

ORIGINAL ARTICLE

Predicting the therapeutic response to intensive psychotherapeutic programs in patients with neurotic spectrum disorders

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Submitted: 2015-04-02 *Accepted:* 2015-04-15 *Published online:* 2015-04-01

Key words: **anxiety disorder; panic disorder; GAD; OCD; social phobia; adjustment disorders; mixed anxiety depressive disorder; prediction; dissociation; clinical response; remission; short psychodynamic psychotherapy; antidepressants**

Abstract

INTRODUCTION: The aim of our study was to establish the efficacy of CBT or short psychodynamic psychotherapy on the sample of non-selected and mostly medication-resistant patients with anxiety disorders (panic disorder with or without agoraphobia, generalized anxiety disorder, social phobia, mixed anxiety-depressive disorder, obsessive compulsive disorder, adjustment disorders, other anxiety disorders) and to search for predictors of therapeutic response in such a group. **METHOD:** The treatment was carried out under usual conditions at the department for anxiety disorders. Short psychodynamic psychotherapy or systematic cognitive behavioural therapy was tailored according the needs of each patient. Pharmacology treatment remained mainly unchanged during the trial period. We used the following outcome measures in the study: the Clinical Global Impression – Severity of Illness scale (CGI), Dissociative Experience Scale (DES), Somatoform Dissociation Questionnaire (SDQ-20), Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI). The primary outcome measures were clinical response defined as 30% decrease in BAI and remission defined as a 1 or 2 points in CGI at the end of therapy. **RESULTS:** 191 patients (137 female) were included in the study and 15 dropped out. Altogether 175 patients completed at least 5 of 6 weeks of intensive psychotherapy program. Patients of all diagnostic groups showed significant improvement in CGI, BAI, BDI. At the end of the treatment, 50.3% decreased 30% or more in BAI and 55.7% reached 1 or 2 points in CGI. The main characteristics present at the beginning of the trial increasing probability of achieving response or remission during the treatment were BAI score lower than 25, BDI score less than 20, no comorbidity with personality disorder, no comorbid depression, no being divorced or widowed. **CONCLUSION:** Therapeutic efficacy of the intensive psychotherapeutics programs for anxiety disorders was predicted with level of anxiety and depression, comorbidity with depression and personality disorders and marital status.

INTRODUCTION

Generalized anxiety disorder, social phobia, panic disorder/agoraphobia, mixed anxiety-depressive disorder, and obsessive-compulsive disorder have been recognized as a severe, highly prevalent and chronically disabling disorders. Both pharmacological and psychotherapeutic approaches have proven effectiveness for these anxiety disorders. Despite their efficacy, the level of treatment resistance is relatively high with 30–50% of patients that do no response to the treatment. Clear predictors of successful therapeutic intervention in anxiety disorders, or obsessive compulsive disorder have not been known yet (Mataix-Cols *et al* 1999). Among characteristics associated with resistance to treatment may be a number of demographic parameters such as age at onset of disorder, duration of a disorder, gender, marital status, positive family history of psychiatric disorders, level of dissociation (Prasko *et al* 2009). Dissociative experiences are widespread among patients with anxiety disorders (Gulsun *et al* 2007; Pastucha *et al* 2009a, 2009b; Prasko *et al* 2010). Dissociation might be a negative predictor of treatment outcome in cognitive-behavioral therapy for patients with obsessive-compulsive disorder and anxiety disorders (Prasko *et al* 2009; Rufer *et al* 2006; Spitzer *et al* 2007). From the demographics factors better prognosis is usually associated with higher socioeconomic status, episodic course of the illness, and the presence of precipitating events (Shetti *et al* 2005). Most frequent predictors of poor therapeutic outcome are higher intensity of symptoms (Saxena *et al* 2002), positive family history, comorbidity with depression or personality disorder, earlier age of onset, longer duration and chronicity, more admissions to psychiatric hospitals (Pigott & Seay 1997; Vyskocilová *et al* 2011).

The aim of our study is to examine if the level of psychopathology, comorbid anxiety disorder, level of dissociation, depression or personality disorder can predict the therapeutic response to intensive psychotherapy (short psychodynamic psychotherapy or cognitive behavioral therapy) in patients suffering with generalized anxiety disorder, social phobia, panic disorder/agoraphobia, mixed anxiety and depressive disorder, obsessive compulsive disorder or adjustment disorder.

Hypotheses

Clinical response (defined as at least a 30% decrease in BAI score) and clinical remission (defined as CGI score of 1 or 2) will be significantly more probable in patients with following characteristics:

- Demographics: shorter duration of disorder, employment, marriage;
- Symptoms in the beginning: BAI scores less than 25, BDI scores less than 20, no comorbidity with other anxiety or depressive disorder, no comorbidity with personality disorder, lower dissociation score in DES (less than 12), and SDQ-20 (less than 22);
- Diagnosis: Patients with panic disorder and/or agoraphobia and patients with adjustment disorder; not patients with obsessive compulsive disorder or generalized anxiety disorder.

METHOD

Treatment-resistant patients are suffering from anxiety disorder or OCD, referred to the Department of Psychiatry at University Hospital in Olomouc for an intensive daily programme lasting six weeks, were enrolled in the study.

Assessment

Diagnosis of specific anxiety disorder according to ICD-10 criteria (1996) was confirmed by two independent psychiatrists before the treatment was started. For study inclusion, criteria see Table 1.

