have schizophrenia earlier than females in the early onset subgroup. While, females tended to have schizophrenia earlier than males in the late onset subgroup. Both positive and negative symptoms occurred in noticeable percentages in the sample. Results based upon the simple yes/ no occurrence of positive/negative symptoms revealed no relation with either age of onset or gender. while relying on the degree of severity of symptoms, results denoted that early onset schizophrenic patients' had severer degrees of bizarre behaviour, allogia and avolition/apathy than the late onset subgroup. Also results denoted that males tended to have severe degrees of delusions, abolition/apathy and anhedonia/ asociality than females.

(Egypt.J. Psychiat., 1999, 22: 267-276).

INTRODUCTION

Schizophrenia is a disease of the brain that manifests with multiple signs and symptoms involving thought, perception, emotion, movement and behavior. Those manifestations combine in various ways, creating considerable diversity among patients, but the cumulative effect of the illness is always severe and usually long lasting. An editorial in science described it as the worst disease affecting mankind, not excepting even Acquired Immune Deficiency Syndrome (AIDS). (Carpenter and Buchanan, 1995).

Since Kraepelin's dementia praecox in the turn of century and Bleuler (who coined the term: schizophrenia) in the beginning of the century, a lot of studies were done to explore presentation of that disease, and came to the hypothesis that schizophrenia is not a single disease entity (Zakanis, 1998).

In 1980, two distinct types of schizophrenia were postulated, type I which was characterized by predominantly positive symptoms, good response to neuroleptics and type II which was character-

ized by mainly negative symptoms and poor response to neuroleptics (Lipton & Cancro, 1995).

Literature show many conflicts about this positive/negative dichotomy. Some authors argued this dichotomy and said that negative symptoms may be secondary to side effects of drugs, depression and under stimulation as a result of hospitalization (e.g. Moller, 1995: Marneros et al., 1995 and Perenyi et al., 1998).

However, the past decade witnessed a large number of investigations who further supported that hypothesis and gave support to the evolving concept of schizophrenia subtypes (positive/ negative) (e.g. Eaton et al., 1995; Dollfus and Petit, 1995; Voruganti et al., 1997; Berman et al., 1997 and Zakzanis, 1998).

The recent years saw a lot of researches about the possible relation between that positive/negative symptoms and a variety of issues including: age of onset, gender, course, outcome, neurotransmitter hypotheses, brain imaging findings and so forth (Liption and Cancro, 1995).

McGlashan and Fenton (1992) in their review about the current status of the relation between positive/negative symptoms an age of onset concluded that "patients with negative symptoms experienced and earlier age of onset" (McGlashan and Fenton, 1992). Also, they found that "patients with negative symptoms tend to be males" (Mcglashan et Fenton, 1992) , a finding for which no satisfactory explanation has been provided. However, Fenning et al. (1995) in their study on 52 first-admission schizophrenic in patients found that gender is not strongly associated with negative symptoms in patients ascertained at early stages of schizophrenia (Fenning et al. 1995).

In Egypt, Omar et al. (1998) in the only available study in this area-found that female patients showed later age of onset compared with males. However, they compared age of onset and gender in relation to paranoid, hebephrenic and undifferentiated subtypes of schizophrenia not with positive/negative symptoms. The aim of this study was to assess positive/negative symptoms, age of onset and gender in a sample of Egyptian patients having schizophrenia for more than two year.

SUBJECTS AND METHOD

A. Subjects:

The sample of the present study consisted of 45 patients, representing all the attendants to an educational hospital in Cairo and who met the following inclusion criteria:

Age above 15 years old.

Attending the out-patient clinic i.e. not hospitalized.

Fulfilled the diagnostic criteria for schizophrenia ICD-10 diagnostic criteria for research (WHO, 1993).

Duration of schizophrenia: more than two years.

Hamilton Rating Scale for Depression score below 18.

Free of past or present history of organic mental disorders, substance use disorders and major medical illness.

Had a reliable informant accompanying him/her to determine-as accurate as we can-age the onset of schizophrenia.

