Childhood Sexual Abuse in Depressed Female Inpatients: A 2-year Follow-up Study and an Explanatory Cognitive Model

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This study prospectively followed up a cohort of 75 depressed in-patient women for 24 months and compared those with and without history of childhood sexual abuse (CSA) along several outcome measures, including clinical measures, and measures for social adjustment and service utilization. Abused patients were no different from the non-abused in rates of DSM-IV major depressive disorder at one and two years. They, however, had higher rates of dysthymic disorder, partial recovery, lifetime substance abuse, suicidal attempts and service utilization, and were more socially maladjusted. Analysis of depressive symptoms revealed a characteristic negative cognitive set linking CSA to depression in these patients. The results show that CSA is associated with poor outcome in depressed women and highlight the importance of preventive and early interventive measures of CSA. Management plans should carefully assess and specifically address the underlying cognitive dysfunction and psychosexual and interpersonal difficulties of these patients to improve outcome.

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INTRODUCTION

Affective disorders are among the most common psychiatric illnesses (Kessler et al, 1994) and account for a large proportion of in-patient admissions. It is well known that depression is twice as common in women as in men (Weissman et al, 1991). They are also more frequently admitted (DHSS, 1986) and have a greater risk of chronicity (Scott, 1988).

The literature reflects a growing awareness of the prevalence of childhood sexual abuse (CSA) in different psychiatric populations (Oppenheimer et al, 1985; Bryer et al, 1987; Craine et al, 1988; Morrison, 1989; Palmer et al, 1990; Palmer et al, 1992; Soliman & Okasha, 1999). Depression is one of the most common sequelae of CSA (Browne & Finkelhor, 1986). As the ratio of female to male victims of CSA has been estimated to be as high as 12:1 (Silverman et al, 1996), the significance of CSA in depressed women is of particular interest to psychiatric services.

Several studies highlighted the impact of CSA on the severity and short-term outcome of depression (Giese et al, 1998; Parker et al, 1999; Soliman & Okasha, 1999). However, little systematic investigation has been reported on the long-term outcome of depression in these patients.

This study followed up a cohort of female depressed in-patients for two years and compared those with and without CSA along several outcome measures, including severity of depression, social adjustment and service utilisation.

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SUBJECTS AND METHODS

Seventy-eight depressed female inpatients, who were admitted for moderate and severe depression during 1997, were prospectively followed up for 24 months. Seventy-five patients completed the follow-up period. Age ranged from 18 to 49 years. Prevalence and characteristics of CSA and its relationship to depression in this cohort was discussed in an earlier study (Soliman & Okasha, 1999).

All patients completed Beck Depression Inventory (BDI; Beck et al, 1961) after one and two years from admission and were clinically assessed by a semi-structured interview on both occasions for DSM-IV (American Psychiatric Association, 1994) axis-I diagnoses. Patients also completed The Social Adjustment Scale, self-report version (SAS-SR; Weissman & Bothwell, 1976) on both occasions. The scale contains 42 questions covering role performance in six areas of functioning: work (as employee, housewife or student) (questions 1-18), social leisure activities (questions 19-29), relationships with extended family (questions 30-37), and marital role as spouse (questions 38-46), parent (questions 47-50) and member of the family unit (questions 51-54). The method provides alternative questions on work relations for students, housewives and the employed, so the scale includes a total of 54 questions of which respondents answer 42. In each area of functioning, questions relate to the past two weeks and cover the patient's performance (e.g. level of social contacts), the amount of friction she experiences with others, finer aspects of interpersonal relationships (e.g. level of independence), and inner feelings (e.g. shyness, boredom) and satisfaction. Five- or six-point response scales are used, with higher scores representing increasing impairment. Two scoring methods are used: a mean score for each section (e.g. work, leisure), and an overall score obtained by summing the item scores and dividing by the number of items checked.

Information about number of relapses leading to readmission during the period of study, suicidal attempts, and use of crisis/emergency service and other mental health services (e.g. day hospital, community mental health team, social workers etc) was collected and ascertained from several sources. Use of other mental health services was scored by summing the duration in months of use of each service.

Statistical analysis

Data was analyzed using SPSS statistical package. X2 was used to test significance of difference between categorical variables. As Explore procedure and tests of normality showed non-normal distribution of continuous variables in the sample, Mann-Whitney U test was used to test the significance of difference between two groups. Spearman correlation coefficient was used to test correlation between continuous variables. Regression and discriminant analyses were used to test the predictive power of variables to CSA status.