General severity of the disorder was assessed by CGI (Clinical Global Impression-Severity of Illness; Guy 1976) in the beginning and at the end of the treatment. Rating scales measuring level of dissociation were employed in the start of the study (DES – Dissociative Experience Scale; Bernstein & Putman 1986; and SDQ-20 – Somatoform Dissociation Questionnaire; Nijenhuis *et al* 1996). Subjective scales measuring depression (BDI – Beck Depression Inventory, Beck *et al* 1961), and anxiety (BAI – Beck Anxiety Inventory; Beck & Emery 1985) were administered once a week during the trial. The study was approved by the local ethical committee.

Tab. 1. Study inclusion and exclusion criteria.

Including criteria	Excluding criteria
<ul style="list-style-type: none"> ICD-10 research criteria for panic disorder and/or agoraphobia, generalized anxiety disorder, social phobia, mixed anxiety depressive disorder, OCD Age 15–70 years Male and female Written informal consensus 	<ul style="list-style-type: none"> Moderate or severe depressive disorder Risk of suicidality Organic psychiatric disorder Acute psychotic disorder Acute serious somatic disease Patients using non-prescribed medication Non-collaborative patient Dissocial personality disorder

Statistics

At first, all data were analysed using univariate analysis. The categorical variables were compared with the use of the chi-square test or Fisher's exact test. The Mann-Whitney test was used to compare continuous variables. Binary logistic regression was used to predict the decrease of BAI >30% or CGI-last 1 or 2. The normality of distribution was checked by the Shapiro-Wilk test. A $p < 0.05$ was considered statistically significant. Data were analysed using statistical software SPSS version 15 (SPSS Inc., Chicago, USA).

Treatment

Patients were treated using usual dosages of antidepressants, mostly same as they were on when referred; there were no substantial changes in pharmacotherapy. Medication dosages were changed minimally (exceptionally there was an increase in dose towards the upper limit and lowering or tapering benzodiazepines off). Mean dosages of paroxetine index were 36.0 ± 19.1 mg per day. There was a statistically significant difference between antidepressant dosage between diagnostic groups (Kruskal-Wallis: $p < 0.0001$) (Table 2). Patients with OCD had significantly higher dosages than other diagnostic groups except group with "other anxiety disorders". Five patients previously repeatedly not responding to antidepressants refused to take them and were treated only with CBT without any medication. With regard to co-medication 16.2 percent of patients used also benzodiazepines with mean dosage of 20.00 ± 12.85 mg of diazepam equivalent and 20.9 percent of patients used also antipsychotics of second generation with mean dosage of 2.4 ± 1.98 mg of risperidone equivalent.

All patients participated in everyday group structured short psychodynamic or CBT program lasting six weeks. CBT program consists of standard steps covering psychoeducation, case conceptualization, making list of symptoms and life problems, cognitive restructuring, exposure therapy (with response prevention in OCD patients), elaboration of core beliefs and conditional rules, and problem solving. Short psychodynamic program was focused on interpersonal problems in patients' life, here and now group interactions and connecting with developmental issues. Both programs are supervised once a week with an experienced therapist. The programme was complemented by communication skill practice, ergo therapy and sports.

RESULTS

In this paper, we present results of the study with patients enrolled in intensive CBT or short psychodynamic therapy programs for anxiety disorders during the period from January 2009 until November 2010. There were 191 patients included in the study (54 males and 137 females). The mean age was 37.12 ± 12.47 years. Demographic and clinical data of the patients are in

Table 2. The average onset of the disorder was at the age of 31.1 ± 12.61 years and mean duration of the disorder was 6.41 ± 6.97 years. Prior to the study, the average anxiety score was 26.64 ± 13.58 measured with BAI. The mean seriousness of the disorder was according CGI 4.47 ± 1.19 . Demographic and clinical data are shown in Table 3.

There were substantial decreases in means of all rating scale scores during the treatment at whole group of patients (see Table 2 and Figure 1).

Separately the patients in all diagnostic groups significantly changed during the therapy in CGI ratings (patients with Panic disorder, Social phobia, OCD, Adjustment disorder, Other anxiety disorder: all unpaired t-tests: $p < 0.0001$, Mixed anxiety depressive disorder: Mann-Whitney test: $p < 0.0001$). The formal indicators of therapeutic response are the percentage of patients clinically improved (decrease by 30% in BAI score) or percentage of patients who reached clinical remission (defined as a score 1 and 2 of CGI at the end of treatment). Our results indicate that the treatment led to clinical response in 51.14% of all the patients. According to the CGI (1 or 2) there were 42.3% of all the patients who reached clinical remission. Taking into account that these patients were pharmacoresistant in previous outpatient treatment, our results are encouraging. The response rate and remission rate differ in percent between diagnostic subgroups (Table 2), but the differences between diagnostic groups did not reach the level of statistical difference (both response and remission rate: chi-square: n.s.) (Table 2, Figure 2).

The intra-diagnostic comparison of the level of anxiety in BAI showed significant changes in ratings of the patients suffering from panic disorder (unpaired t-test: $p < 0.001$), social phobia (unpaired t-test: $p < 0.05$), GAD (unpaired t-test: $p < 0.05$), mixed anxiety depressive disorder (unpaired t-test: $p < 0.01$) and adjustment disorders (unpaired t-test: $p < 0.05$), but not in patients suffering with OCD (unpaired t-test: n.s.), and other anxiety disorders (unpaired t-test: n.s.) (Figure 3).

