Psychiatry Research 227 (2015) 192–197

Contents lists available at ScienceDirect

Psychiatry Research

journal homepage: www.elsevier.com/locate/psychres

Gender differences in 353 inpatients with acute psychosis: The experience of one Psychiatric Emergency Service of Turin

Cristiana Montemagni [a], Tiziana Frieri [a], Arianna Blandamura [a], Vincenzo Villari [b], Paola Rocca [a,*]

[a] Department of Neuroscience, Psychiatric Section, University of Turin, SSCVD, Via Cherasco 11, 10126 Turin, Italy
[b] Department of Neuroscience and Mental Health, SC Psychiatry SPDC, A.O. Città della Salute e della Scienza, Turin, Italy

ARTICLE INFO

Article history:
Received 21 July 2014
Received in revised form
7 February 2015
Accepted 30 March 2015
Available online 7 April 2015

Keywords:
Gender differences
Schizophrenia spectrum disorder
Acute psychosis
Hospitalization
Psychiatric Emergency Service

ABSTRACT

The aim of the study is to evaluate gender-related socio-demographic and clinical differences in a large sample of inpatients with schizophrenia spectrum disorder. A sample of 353 acute patients, consecutively hospitalized between January 2007 and December 2008 in the Psychiatric Emergency Service of the San Giovanni Battista Hospital, was recruited. Psychiatric assessment included the Clinical Global Impression Scale-Severity (CGI-S), the Brief Psychiatric Rating Scale (BPRS) and the Global Assessment of Functioning (GAF). Differences between the groups were tested using chi-square test and ANOVA. Data were analyzed using a three-way MANOVA with the six BPRS scales with repeated measures for admission/discharge and BPRS total score baseline and independent groups for men and women. A two-way ANOVA for repeated measures was performed for CGI-S and GAF. Men were younger, more likely to be never married, more often substance abusers. Male patients showed both lower anxious–depressive and anergia symptom scores and higher activation symptom scores than female patients. Brief hospitalization was shown to be highly effective in both groups. Females showed a significantly better improvement in anergia and activation than males. The present evidence suggests that management of acute psychosis should target specific gender differences which should influence therapeutic approach in all its modalities.

1. Introduction

Psychosis, regardless of its nosological entity (e.g. schizophrenia, delusional disorder, organic psychosis) or phase (e.g. acute, chronic), is diagnosed in the same way using the same criteria in males and females (Groleger and Novak-Grubic, 2010). It is surprising that, given the clinical heterogeneity in psychotic disorders, the majority of data concerning gender exists for schizophrenia. Gender differences in schizophrenia are one of the most consistently reported aspects of the disease (Kraepelin, 1893; Kretschmer, 1925; Leung and Chue, 2000; Goldstein et al., 2002). They are described in almost all features of the illness from prevalence, incidence, mean age at onset, clinical presentation, course and in the response to treatment (Castle et al., 1995). According to the majority of authors, males manifest the disease earlier and display more severe premorbid dysfunctions, intellectual impairment, and social deficits. Course and outcome of the illness, as well as the first episode of psychosis itself, are usually more severe and disabling in males. On the contrary, women manifest onset symptoms later in life, complete their studies, get married, or establish intimate relationships more frequently than males, showing less frequently negative and affective symptoms. Furthermore, women show a lower tendency towards substance abuse and antisocial behavior, better response to treatment, higher rate of compliance, but an increased vulnerability to side effects of drugs (Abel et al., 2010; Ochoa et al., 2012). Gender differences in the use of mental health services have been less studied, and the results are controversial. With regard to hospitalizations, Usall et al. (2001) found that the number of previous hospitalizations was similar for both men and women. However, compared with men, women spent less time in hospital. After a two-year follow up of these patients, men were found to have more hospitalizations and longer stays than women (Usall et al., 2003). In the SOHO Study, however, Haro et al. (2008) found that women presented a

* Corresponding author. Tel.: +39 011 6336780; fax: +39 011 673473.
E-mail address: paola.rocca@unito.it (P. Rocca).