B. Method:

The current study was carried out along six months interval starting from the 3rd of January 1998. All the patients of the study were subjected to:

Semi-structured clinical psychiatric interview guided by the diagnostic criteria for research of ICD-10 (WHO, 1993), with medical including neurological examination. The psychiatric interviews were done by senior psychiatrists, M D qualified with minimum 10 years experience. It was done to diagnose schizophrenia, and exclude the presence of depression. Also, through it, age of onset was determined from patient and informant

Hamilton Rating Scale for Depression which is a clinician-rated scale. The scale is rated on the basis of the patient's condition in the previous few days It contains 17 variables. The items are not defined but detailed information is given about scoring (Peck and Dean, 1988). It was used to confirm exclusion of depression

Scale for the assessment of positive symptoms (SAPS): which is a clinician-rated scale. It includes four groups of symptoms: hallucinations, delusions, bizarre behaviour and positive formal thought disorder The scale provides rich definitions to characterize each scale point (Wetzler, 1989)

Scale for the assessment of negative symptoms (SANS): it is a clinician-rated scale. It includes five groups of symptoms: allogia, affective flattening, abolition-apathy, anhedonia-asociality and attention. Each group of symptoms has several different items (Wetzler 1989).

Age of onset was operationally defined as the age at which positive psychotic symptoms, negative symptoms or disorganized behavior were firstly reported by the patient or the informant.

According to the age of onset, two subgroups were selected from the original sample, early onset schizophrenic patients (age of onset less than 20 years) and they were 21 patients, and late onset schizophrenic patients (age of onset more than 30 years) and they were 11 patients.

RESULTS

Table (1) shows some demographic characteristics of the sample, their mean age was 32.69±11.84 years. Two thirds of them were males while females represented one third only. The majority of the sample (46.67%) had schizophrenia early in their lives i.e less than 20 years old. The mean age of onset of the whole sample was 24.02±1057 years.

Table (2) indicates that, although, there was no statistical significance to the difference between the ages of males and females, males had schizophrenia earlier than females in the early onset subgroup (about 3 years earlier), and females got schizophrenia earlier than males in the late onset subgroup (about 7 years earlier).

Table (3) indicates that the positive and negative symptoms of schizophrenia are intermingled in the sample. The more frequently met symptoms were: a effective flattening (95.6%), delusions (93.3%) and positive formal thought disturbance (91.1%). While, the lesser frequently met were: bizarre behaviour (66.7%), allogia (77.8%), and attention disturbance (77.8%), There were no statistical significance to the differences in percentages of positive/negative symptoms and age of onset (Table 4) and gender (table 5).

However, results indicated that patients who had schizophrenia early in their lives were presenting clinically with more bizarre behaviour, allogia and abolition/apathy than those who had schizophrenia later. Also, results denoted that males were presenting clinically with more hallucination, delusions, bi-

Table 1
Some Demographic Characteristics of the Sample

Data		NO	%
Age in years	-20	4	8.89
	20-29	16	35.56
	30-39	14	31.11
	40-49	8	17.78
	50-	3	6.67
	Total	45	100
	Mean	32.96	
	Standard Deviation	±11.84	
Sex	Males	30	66.67
	Females	15	33.33
Age of onset in year	-20	21	46.67
	20-29	13	28.89
	30-	11	24.44
	Mean	24.02	
	Standard Deviation	±10.57	

Table 2
Age and Age of Onset in Relation to Gender

Data	Males		Females		t.test	P
	Mean	S.D±	Mean	S.D±		
Age in years	34.03	13.18	31.4	7.86	0.69	>0.05
Age* of onset in early onset schizophrenic patients	15.57	2.66	18.5	2.78	2.29	<0.05
Age ** of onset in late onset schizophrenic Patients	41.13	4.6	34.33	2.87	2.16	<0.05

* Males were: 13. Females were: 8

** Males were: 8. Females were: 3

Table 3
Distribution of the Sample According to the Positive/Negative

Data	No.	%
hallucinations	36	80
Delusions	42	93.3
bizarre behavior	30	66.7
+ ve formal thought disorder	41	91.1
Affective flattenting	43	95.5
Allogia	35	77.8
Avolition/Apathy	39	86.7
Anhedonia-asociality	38	84.4
Attention disturbance	35	77.8

Table 4
Relation Between the Presence of Positive/Negative Symptoms and Age of Onset

Data	Early onset (N.=2)		Late onset (N.=11)		CR*	P
	No.	%	No.	%		
Hallucinations	17	81	9	81.8	0.29	--**
Delusions	20	95.2	11	100	0.63	--
Bizarre behavior	16	76.2	6	54.5	1.33	--
+ve formal thought disorder	19	90.5	10	90.9	0.15	--
Affective flattening	20	95.2	11	100	0.63	--
Allogia	20	95.2	8	72.7	1.83	--
Avolition/apathy	18	85.7	8	72.7	0.94	--
associality	17	81	9	81.8	0.29	--
Attention disturbance	17	81	8	72.7	0.59	--

* CR= Critical Ratio.