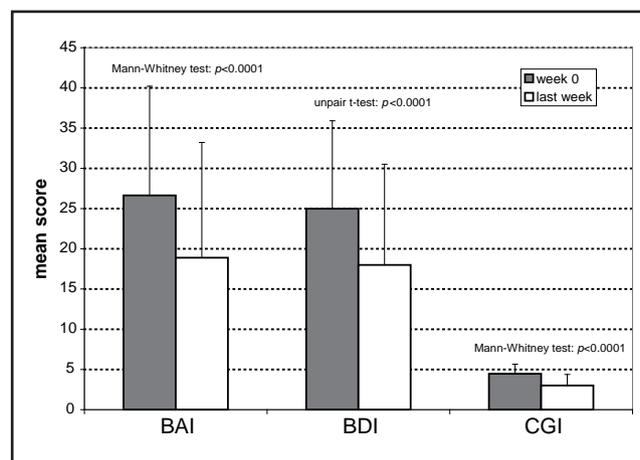


Fig. 1. Clinical rating scales – changes of mean scores during treatment.

Tab. 2. Demographic and clinical data.

	All patients	Main diagnosis						
		Panic disorder and/or agoraphobia	Social phobia	Generalized anxiety disorder	Mixed anxiety depressive disorder	Obsessive compulsive disorder	Adjustment disorder	Other anxiety disorder
Number of patients / number of drop outs	191/15	23/3	15/0	35/4	60/7	15/0	30/1	13/0
Male / female	54/137	3/20	8/7	8/27	18/42	6/9	8/22	4/9
Age	37.12±12.47	34.35±10.23	28.47±11.58	35.66±10.65	41.10±12.71	34.53±11.89	36.87±13.05	41.45±14.23
Years of education	12.97±2.52	12.26±1.86	12.93±2,37	13.86±3.13	12.65±2.45	13.40±2.59	13.10±2.41	12.62±2.02
Single/married/divorce/ widowed	84/63/36/8	10/11/2/0	13/1/0/1	16/13/5/1	19/23/12/4	8/3/4/0	13/7/10/0	5/5/2/0
Employed/unemployed / student/invalidity/pension	101/41/26/18/5	16/2/2/3/0	2/7/5/1/0	18/8/5/4/0	31/14/4/9/2	7/5/3/1/1	20/4/6/0/0	7/2/1/1/2
Onset of the disorder	31.1±12.61	28.96±7.42	21.73±12.24	29.09±11.50	34.18±13.24	27.67±12.47	33.37±12.73	33.62±14.03
Duration of the disorder	6.41±6,97	6.98±9.28	7.47±7.02	6.61±6.43	6.97±7.04	6.90±6.63	3.50±4.28	7.31±8.85
Number of hospitalizations	2.04±1.60	2.13±1.49	1.80±1.21	2.50±2.18	2.09±1.63	1.67±0.90	1.53±0.68	2.33±2.31
Axis I comorbidity	49.2%	73.9%	60%	71.4%	63.3%	13.3%	33.3%	100%
Personality disorder	45.0%	30.43%	66.7%	71.4%	38.3%	20%	43.3%	46.2%
Somatic comorbidity	16.8%	26.1%	26.7%	11.4%	18.3%	13.3%	10%	15.4%
The same disorder in family	13.1%	21.7%	0%	14.3%	18.3%	6,7%	10%	0%
Other psychiatric disorder in family	27.2%	30,4%	53.3%	31.4%	10.0%	46.7%	30%	30.8%
DES	14.58±14.59	11.19±10.63	9.37±5.73	16.57±16.90	14.85±10.06	15.38±19.18	16.47±20.02	15.52±25.57
pathological DES	9.50±15.92	6.49±6.95	6.32±6.96	12.57±17.51	6.97±7.77	11.45±18.28	12.81±23.66	11.65±26.91
SDQ	28.68±10.62	27.52±7.25	25.29±5.18	31.34±12.87	28.22±8.51	24.29±6.82	27.52±11.24	36.92±18.31
BAI-0	26.64±13.58	30.62±10.41	24.27±6.29	34.30±14.33	25.74±12.92	21.13±10.62	21.32±15.15	25.31±16.65
BAI-L	18.89±14.33	17.0±11.51	18.13±9.47	25.17±15.84	18.62±14.20	18.86±15.56	13.21±12.72	21.54±18.29
BAI-O-L 30% decrease	51.14%	60.1%	46.7%	34.3%	45%	33.3%	46.7%	38.5%
BDI-0	24.99±10.93	20.33±10.44	21.93±8.45	28.69±11.86	27.65±9.08	20.67±10.92	23.07±11.25	23.38±13.76
BDI-L	17.99±12.52	11.55±8.61	18.80±10.28	21.50±13.49	19.41±11.71	16.21±11.32	15.25±13.26	19.08±16.99
CGI-0	4.47±1.19	4.48±0.95	4.47±0.74	4.79±1.27	4.29±0.99	4.87±1.25	4.00±1.39	4.92±1.66
CGI-L	3.00±1.38	2.41±1.30	3.13±1.06	3.28±1.30	3.11±1.42	2.80±1.08	2.59±1.30	3.62±1.81
CGI-L 1 or 2	42.3%	56.5%	33.3%	31.3%	36.7%	46.7%	53.3%	38.5%
Type of psychotherapy: Short dynamic / CBT	42.9%/55.5%	21.7%/78.3%	6.7%/92.3%	45.7%/51.4%	55.7%/41.7%	6.7%/93.3%	56.7%/36.7%	61.5%/38.5%
Antidepressants: dosage of paroxetin equivalent in mg/day	36.28±19.52 (n=182)	29.09±11.09 (n=22)	30.67±17.920 (n=15)	37.65±19.08 (n=34)	32.12±15.350 (n=59)	63.33±25.54 (n=15)	33.1±16.46 (n=29)	40.38±14.21 (n=13)
Anxiolytics: dosage of diazepam equivalent in mg/day	20.00±12.85 (n=31)	17.50±17.68 (n=2)	0	18.33±11.25 (n=6)	19.17±8.01 (n=6)	0	17.5±17.68 (n=2)	35.0±21.21 (n=2)
Antipsychotics: dosage of risperidone equivalent in mg/day	2.40±1.89 (n=40)	3.25±3.46 (n=6)	6 (n=2)	2.22±1.73 (n=18)	2.08±0.79 (n=12)	2.60±1.34 (n=5)	1.00±0.0 (n=5)	3.0±1.73 (n=3)