RESULTS

No significant difference in sociodemographic data was found between both groups (Soliman & Okasha, 1999). At the end of follow up, 33 (82.5%) of non-abused patients were still on medication, compared to 34 (97.1%) of abused patients ($p = .061$, Fishers exact test). There was no statistically significant difference between abused and non-abused women in the number of subjects fulfilling the criteria of DSM-IV major

depressive disorder after one year (48.6% Vs 27.5%; p = .093) and two years (42.9% Vs 30%; p = .335) (table 1). However, rates of dysthymic disorder and partial remission/inter-episodic recovery as well as those whose subjective measures indicated (according to cut-off scores recommended by Beck & Beamsderfer, 1974) at least moderate (BDI score >15) range of depression, were more frequent in abused subjects at both occasions (table 1). Rate of lifetime alcohol/drug abuse was also significantly higher in abused subjects.

The 21-item scores of BDI of both groups were compared, with the level of statistical significance taken at < .001 to adjust for the large number of comparisons and the relatively small sample size. Differences between the means (SD) of groups of statements number seven (2.54, .89 Vs .63, .54), eight (1.63, .84 Vs .45, .6), five (1.51, .61 Vs .55, .93), twenty-one (1.31, .61 Vs 1.05, .55) and three (1.60, .72 Vs 1.32, .57) were significant. These groups of statements reflect self-hate and disgust, self-blame, guilt feelings, lack of interest in sex and sense of personal failure, respectively.

As table 2 shows, abused subjects had higher BDI mean scores one and two years from the index admission, more suicidal attempts, more relapses leading to readmission, and more use of emergency/crisis service and other mental health services than non-abused women. The Social Adjustment Scale (table 3) shows that they are also, overall, less socially adjusted, particularly to marital roles and work.

Correlations:

Correlation between items sores and overall scores of The Social Adjustment Scale at one and two years was high (r= .872-.990), while that between BDI scores was modest to high (r=.565). Modest but significant correlation was found between overall adjustment scores and use of emergency/crisis service (r = .351, p< . 01), use of other mental health services (r= .317, p< .01) and number of suicidal attempts (r= .336, p< .01). BDI scores also correlated with these variables (r= .510, .617 and .813, respectively) and with frequency of readmission (r = .530). Suicide attempts correlated with use of emergency service (r= .468), other mental health services (r= .483), frequency of readmission (r= .548) and BDI at one year (r= .599) and two years (r= .477).

Regression and discriminant analyses

Using entry method, regression model accounted for 69.6% to 93.6% of variance in CSA status and correctly predicted 100% of non-abused and 91% of abused subjects. Variables entered into the model included number of suicidal attempts, social adjustment as spouse and member of family unit, BDI mean scores at the end of the follow-up and frequency of readmission. Forward stepwise method selected number of suicide attempts as the best predictive variable. This accounted for 54.8% to 73.6% of variance and correctly predicted 97% and 82% of non-abused and abused subjects, respectively. Discriminant analysis (table 4) correctly identified 72.5% of the non-abused, 100% of those with abuse not involving genital contact, 38.5% of those with abuse involving genital contact without penetration and 73.3% of those with abuse involving genital penetration, with an overall hit rate of 69.3%.

DISCUSSION

In our previous study of the same cohort in acute setting and short-term follow-up (Soliman & Okasha, 1999), we

Table 1
DSM-IV axis-I Diagnoses and Subjective Measures of Depression

	One year			Two years		
	(N =35)	(N = 40)	P*	(N =35)	(N = 40)	P*
	Abused	Non-abused		Abused	Non-abused	
	N (%)	N (%)		N (%)	N (%)	
DSM-IV mood disorders:	17 (48.6%)	11 (27.5%)	.093	15(42.9%)	12(30%)	.335
- Major depressive disorder	12 (34.3%)	4 (10%)	.013	12 (34.3%)	4 (10%)	.013
- Dysthymic disorder						
- Partial remission/inter-episodic recovery	10 (28.6%)	3 (7.5%)	.030	13 (37.1%)	6 (15%)	.035
ther DSM-IV axis-I disorders:	9(25.7%)	3(7.5%)	.055	6(17.1%)	2(5%)	.136
Alcohol use disorder	6 (17.1%)	2 (5%)	.136	4 (11.4)	2 (5%)	.409
Other (non-alcohol) use disorders	2 (5.7)	1 (2.5)	.596	3 (8.6%)	1 (2.5%)	.334
Generalized anxiety disorder	0 (0%)	1 (2.5%)		0 (0%)	(0%)	
Somatoform disorders	1 (2.9%)	0 (0%)		1 (2.9%)	0 (0%)	
Anorexia nervosa						
time alcohol/drug use disorder	16(45.7%)	7(17.5%)	.012	17(48.6%)	7 (17.5%)	.006*
BDI>15	27(77.1%)	13(32.5%)	.000*	25(71.4%)	15(37.5%)	.005*

* Fishers Exact Test
N.B. the patient may have more than one diagnosis, that is why the total number of patients is different from that of the sample.