** (-) =>0.05.

Table 5
Relation Between the Presence of Positive/Negative Symptoms and Gender

Data	Early onset (N.=30)		Late onset (N.=15)		CR*	P
	No.	%	No.	%		
Hallucinations	26	86.7	10	66.7	1.58	--
Delusions	29	96.7	13	86.7	1.24	--
Bizarre behavior	23	76.7	8	53.5	1.61	--
+ve formal thought disorder	29	96.7	12	80	1.84	--
Affective flattening	29	96.7	14	93.3	0.48	--
Allogia	21	70	14	93.3	1.75	--
Avolition/apathy	28	93.3	11	73.3	1.82	--
associality	27	90	11	73.3	1.83	--
Attention disturbance	25	83.3	10	66.7	1.25	--

Table 6
Relation Between of Presence Positive/Negative Symptoms and Age of Onset

Data	Early onset (N.=30)		Late onset (N.=15)		CR*	P
	Mean	S.D±	Mean	S.D±		
Hallucinations	13.01	13.33	15.56	12.1	0.52	- -
Delusions	22.63	13.89	24.73	12.73	0.41	- -
Bizarre behavior	4.82	4.3	1.73	2,18	2.17	<0.05
+ve formal thought disorder	12.11	6.89	16	10.06	1.26	- -
Affective flattening	22.77	7.7	22.36	3.98	0.16	- -
	16.41	4.99	11.55	5.57	2.46	<0.05
Allogia	12.95	5.16	8.91	4.93	2.09	<0.05
Avolition/apathy associality	12.59	6.71	14.55	7.07	0.75	- -
Attention disturbance	7.05	3.81	5.45	2.1	1.26	- -

Table 7
Relation Between Degree of Severity of Positive/ Negative Symptoms and Gender

Data	Early onset (N.=30)		Late onset (N.=15)		CR*	P
	Mean	S.D±	Mean	S.D±		
Hallucinations	14.9	11.85	10.4	11.55	1.18	- -
Delusions	25.17	14.55	14.47	12.29	2.39	<0.05
Bizarre behavior	4.27	4.48	2.93	3.17	1.01	- -
+ve formal thought disorder	13.33	7.98	11.27	8.61	0.78	- -
Affective flattening	22.1	6.69	18.13	7.74	1.74	- -
Allogia	12.43	6.54	13.6	5.12	0.59	- -
Avolition/apathy	11.9	4.55	8.4	4.39	0.41	<0.05
asociality	14.5	6.52	9.07	5.36	2.73	<0.01
Attention disturbance	6.63	2.95	5.33	3.75	1.24	- -

zarre behaviour, +ve formal thought disorder, abolition/apathy and attention disturbances than females. Relying upon degree of severity of positive/negative symptoms, results clinically with severe degree of bizarre behaviour and abolition/apathy than those who had schizophrenia later in their lives, the differences were statistically significant (Table 6).

Table (7) shows that males were representing with more severe degree of delusions, abolition/apathy and anhedonia/ asociality than females. The differences were statistically significant.

DISCUSSION

Many studies in the area of pathogenesis and pathophysiology of schizophrenia investigated the age of onset, gender, neuroleptic responsivity, positive/negative symptoms and the interaction between them. Our results revealed that the mean age of onset of schizophrenia was 24.02+10.57 years. This result is consistent with the well known observation that schizophrenia usually manifests during late adolescence and early adulthood (Carpenter and Buchanan, 1995),.

However, categorizing the sample into early onset schizophrenic patients and late onset schizophrenic patients, the results indicated that males had late onset schizophrenic patients, the results indicated that males had schizophrenia earlier than females (about 3 years earlier in the early onset subgroup. And, females had schizophrenia earlier than males (about 7 years earlier) in the late onset subgroup. Our result goes with the previous studies which reported gender differences in the age of onset of schizophrenia (e.g. Gureji, 1991).