http://dx.doi.org/10.1016/j.psychres.2015.03.035
0165-1781/

higher risk of hospitalization than men. Most of research has tried to ascertain the role of gender in psychosis in terms of epidemiology and course of illness. Few data are available on important gender-specific differences in clinical symptoms of acute psychosis. Contradictory findings may depend on different methodologies and on the sample that is being studied, i.e., by differences in patients' environment (community versus psychiatric ward) or in the stage of illness of samples examined (early course versus chronic population in stable phase). Solid and stronger evidence for gender-differences (Häfner et al., 1998; Muller, 2007; Tang et al., 2007; Thorup et al., 2007; Cotton et al., 2009) were reported on different clinical presentations of acute psychosis, premorbid adaptation, functioning and, to a minor extent, on treatment differences (Tang et al., 2007).

Considering the limited number of studies conducted on patients with non-affective psychosis in the acute phase and during hospitalization, the aim of the current study was to evaluate gender-related socio-demographic and clinical differences in a large sample of inpatients with schizophrenia spectrum disorder, admitted to a Psychiatric Emergency Service in a geographically well-defined catchment area in Italy.

2. Materials and methods

2.1. Patient population

The present study was conducted in the period between January 2007 and December 2008 in the Psychiatric Emergency Service, Department of Neuroscience and Mental Health, A.O. Città della Salute e della Scienza di Torino – Presidio Molinette, Turin. It is part of the first hospital in Italy concerning the size and the indices for complexity of care. Due to the local organization of mental health that has divided the urban area of the city into zones, this Psychiatric Emergency Service is the only acute inpatient psychiatric facility of reference for the population of the corresponding zone. It provides emergency care for a population of approximately 120,000 inhabitants with a total of almost 450 admissions every year.

All consecutive patients fulfilling the following criteria were included in the study:

1. men and women in the 18–65 years age group;
2. patients whose DSM-IV-TR (American Psychiatric Association, 2000) diagnoses, formulated by the treating consultant psychiatrist, collapsed into the schizophrenia spectrum: brief psychotic disorder, schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, psychotic disorder not otherwise specified. Diagnoses were formulated by the treating consultant psychiatrists (T.F., A.B.) and were confirmed using the Structured Clinical Interview for DSM-IV disorders (SCID-I and SCID-II) (First et al., 1997a, 1997b). Subjects were excluded, if they had a current disorder other than those above mentioned.

The protocol was approved by the Local Research Ethics Committee (Comitato Etico Interaziendale – CEI 185). Because data collection was integrated as part of the regular diagnostic assessment procedure and of the quality check processes that don't influence therapeutic decisions or outcomes and because the data were analyzed anonymously, the Local Research Ethics Committee agreed that informed consent was not required. All personally sensitive information contained in the database used for this study was previously de-identified according to the Italian legislation (D.L. 196/2003, art. 110,–Ricerca medica, biomedica, epidemiologica;–-Linee guida per i trattamenti di dati personali nell'ambito delle sperimentazioni cliniche di medicinali—24 luglio 2008 del Garante per la protezione dei dati personali, art. 13). The study was carried out in accordance with the Declaration of Helsinki (with amendments) and Good Clinical Practice.

2.2. Psychiatric assessment

At the time of assessment a semi-structured interview to assess socio-demographic (gender, age, education level achieved, marital status, employment situation), clinical features (length of illness, previous admissions, past suicidal attempts within previous 6 months, previous outpatient contact in the past 6 months, previous substance misuse, previous psychiatric treatment in the last 2 weeks) and data relating to the current hospitalization (voluntary or compulsory treatment) was filled out.

Clinical ratings included the Clinical Global Impression-Severity scale (CGI-S) (Guy, 1976), and the Brief Psychiatric Rating Scale (BPRS) (Overall and Gorham, 1962) in the 18-item Italian version. The severity of the 18 symptoms was grouped in five different domains: anxiety–depression (guilt feelings, anxiety, and depressive mood), anergia (motor retardation, emotional withdrawal, and blunted affect), thought disturbance (conceptual disorganization, hallucinatory behavior, and unusual thought content), activation (tension and excitement) and hostile—suspiciousness (hostility, uncooperativeness, and suspiciousness).