The intra-diagnostic comparison of the level of depression in BDI showed significant changes during the therapy in ratings of the patients suffering from panic disorder (unpaired t-test: $p < 0.01$), GAD (unpaired t-test: $p < 0.05$), mixed anxiety-depressive disorder (unpaired t-test: $p < 0.0001$) and adjustment disorders (unpaired t-test: $p < 0.05$), but not in patients suffering with social phobia (unpaired t-test: n.s.), OCD (unpaired t-test: n.s.), and other anxiety disorders (unpaired t-test: n.s.), (Figure 4).

The direct comparisons between short psychodynamic psychotherapy and CBT in all patients have no satisfactory relevance because there were not include randomization to the treatment approaches and there were several differences between diagnostic group treated with each approach (patients with OCD, Panic disorder and Social phobia were mostly treated with CBT) and also there were differences between levels of anxiety in different diagnostic groups at the beginning (one-way ANOVA: $f = 3.601$, $df = 182$; $p < 0.005$) (Table 3). When we compared only diagnostic entities, where the groups were comparable in both treatments approaches in the number of patients and severity of anxiety and depressive scores at the beginning (patients with generalized anxiety disorder, mixed anxiety-depressive disorder and adjustment disorder), we can notice significantly higher efficacy of CBT ($n = 54$) in comparison with short psychodynamic psychotherapy ($n = 75$) (for BAI: two-way ANOVA RM: $F = 3.602$; $df = 53$; $p < 0.0001$; for BDI: two-way ANOVA RM: $F = 2,837$; $df = 53$; $p < 0.0001$) (Table 2, Figure 5). Because the lack of randomization to the treatment groups these results are mostly informative.

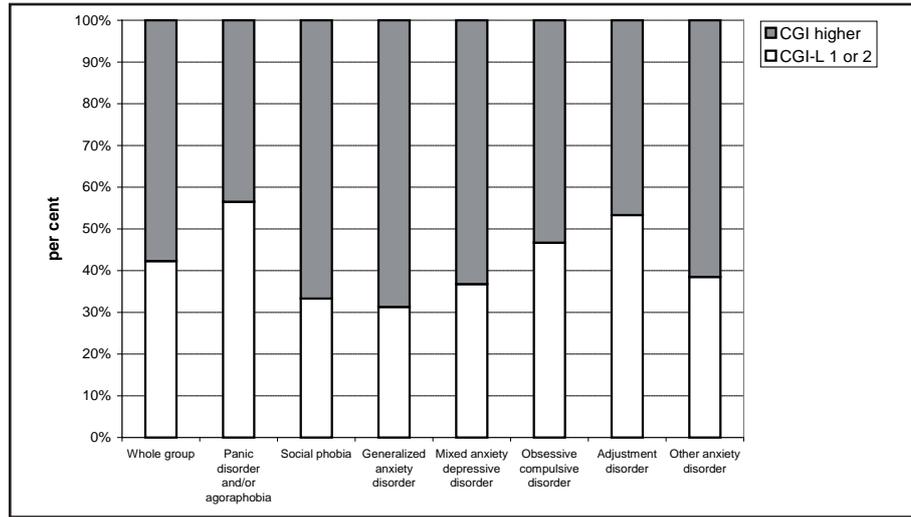


Fig. 2. Achieving remission – percentage of patients according the diagnosis.