The reasons for these differences are

not clear (Karno et Norquist, 1995). However, they can be seen on the basis of biological and/or social variables. From a biological point of view, there is good evidence to the antidopaminergic property of oestrogens (Maggi and Perez, 1985). and, it seems that this antidopaminergic property is relatively higher in the early years of the sexually mature females lives which are suitable for reproduction.and, then decrease in the later years which are not suitable for reproduction. i.e. females sexual hormones may have a protective effect to the benefit of the sexually mature young females against schizophrenia.

From a social point of view, the current results may be due to the influence of sex-specific roles on the tolerance and/or reaction of the society to deviant behaviour at the beginning of a psychosis (Warren, 1983) and hence, on the time of help-seeking (leaf and Bruce, 1987).

Based upon the simple identification or absence of the individual positive/negative symptoms, our results supported Fenning et al. (1995), study on 52 first-admission schizophrenic inpatients and who concluded that gender is not strongly associated with negative symptoms (Fenning et al., 1995). Also our results were not in agreement with McGlashan and Fenton (1992) who found that "patients with negative symptoms experienced an earlier age of onset and tend to be males (McGlashn and Fenton, 1992).

While, relying upon the degrees of severity of positive/negative symptoms, as a parallel way - our results indicated that there were significant statistical relations between positive/negative symptoms and each of age onset and gender. Where patients who had schizophrenia earlier in their lives had severe degree of bizarre behaviour, allogia and avolition/apathy than those who developed schizophrenia later. and, males had severe degree of delusion, abolition/apathy and anhedonia/asociality than females. These two parallel lines of approach may explain the contradictory results in the literature. But we do not know why some symptoms (as previously mentioned) tend to be represented in more severe degrees in some subgroups (males and earlier in onset) than their counterparts, and this may need further investigation using different methodolgical approaches.

In conclusion, the current study denoted the necessity of addressing degree of severity of positive/negative symptoms of schizophrenia when comparing different subgroups of patients rather than the mere existence or absence of these symptoms only. and, this in turn may be a step forward to address the degree of severity of schizophrenia as a whole on diagnosing patients with its probable therapeutic implications and outcome strategies.

Also, it showed that early onset schizophrenics tend to have severe degrees of: bizarre behaviour, allogia and avolition/apathy than later onset schizophrenics. Also, it clarified that males tend to have severe degrees of: delusions, abolition/apathy and archedonia/asociality than females.

Limitations:

The study was conducted in a small chronically ill patients treated with relatively high doses of antipsychotics. it is not clear that the results obtained here would be applicable to an acute patient population. So, further study involving acutely ill patients is recommended.

REFERENCES

Berman, I., Viegner, B., Merson, A., Allen, E., Pappas, D., and Green, A. (1997) Dif-

ferential relationship between positive and negative symptoms and neuropsychological deficits in schizpohrenia. Schizophrenia Research, Vol. 25, P. 1-10.

Carpenter, W., and Buchanan, R., (1995) Schizophrenia: Introduction and overview" in: Harold, J., and Benamin, J., Sadock: Comprehendive Textbook of Psychiatry. Baltimore, Williams., and Wilkin, 6th edition, Vol (1) P. 889-902.

Dollfus, S., and Petit, M., (1995) Negative symptoms in schizophrenia: their evolution during an acute phase. Schizophrenia Research, Vol. 17 (2), P. 187-194.

Fenning, S., Utnanmm, K., Romet, E., and Galambos, N., (1995) Gender, Prmorbid characteristics and negative symptoms in Schizophrenia Acta Psychiatrica Scandinavica, Vol. 92, (3), 173-177.

Gueji, O., (1991) Gender and Schizophrenia: age of onset and sceiodemographic attributes" Acta Psychiatrica Scandinivica, Vol. (83), 402-405.

Karno, M., et Norquist, G., (1995) Schizophrenia: Epidemiology in: Harold I. Kaplan & Benjamin J. Sadock: comprehensive Textbook of Psychiatry. Baltimore, Williams, and wilkins, 6th edition, vol. (1), P. 902-910.

Leaf, P., and Bruce, L., (1987) Gender difference in the use of metal health-related services: a re-examination. J. Health soc. Behave. Vol. (18), P. 171-183.

