Journal of Affective Disorders 146 (2013) 137–141

Contents lists available at SciVerse ScienceDirect

Journal of Affective Disorders

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

Brief report

Effects of childhood trauma on somatization in major depressive disorder: The role of alexithymia

Medine Yazici Güleç*, Merih Altintaş, Leman İnanç, Çiğdem Hazal Bezgin, Esra Kaymak Koca, Hüseyin Güleç

Erenköy Mental Research and Training Hospital, Kadıköy, Istanbul 34736, Turkey

ARTICLE INFO

Article history:
Received 23 April 2012
Received in revised form
15 June 2012
Accepted 15 June 2012
Available online 9 August 2012

Keywords:
Childhood trauma
Alexithymia
Somatization
Major depressive disorder

ABSTRACT

Background: Childhood trauma (CT) is often associated with later psychopathology, including depression, somatization, and alexithymia. The aim of the present study was to investigate the relationships of CT with somatization and alexithymia. Moreover, the effect of specific subtypes of trauma on alexithymia and somatization was also investigated.

Methods: The present study was conducted on 100 outpatients with major depressive disorder (MDD) and 50 age and gender matched healthy controls (HC). Data were collected on each of the participants, including the Childhood Trauma Questionnaire (CTQ-28), the Hamilton Anxiety Rating Scale (HARS), the Hamilton Depression Rating Scale (HDRS), a 20-item Toronto Alexithymia Scale (TAS), and a somatization subscale of the Symptom Check List-Revised Form (SCL-90 R). Patient groups were divided into two categories according to the TAS-20 cut-off score. Reliability and validity were assessed, and factor analyses were conducted on the CTQ-28. Next, the relationships among CT subtypes, alexithymia, and somatization were investigated using Pearson's and partial correlation analysis. Additionally, the types of CT that predict alexithymia and somatization were also investigated.

Results: Significantly higher scores on the clinical variables were noted in the patient group compared with the control group, except for physical neglect on the CTQ. The partial correlation of the CT types with somatization and alexithymia showed that the HARS, HDRS, somatization subscale of the SCL-90 R (for alexithymia), and the TAS-total (for somatization) were covariates. None of the CT types was correlated with somatization, whereas physical abuse and emotional neglect were correlated with alexithymia. Moreover, emotional abuse and emotional neglect predicted scores on the TAS and on the somatization subscale of the SCL-90 R. Conclusions CT is associated with alexithymia and ongoing somatic complaints. Alexithymia contributes to the emergence of somatic symptoms in MDD, particularly following CT. Somatization also contributes to alexithymia. Interestingly, the present study found that the relationship of emotional neglect and physical abuse with alexithymia was independent from somatization. Taken together, these results indicate that emotional abuse and neglect predict the later emergence of alexithymia and somatization

1. Introduction

Major depression is frequently associated with a wide range of somatic symptoms (Vaccarino et al., 2008) which associated with disability, chronicity and inappropriate and excessive use of the healthcare resources (Spitzer et al., 1995; Barsky et al., 2005). Indeed, somatic complaints are the most common clinical symptoms of depression (Simon et al., 1999).

Alexithymia, an important risk factors for psychiatric and psychosomatic disorders, is characterized by corrupted affect regulation. Alexithymia was originally considered a characteristic of somatization; however, it has more frequently been associated with overall dimensions of psychopathology (Taylor et al., 1997) and is highly associated with depression (Honkalampi et al., 2000). Many of the psychopathological symptoms of depression are associated with difficulty in defining feelings as a result of affect dysregulation (Taylor, 2010). Somatic symptoms of depression are also associated with alexithymia (Sayar et al., 2003).

The importance of childhood trauma (CT) in the development of alexithymia has previously been reported (Bagby and Taylor, 1997; Hund and Espelage, 2006). Specifically, psychic trauma during early childhood can lead to influenced affect-regulating capacity. This may subsequently lead to alexithymia through impairments in imagination, symbolization, lifelong anhedonia, and insecure attachment styles.

In the present study, the association between CT and the subsequent development of psychopathology (Kessler et al., 1997), including both depression (Bernet and Stein, 1999; Hill et al., 2000;

* Corresponding author. Tel.: +902163609163; fax: +902163563496.
E-mail address: yazicimedine@yahoo.com (M.Y. Güleç).

0165-0327/$ - see front matter © 2012 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.jad.2012.06.033

Kaplan and Klinetob, 2000; Zlotnick et al., 2001; Kendler et al., 2004; Heim et al., 2008; Aguilera et al., 2009; Teicher et al., 2009; Wiersma et al., 2009; Hovens et al., 2010; Schoedl et al., 2010) and somatization (Katon et al., 2001; Imbierowicz and Egle, 2003; Spitzer et al., 2008), in adulthood is investigated. Previous studies have examined these two clinical manifestations separately; however, to our knowledge these two have not been studied together in regard with CT. We expected that alexithymic depressive subjects more frequently experienced CT. Our primary hypothesis was that the association between alexithymia and CT is independent of depression, anxiety, and ongoing somatic complaints. Furthermore, we hypothesized that CT contributes to alexithymia and somatic complaints.