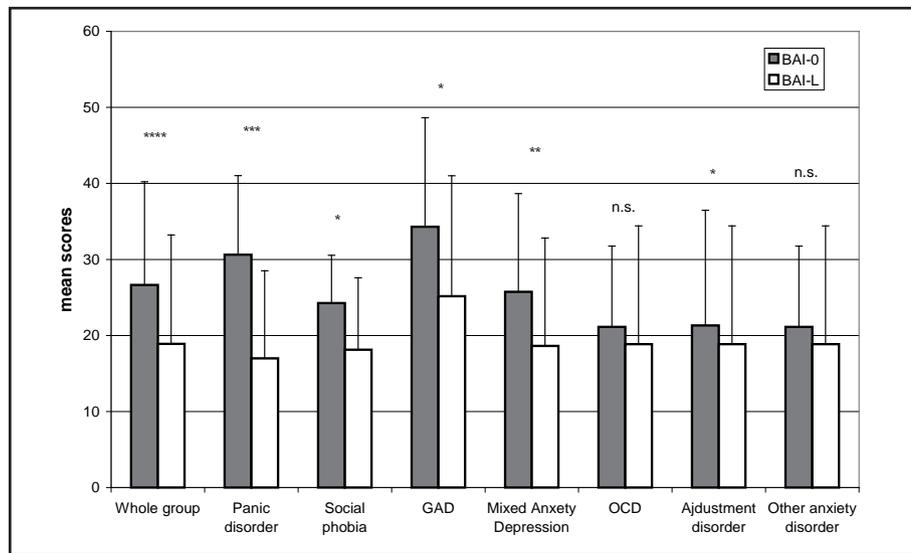


Fig. 3. BAI means before and after the therapy in the whole group and all diagnostic groups. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; **** $p < 0.0001$; n.s.= no significant

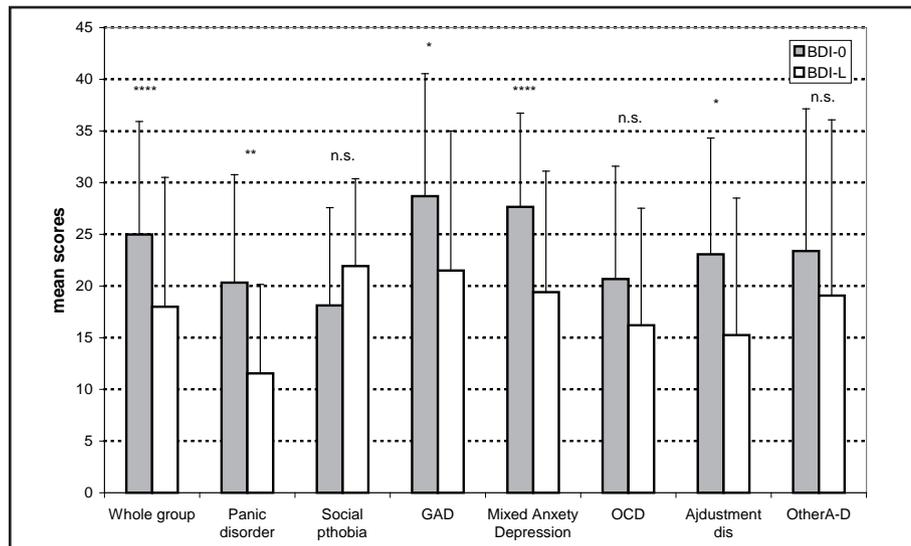


Fig. 4. Mean BDI before and after the therapy in the whole group and all diagnostic groups. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; **** $p < 0.0001$; n.s.= no significant

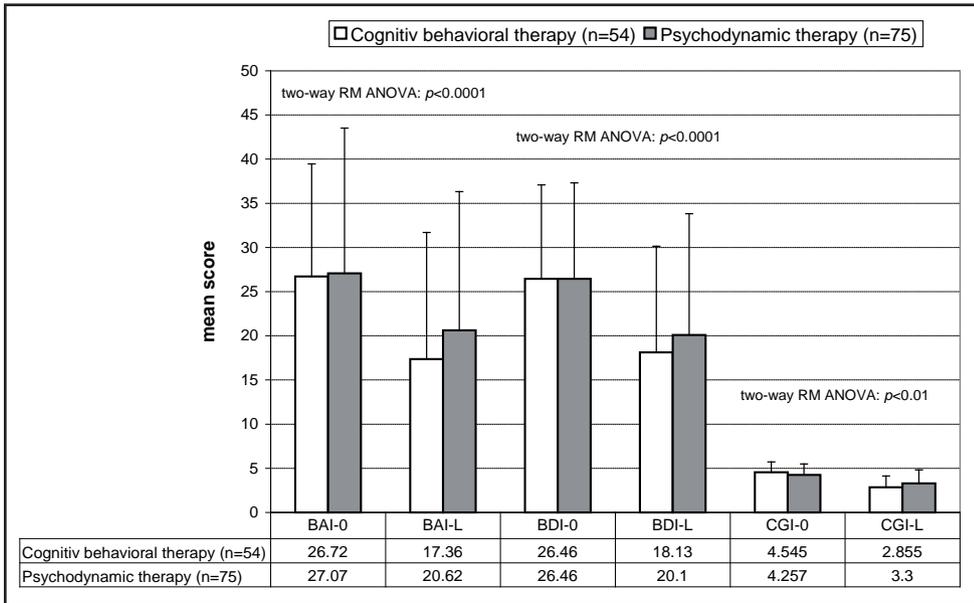


Fig. 5. Changes in rating scales during CBT and Psychodynamic therapy in patients suffering from GAD, Mixed anxiety depressive disorder or adjustment disorder