Table 2
Clinical Correlates and Service use

	Abused	Non-abused	P*
	(N =35)	(N =40)	
	mean (sd)	mean (sd)	
BDI score (one year)	23.29(9.43)	13.98(8.92)	.000*
BDI score (two yeasr)	24.20(10.26	15.60(10.24)	.000*
Number of suicidal attempts	1.94(1.16)	.40(0.63)	.000*
Frequency of readmission	1.43(1.01)	.78(0.70)	.003*
Use of emergency/crisis service	1.94(1.03)	1.23(0.83)	.004*
Use of other mental healt services	17.26(15.74)	9.20(12.42)	.023

* Mann-Whitney U Test

Table 3
Social Adjustment Scale Scores

	One year				P**	Two years				P**
	Abused		Non-abused			Abused		Non-abused		
	N*	mean (sd)	N	mean (sd)		N*	mean (sd)	N	mean (sd)	
Work	35	20.80 (6.53)	40	16.22 (5.93)	.000*	35	20.3 (6.92)	40	15.90 (6.01)	.002*
Leisure activites	35	28.71 (5.62)	40	27.05 (4.91)	.139	35	27.83 (5.36)	40	26.63 (4.92)	.251
Relatonship with extended family	35	23.71 (3.26)	40	22.67 (4.0)	.000*	35	23.94 (3.63)	40	22.45 (4.05)	.271
Marital roles as spouse	24	31.0 (5.05)	33	22.97 (4.19)	.000*	24	30.75 (5.28)	33	22.58 (4.21)	.000*
Marital role as parent	26	11.85 (2.75)	33	9.33 (2.01)	.000*	26	11.04 (2.66)	33	9.60 (2.01)	.004*
Marital role as me-mober of family unit	26	7.08 (1.44)	33	4.88 (0.86)	.000*	26	6.58 (1.47)	33	4.55 (0.79)	.000*
Overall score	36	20.71 (3.13)	40	17.88 (3.88)	.000*	36	20.28 (3.19)	40	17.54 (3.84)	.000*

* Different numbers due to different social status
**Mann-whitney U test

Table 4
Discriminant Analysis Group Prediction on CSA

	Predicted group membership**				
Original groups*	Group 1	Group 2	Group 3	Group 4	Total
Group 1	29 (72.5%)	10(25%)	1(2.5%)	0(0%)	40(100%)
Group 2	0(0%	7(100%)	0(0%)	0(0%)	7(100%)
Group 3	2(15.4%)	3(23.1%)	5(38.5&)	3(23.1%)	13(100%)
Group 4	0(0%)	0(0%)	4(26.7%)	11(73.3%)	15(100%)

*Group1=non-abused, group2=abuse not involving genital contact, group 3 = abuse involving genital contact without penetration, group 4 = abuse involving genital penetration
**First 3 canonical discriminant functions were used in the analysis, with Eigenvaluses: 2.184,.141,.044 and wilks Lambda=.264. Variables in the analysis: number of suicde attempts, 2-years BDI, frquency of readmission, use of emergency service, use of other mental health services and overall social adjustment. 69.3% of originally grouped cases correctly classified.

found a strong association between CSA and severity of psychopathology. Depressed women, who gave a history of CSA, had longer period of hospitalization, Higher BDI scores 6-months from admission, earlier onset of depression, more previous depressive episodes and suicide attempts and poor medication response.

Follow-up of these patients did not show a significant difference between abused and non-abused subjects in rates of DSM-IV major depressive disorder at one and two years. Abused women, however, had higher rates of dysthymic disorder and partial remission/inter-episodic recovery. They also rated higher on subjective measures of depression. This suggests that sexually abused women have more tendencies to chronicity. Childhood adversities have been linked to chronicity of depression in both community and depressed patient series (Brown et al, 1994 a & b).

There is some evidence that CSA is an important factor in this clinical difference. Comparing the BDI 21-item' scores showed that sexually abused women tended to rate higher than the non-abused on statements reflecting self hate and blame, guilt feelings, sense of personal failure and lack of interest in sex. This constellation of negative attitude towards self may constitute the long-term cognitive-emotional impact of sexual abuse and may represent the mediating factor between CSA and depression in this population. Feelings of self-blame and personal powerlessness were found to contribute to the sadness and anger that characterized depression in abused children (Hamman, 1990; Shapiro, 1991). Empirical work by Gold (1986) showed that women who had been sexually abused as children and also had high scores on psychological distress scales (such as Beck Depression Inventory) tended to have internal, stable, and global attributional style when confronted with adverse events. Tobin & Griffings (1996) found that self-criticism was the only primary coping strategy to differentiate abused from non-abused eating disorder patients and that abused patients presented with higher rate of disturbed behaviour and affective distress.