2. Methods

2.1. Participants and procedures

The present study was conducted in patients diagnosed with MDD. One hundred MDD patients between the ages of 18 and 64 years (24 men, mean age 37.2 years, *S.D.*=12.2, mean duration of education 9.3 years, *S.D.*=3.3 and 76 women, mean age 41.17 years, *S.D.*=11.75, mean duration of education 8.0 years, *S.D.*=3.7) participated in the study. As somatization, alexithymia, and childhood traumas are known to contribute to numerous psychiatric manifestations (Beekman et al., 2000; Hovens et al., 2010), 39 patients with comorbid psychiatric disorders and 19 patients who were previously or currently being treated for chronic somatic or physical diseases were excluded from the study. Additionally, the patients, who had received psychotropic agent last 15 days, were excluded the study.

The healthy control (HC) group was balanced according to age, sex, and education and consisted of 50 hospital staff members and their relatives (19 men, mean age 43.6 years, *S.D.*=10.0, mean duration of education 8.2 years, *S.D.*=3.6 and 31 women, mean age 36.7 years, *S.D.*=12.0, mean duration of education 10.2 years, *S.D.*=4.0). The controls had no history of psychiatric disorders or medical diseases. All of the participants in the study were evaluated with standard psychiatric interviews. All of the participants were informed about the study, and written consent was obtained from all participants.

2.2. Data collection

All participants were evaluated with structured clinical interview for DSM-IV axis I clinical diagnosis (SCID-I) (First et al., 1997; Özkürkçügil et al., 1999). Severity of depression and anxiety were evaluated with Hamilton Depression Rating Scale (HDRS) (Hamilton, 1960; Akdemir et al., 1996) and Hamilton Anxiety Rating Scale (HARS) (Hamilton, 1959; Yazıcı et al., 1998). The level of somatic symptomatology was assessed with the somatization subscale of the Symptom Check List-90-revised (SCLs-90 R) (Derogatis et al., 1974; Dag, 1991).

The 20-item Toronto Alexithymia Scale (TAS-20) is a self-report measure of the alexithymia construct (Bagby et al., 1994a, 1994b; Güleç et al., 2009). In the Turkish population, the total scores of the TAS-20 were dichotomized as ≥ 59, which indicated alexithymia, and ≤ 51, which indicated absence of alexithymia (Güleç and Yenel, 2010). Values between 51 and 59 are considered borderline. We dichotomized the groups using the cut-off point of 58/59.

Childhood Trauma Questionnaire (CTQ) is a 28-item questionnaire that assesses emotional, physical, and sexual abuse, as well as physical and emotional neglect in childhood (Bernstein et al., 2003). The Turkish version of the CTQ was found to be valid and reliable in a previous study (Sar et al., 2009).

2.3. Statistical analyses

Characteristics of the population were described by using the mean, the median and the range for quantitative variables. Kolmogorov–Smirnov test was used to test if data was normally distributed. MDD patients were divided into to two groups according to the dichotomized TAS-20. Descriptive analyses included sociodemographic variables, which were compared using ANOVA (two MDD groups and HC) and Student's *t*-test (MDD and HC) for scalar data and the chi-square test for categorical data. MANOVA analysis was performed for confounding effect of gender. Pearson's correlation analysis was used to correlations between variables. The relationship between the CTQ and the TAS-20 score was analyzed using partial correlation analysis, controlling for the scores on the HDRS, HARS and SCLs-90 R. A similar model was used for the relationship between the CTQ and the SCLs-90 R. In the linear regression model, alexithymia and somatization were considered the dependent variable, and the CT types were considered the independent variable Statistical analyses were performed using SPSS-9.0. The p value was set at <0.05.

3. Results

No significant differences in age, gender, or education status were noted between the patient and the HC group. The overall clinical variables scores in the patient group were significantly higher compared with controls, except for the CTQ-physical neglect score. The patient group was divided into alexithymic and non-alexithymic subjects. The number of females was higher in the non-alexithymic group. The scores on the CTQ for emotional abuse, physical abuse, physical neglect, and CTQ-total scores were higher in the alexithymic group compared with the non-alexithymic group. Moreover, the SCLs-90 R was also higher in the alexithymic group (Table 1). After controlling for gender, no significant differences were noted between variables by MANOVA.

CTQ-emotional abuse scores were positively correlated with the HDRS, the SCLs-90 R, and the TAS-20. The CTQ-physical abuse and the CTQ-sexual abuse scores were positively correlated with the SCLs-90 R and the TAS-20. The CTQ-emotional neglect and the CTQ-physical neglect scores were positively correlated with the TAS-20. Moreover, partial correlation of the CTQ-28 types with somatization and alexithymia was evaluated.

After controlling for the HDRS, HARS and TAS-20 scores, none of the correlations between somatization and the CTQ dimensions were statistically significant, whereas correlations between physical abuse and emotional neglect and alexithymia were significant (Table 2).

Emotional abuse and emotional neglect predicted scores on the TAS-20 and the SCLs-90 R following an evaluation of the types of childhood trauma that predicted the alexithymia (Table 3) and somatization (Table 4).

4. Discussion

The present study investigated whether alexithymia mediates the effect of childhood trauma on somatization in patients with MDD. The results of this study provide information about the path of alexithymia in this process based on the assumption that CT leads to depression in adulthood. The hypothesis that CT contributes to the development of alexithymia and influences affect regulation was tested. Similarly, the effect of CT history and alexithymia on somatic complaints in depressive patients was also investigated. We predicted that alexithymia would largely contribute to the somatic