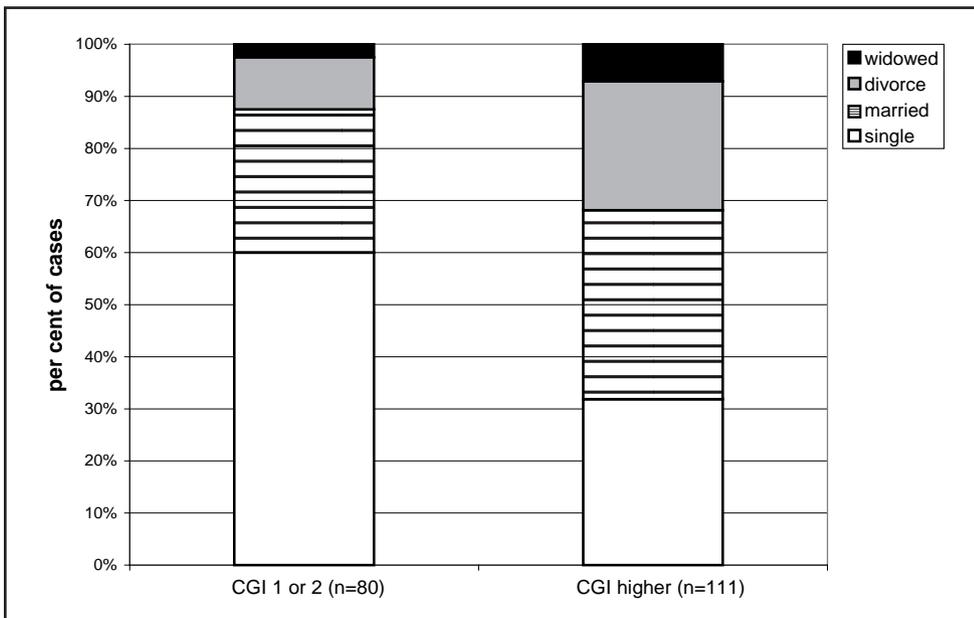


Fig. 6. Percent of different marital status of remitters and non-remitters in CGI.

Influence of demographic variables on response rate or remission

Gender: Response rate (BAI decrease of 30% or more) occurred in 47.2% males and 52.8% females (Fisher's exact test: n.s.), and CGI 1 or 2 was achieved in 37.7% males and 50.0% females, Fisher's exact test: n.s.). There were no significant gender differences found in comparison of patients improved or remitted.

Age: The mean age of responders and non-responders did not differ significantly (35.55±12.66 versus 38.71±12.41; unpair t-test: t=1.557 df=174; n.s.). But there was statistically significant difference in ages

between remitted and non-remitted patients (34.25±12.46 versus 39.19±12.12; unpair t-test: t=2.746, df=189; p<0.01.). Thus we may conclude that remitted patients were significantly younger than non-remitted patients.

Duration of disorder: The mean duration of the disorder in responders and non-responders did not differ significantly (6.22±7.53 versus 6.42±6.40; unpair t-test: t=0.1904 df=173; n.s.). Also there was not statistically significant difference in ages between remitted and non-remitted patients (5.23±5.88 versus 7.25±7.62; unpair t-test: t=1.967 df=187; n.s.).

Marital status: The marital status showed statistically significant difference between responders and non-responder in BAI (chi-square: p<0.05). This difference was influenced by the higher frequency of widowers in non-responder group (Fisher's exact test: p<0.05). The frequencies of different marital status (single, married, divorced or widowed) are also significantly different between remitted and non-remitted according CGI (chi-square: p<0.01)

with higher percentage of single (Fisher's exact test: p<0.05) in remitters group and higher percentage of divorced (Fisher's exact test: p<0.05) in non-remitters group (Figure 6).

Employment: There were no differences in response rate (chi-square: n.s.) and in remission rate (chi-square: n.s.) according employment status.

Results analysis in accordance with the degree of psychopathology and dissociation

BAI scores: Patients with BAI score in the beginning lower than 25 did not differ in response rate from the

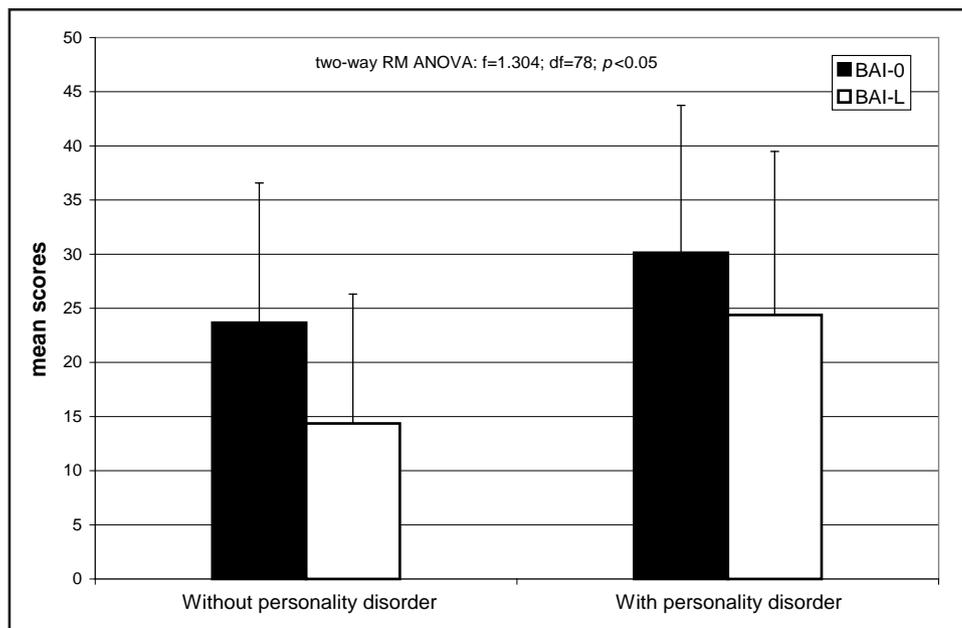


Fig. 7. Impact of comorbidity with personality disorders on BAI ratings.