As regards psychopathological evaluation, the Brief Psychiatric Rating Scale (BPRS) has been recognized as a valid measurement tool to evaluate significant change in patient symptoms and to provide early prediction of short-term outcome; in particular, subscale scores might be of more value in demonstrating early response of patients according to diagnosis.

The Global Assessment of Functioning (GAF) (Jones et al., 1995) is a clinician-rated, 100-point, single-rating scale, to evaluate functioning across three domains (psychological, social functioning and occupational/educational functioning) on a hypothetical continuum of mental health-illness. For the purpose of our study, raters were instructed to use the GAF to measure only psychosocial functioning in the month before rating, as reported in other studies (Altshuler et al., 2002; Martinez-Aran et al., 2004; Martinez-Aran et al., 2007). Patients were assessed at admission and discharge.

All assessments were performed by the same well-trained experienced interviewing psychiatrists (T.F., A.B.) who were blinded to the diagnosis, psychiatric history, and pharmacological treatment. The interviewing psychiatrists were never members of the patients' treating team and were not involved in the clinical activity of the emergency department during the study period. In an attempt to reduce inter-rater variability, raters were trained to administer the psychometric tools according to common standards. Efforts were made to maintain inter-rater reliability across the entire study period, including careful calibration and standardization procedures and regular in-depth review of a sample of interviews with the lead author.

2.3. Data analyses

Statistical analyses were performed using the software Statistical Package for the Social Sciences (SPSS) version 21 for Windows (SPSS, Chicago, IL, USA).

Data are presented as means ± standard deviations (S.D.) or percentages (%), unless stated otherwise.

The sample was divided into two groups in relation to gender. Analyses were planned in 2 stages.

In stage 1, baseline sociodemographic and clinical characteristics were tested by One-way analysis of variance (ANOVA) or χ^2 test for categorical variables.

In stage 2, a three-way MANOVA with the six BPRS scales with repeated measures for admission/discharge and BPRS total score baseline and independent groups for men and women was performed. The between-subject factor was the group (male/female), and the within-subject factors were time (baseline and discharge) and BPRS total score baseline. Effects of time (longitudinal dimension), time by BPRS total score baseline, and time by group (interaction effects) were examined.

We used partial η^2 as a measure of effect size, to convey an approximate estimate of variance accounted for by the effect. Effect size is reported in terms of η^2 (0.01 = low, 0.06 = medium, 0.14 = large). A MANCOVA with age as covariate was used to test the effect of age on the obtained results.

A two-way analysis of variance (ANOVA) for repeated measures was performed for CGI-S and GAF. The between-subject factor was the group (male/female), and the within-subject factor was time (baseline and discharge). Effects of time (longitudinal dimension), group (cross-sectional dimension), and time by group (interaction effect) were examined.

3. Results

During the 24-months period of inclusion, 951 acute patients were admitted in the Psychiatric Emergency Service of the Città della Salute e della Scienza di Torino – Presidio Molinette, of those 353 patients fulfilled the inclusion criteria and were eligible for the study. Sample characteristics are described in two previous studies of our research group (Frieri et al., 2013, 2014). One hundred ninety-six patients (56%) were males and 157 (44%) were females. The mean age (± S.D.) was 41.7 (± 13.3) years. The mean education (± S.D.) was 9.26 (± 3.02) years. Eighty % of patients was single and 78% was unemployed. The mean length of illness (± SD) was 9.86 (± 8.05), 25% had an history of substance use. One-hundred-sixty patients received a diagnosis of schizophrenia (45.3%); 66 a diagnosis of schizoaffective disorder (18.7%); 21 a diagnosis of delusional disorder (5.9%); 104 a diagnosis of brief psychotic disorder (29.5%); and two a diagnosis of schizophreniform disorder (0.6%). No significant difference in gender