Lipton, A. and Cancro, R. (1995) Schizophrenia: Clinical features in: Harold I Kaplan and Benjamin J. Sadock: "Comprehensive Textbook of Psychiatry" Baltimore, Williams and Wilkins, 6thc edition, Vol. (1), P. 968-987.

Marneros, A., Rohde, A., and Deister, A. (1995) Validity of the negative/Positive dichotomy of schizophrenic disorders under longterm conditions" Psychopathology, vol. 28 (1), P. 32-37.

Mcglashan, T. and Fenton, W. (1992) the positive - negativ- negative distinction in schizophrenia: a review of the the natural history validation:". Arch. Gen. psychiat. vol. (49), P. 63-72.

Maggi, A. and perez, J. (1985) role of female gonadal hormones in the C.N.S: clinical and experimental aspects. Life sci. vol. (37), P. 893-906.

Moller, H. (1995) the negative componemt in schizophrenia". Acta psychiatrica scandinvica, vol. 388, P. 11-14.

Omar, A.; Haroun, A. and Nagy, N. (1998) Age of onset and gender in a sample of Egyptian schizophrenic patients. Current psychiat. Vol. 5 (3), P. 286-293.

Pack, F. and Dean, C. (1988) Measurement in Psychiatry in : R.E. Kendell and A.K. Zealley: " Companion to psychiatric studies". Edinburgh, Churchill Livingstone, 4th edition, P. 224-241.

Perenyi, A., Norman, T., Hopwood M. and Burrows, S. (1998) Negative symptoms, depression and parkinsonian symptoms in chronic hospitalized schizophrenic patients". J. of Affect. Dis., Vol. 48 (2-3), P. 163 - 169.

Vorugnti, L., Heslegrave, R. and Awad, A (1997) Neurocognitive correlates of positive and negative syndromes in schizophrenia. Cand. J. of psychiat. Vol. 42, (10), P. 1066-1071, Dec.

Warren, C., (1983) Mental illness in the family: a comparison of husbands and wives. J.Fam. Issues, Vol. (4), P. 533-558.

Wetzler, S., (1989) Measuring mental illness: psychometric assessment for clinicians. Washington, American psychiatric press.

World Health Organization (1993) ICS -10 classification of mental and behavioral disorder - diagnostic criteriafor research. Geneva, World Health organization.

Zakzanis, K. (1998) Neuropsychological correlates of positive vs. negative schizophrenic symptomatiology. schizophrenia Research, Vo., 29 (3), P. 227-237, Feb 98.

تقويم إكلينيكى للأعراض الإيجابية / السلبية، من بداية المرض ونوعية الجنس فى عينة من المرضى المصريين المصابين بالفصام لمدة أكثر من سنتين

أجريت الدراسة الحالية بهدف عمل تقويم إكلينيكى لسن بداية المرض ونوعية الجنس والأعراض الإيجابية / السلبية للفصام من منظور مصرى، وشملت عينة الدراسة ٤٥ مريضاً مصاباً بالفصام وفقاً لمعطيات التشخيص للأبحاث الواردة فى التصنيف الدلى العاشر للأمراض النفسية وذلك لمدة أكثر من سنتين، وكانو ا خاليين من الإكتئاب وأيضاً خاليين من الإضطرابات المخية العضوية، سوء إستعمال العقاقير ومن الأمراض الباطنية الكبيرة، وتم تقويم المرض عبر مقابلات إكلينيكية نصف مقننة، مقياس هاملتون للإكتئاب، مقياس لتقويم الأعراض الإيجابية ومقياس لتقويم الأعراض السلبية.

وكان متوسط سن العينة ٣٢,٩٦ ± ١١,٨٤ سنة، وكان ثلثا العينة من الذكور بينما الاناث يمثلن ثلثاً فقط، وكان سن بداية المرض فى الذكور أقل من الإناث فى المجموعة الفرعية ذات البداية المبكرة، بينما لوحظ العكس فى المجموعة الفرعية ذات البداية المتأخرة.

وأظهرت الدراسة فائدة الإعتماد على درجات شدة الأعراض للتفرقة بين المجموعات الفرعية لسن البداية ونوعية الجنس عن الإعتماد على مجرد تواتر وجود الأعراض من عدمها.