Abused patients in our sample showed poorer social adjustment, particularly in their marital roles. In our previous work (Soliman & Okasha, 1999), compared to non-abused subjects, they rated the quality of their sexual life, the quality of relationship with partners and ability to trust men as low. This suggests a link with their early traumatic sexual experiences, which, on the cognitive pathway, relate to negative cognitive set that interferes with the development of normal sexuality and successful supportive relationships. This, in turn, increases the risk of depression once a stressor arises. Previous research found that "interpersonal difficulties" (Brown et al, 1994 a & b) and poor quality of marital relationship (Hooly et al, 1986) were associated with the development of chronic depression.

Suicidal behaviour was the best predictor of CSA status in our sample. This has been a consistent finding in sexually abused subjects (Davidson et al, 1996; Silverman et al, 1996; Dubo et al, 1997; Gladstone et al, 1999). This correlated with their high subjective distress, greater use of services, and poor social adjustment. Abused subjects also had a higher lifetime substance abuse. The later has been associated with suicidal behaviour (Morgan et al, 1976; Kreitman & Casey, 1988) and CSA (Parker et al, 1999). This also could be understood within the same hypothesis of an underlying ongoing negative cognitive set

linking CSA to adult disturbed behaviour, maladaptive coping strategies and psychopathology.

Before considering the clinical implications of our study, we would like to discuss its limitations. The study group represented moderate and severe depressed inpatients. It is a possibility that milder forms of depression comprise a different group with different outcome. It is also possible that other factors, such as dysfunctional family background, may increase the likelihood of both CSA and adult-onset depression (Parker et al, 1999). However, four studies in which the variables related to family dysfunction and poor parenting were controlled, showed that the relationship between CSA and adult-onset depression was maintained (Bagly & Ramsey, 1985; Bifulco et al, 1991; Mullen et al, 1993; Fergusson et al, 1996).

Personality disorder could be another confounding factor, mediating the clinical difference between abused and non-abused groups. However, several studies (Parker et al, 1999; Johnson et al, 1999) suggested that CSA status is associated with an increased risk of developing personality disorder in adulthood. The negative cognitive set characteristic to abused patients in this study could be at the core of an underlying disordered personality, and together, mediate the impact of CSA on depression in abused women.

There are several clinical implications of the present study. Firstly, the results suggest that history of CSA is an important prognostic factor in moderate and severe depression in women. Secondly, the higher rates of negative cognitive attitude towards self, difficulties with sexual life, and interpersonal difficulties suggest that these issues should be carefully assessed and specifically addressed in management plans for this population. Thirdly, the study highlights the importance of preventive and early interventive measures of child sexual abuse in order to prevent or mitigate long-lasting consequences that carry a poor prognostic factor.

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سوء المعاملة الجنسية أثناء الطفولة فى السيدات المكتئبات بالمستشفى دراسة متابعة لمدة سنتين مع شرح لنموذج معرفى

تمت فى هذه الدراسة متابعة خمسة وسبعين سيدة مصابة بالإكتئاب لمدة أربعة وعشرين شهرا ممن تم حجزهن بالمستشفى، وقد تم مقارنة هؤلاء ممن تعرضن لسوء معاملة جنسية أثناء الطفولة بالذين لم يتعرضن لذلك على عدة محاور تشمل الأعراض الإكلينيكية و التوافق الاجتماعى ومدى إستهلاك الخدمات الطبية، وقد أظهرت النتائج أن المجموعة الأولى(اللائى تعرضون لسوء معاملة جنسية) لم تختلف كثيرا عن الأخرى فى التشخيص حسب التقسيم الأمريكى الرابع بعد عام وعامين من المرض، ولكن تميزت هذه المجموعة بنسبة أعلى فى إعتلال المزاج والشفاء الجزئى وسوء إستخدام العقاقير ومحاولات الإنتحار وإستهلاك الخدمات الطبية، كما تميزن أيضا بعدم التوافق الإجتماعى، وبتحليل أعراض الإكتئاب وجد أن هناك تركيبة معرفية سلبية تجاه سوء المعاملة الجنسية مقترنة بالإكتئاب، وتشير النتائج إلى أن سوء المعاملة الجنسية أثناء الطفولة يقترن بسوء مآل المرض مما يدعو إلى أهمية إتخاذ إجراءات وقائية لمنع حدوث هذا السلوك.

كذلك خطط العلاج لابد أن تقيم وتحدد مدى الاضطراب المعرفى والجنسى وكذلك الصعوبات فى العلاقات الإنسانية لهؤلاء المرضى لتحسين مآل المرض.