Tab. 3. Logistic regression – prediction of clinical improvement (Variables, not in the Equation).

Step 0 Variables	Score	df	Sig
Onset of the disorder between age 20 to 40 (1)	1.123	1	0.289
Duration less than five years (1)	0.323	1	0.570
Gender (1)	1.278	1	0.258
Without psychiatric heredity (1)	0.541	1	0.462
Without comorbid personality disorder	11.321	1	0.001
Somatic disorder (1)	0.232	1	0.630
BAI-0 lower than 25 (1)	0.818	1	0.366
BDI-0 lower than 20 (1)	13.306	1	0.0001
DES lower than 12 (1)	1.129	1	0.288
DES-T lower than 10 (1)	0.347	1	0.556
SDQ lower than 22(1)	0.780	1	0.377
Comorbidity with depression (1)	2.580	1	0.108
Comorbidity with 1 actual disorder (1)	0.008	1	0.930
Comorbidity 2 and more actual disorders (1)	0.606	1	0.436
Dosage of antidepressants	1.552	1	0.213
Duration of the disorder	0.027	1	0.869
Years of education	3.122	1	0.077
DES	3.800	1	0.051
DES-T	0.996	1	0.318
SDQ	4.245	1	0.039
Overall Statistics	38.849	22	0.015

patient with BAI higher than 25 (Fisher's exact test: n.s.). On the other side patients with mean BAI scores at the beginning lower than 25 reached the clinical remission according CGI (1 or 2) at the end of therapy statistically more frequently than patients with higher initial BAI scores (Fisher's exact test: $p < 0.01$).

BDI scores: Patients with BDI scores lower than 20 at the beginning achieved response more frequently than patients with BDI higher than 20 (Fisher's exact test: $p < 0.0001$). The same result was obtained in remission rate (Fisher's exact test: $p < 0.0005$).

Presence of comorbidity with mild depression: Comorbid mild depression was diagnosed in 40 patients. Patients with comorbid diagnose of mild depression at the beginning achieved response less frequently ($n=14$) than patients without comorbid mild depression ($n=76$) (Fisher's exact test: $p < 0.05$) and also reach remission less often ($n=12$) versus no depression group ($n=68$) (Fisher's exact test: $p < 0.05$) (Figure 7).

Presence of comorbidity with other anxiety disorder: Despite the high frequency of comorbid anxiety disorder in our study population (49.2%), there were no statistically significant impact of this comorbidity on response or remission rate (both Fisher's exact tests: n.s.).

Presence of comorbidity with the personality disorder: Comorbid personality disorder was diagnosed in 45% of patients. Response occurred in 30 out of 80 patient with personality disorder and 76 out of 111 patient without personality disorder (Fisher's exact test: $p < 0,005$). Patients with comorbid personality disorder also did not achieve remission according CGI as frequently as a patient without personality disorder (24/80 versus 63/111: Fisher's exact test: $p < 0.0005$). It can be concluded that comorbidity with personality disorder has high impact on response and remission rates in patients with anxiety disorders.

Psychic dissociation scores (according DES): After dividing the patients into groups with DES scores lower and higher than 12, remission is not more frequent in the group with lower DES than in the group with higher scores (Fisher's exact test n.s.). Similarly, no statistical significance has been found in terms of response according to BAI (Fisher's exact test: ns).

Degree of somatopsychic dissociation (according SDQ): The numbers of improved or remitting patients

Tab. 4. Results of logistic regression –significant predictors for prediction of clinical improvement.

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I. for EXP (B)	
								Lower	Upper
Step 1	BDI-0 lower than 20 (1)	1.451	0.414	12.296	1	0.0001	4.267	1.896	9.600
	Constant	0.373	0.207	3.254	1	0.071	1.452		
Step 2	Patients without personality disorder (1)	0.929	0.357	6-796	1	0.009	2.533	1.259	5.094
	BDI-0 lower than 20	1.245	0.426	8.537	1	0.003	3.473	1.507	8.006
	Constant	0.282	0.213	1.747	1	0.186	1.326		

Exp(B)=OR (odds ratio)

Tab. 5. Logistic regression – prediction of remission (CGI last 1 or 2) (Variables, not in the Equation).

Step 0 Variables	Score	df	Sig
Onset of the disorder between age 20 to 40 (1)	2.813	1	0.093
Duration of the disorder less than five years (1)	2.060	1	0.151
Gender (1)	2.649	1	0.104
Without psychiatric heredity (1)	0.000	1	0.993
Without personality disorder (1)	9.212	1	0.002
Without somatic disorder (1)	1.476	1	0.224
BAI-0 less than 25 (1)	4.271	1	0.039
BDI less than 20 (1)	15.959	1	0.0001
DES less than 12 (1)	1.434	1	0.231
DES-T less than 10 (1)	0.404	1	0.525
SDQ less than 22 (1)	2.632	1	0.105
Depression (1)	2.018	1	0.155
Comorbidity with 1 actual disorder (1)	0.075	1	0.785
Comorbidity 2 and more actual disorders (1)	0.188	1	0.665
Age of the onset of the disorder	4.531	1	0.033
Duration of the disorder	1.639	1	0.200
Years of education	0.610	1	0.425
DES	5.299	1	0.435
DES-T	3.370	1	0.066
SDQ	3.712	1	0.054
BDI-0	15.025	1	0.0001
Overall Statistic	39.858	1	0.008

with SDQ scores lower than 22 did not significantly differ from those with higher scores of somatopsychic dissociation (Fisher's exact test in both parameters: ns). For this reason, it seems that we cannot predict the therapeutic effect from this cut point of the intensity of somatopsychic dissociation.

Logistic regression of the results

Binary logistic regression was used to predict the clinical improvement (decrease of BAI >30%) during the treatment from demographic and clinical variables. The first step of the regression shows that there are several variables with statistical significances: comorbidity with personality disorder, BDI-0 less than 20 and SHQ score (Table 3).

Next steps of logistic regression decreased the number of independent variables; the significant predictors for clinical improvement (decreasing BAI >30%) are parameters BDI-0 <20 and not have a diagnosis of personality disorder (Table 4). The values BDI <20 at the start of the treatment increase chance for clinical improvement 3.47 times (95%CI: 1.51–8.01). If patients do not receive comorbid diagnosis of personality disorder, the chance for Clinical improvement is higher 2.53 time greater than if they receive it (Table 4).

Binary logistic regression was also used for the prediction of the remission (CGI last 1 or 2) at the end of the treatment. The first step of regression shows the comorbidity with personality disorder, earlier onset of the disorder, lower score of dissociation measured by DES, BDI-0, lower BDI-0 scores significantly increase the probability to achieve remission during the treatment (Table 5).

Next steps of logistic regression for achieving the remission (CGI-L rate 1 or 2) show that the predictors are female gender, not have diagnosis of personality disorder, earlier onset of the disorder, and BDI less than 20 (Table 6). The first step of the regression shows BDI-0 score higher than 20 and female gender significantly increase the probability to achieve remission during the treatment (Table 5). At second step the BDI-0 lower than 20 persists. At third step of the logistic regression female gender, no comorbidity with personality disorder and BDI-0 lower than 20 survive. In step for all before predictors persisted, and age of the onset entered.

Significant predictors, of achieving the remission (CGI-L 1 or 2), are BDI-0 less than 20, no having personality disorder, female gender, and lower age of onset of the disorder. The BDI less than 20 increase chance to reach clinical remission 3.44 times (95%CI: 1.65–7.19). There is the chance to reach Clinical remission 2.88

Tab. 6. Results of logistic regression – significant predictors for remission (CGI-last 1 or 2).

	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I. for EXP (B)	
							Lower	Upper
Step 1								
BDI-0 lower than 20 (1)	1.332	0.340	15.344	1	0.000	3.790	1.946	7.381
Constant	-0.303	0,170	3.180	1	0.075	0.736		
Gender (1)	0.945	0.395	5.364	1	0.021	2.497	1.150	5.419
Step 2								
BDI less than 20 (1)	1.505	0.359	17.584	1	0.000	4.504	2.229	9.102
Constant	-0.493	0.194	6.461	1	0.011	0.611		
Step 3								
Gender (1)	0.950	0.404	5.531	1	0.019	2.585	1.171	5.706
Without personality disorder (1)	0.802	0.360	4.960	1	0.026	2.230	1.101	4.519
BDI less than 20 (1)	1.355	0.368	13.543	1	0.000	3.876	1.884	7.976
Constant	-0.546	0.200	7.448	1	0.006	0.579		
Step 4								
Gender (1=female)	1.047	0.416	6.338	1	0.012	2.850	1.261	6.442
Without personality disorder (1)	1.057	0.366	7.488	1	0.006	2.877	1.350	6.132
Age of the onset	-0.36	0.015	5.768	1	0.016	0.964	0,936	0.993
BDI less than 20 (1)	1.237	0.375	10.857	1	0.001	3.444	1.650	7.186
Constant	0.530	0.482	1.212	1	0.271	1.700		

Variable(s) entered on step 1. BDI-0 less than 20; Variable(s) entered on step 2: gender; Variable(s) entered on step 3: without personality disorder; Variable(s) entering on step 4: age of the onset of the disorder

times (95%CI: 1.35–6.13) more if the personality disorder is no comorbid. The females have 2.85 (95%CI: 1.26–6.44) times higher chance to achieving the clinical remission than males. Higher age of the disorder onset decreas chance to achieve clinical remission 0.964 times than the lower age.

DISCUSSION

The aim of our study was to identify factors that influence the therapeutic response and remission of complex psychotherapeutic programs in pharmacoresistant patients with anxiety disorders. Our preliminary hypotheses have been confirmed only partially. In the first hypothesis, we postulated that the shorter duration, employment and marriage will be connected with a better outcome. Our data have not confirmed the impact of duration of the disorder or employment on clinical response or remission in our patients with anxiety disorders. However, there was the association between the younger age of disorder onset and higher probability to achieve remission. The widowhood had significant negative impact on response rate, and divorce or widowhood had an adverse impact on remission rate. Our result about duration of the disorder is opposite to findings of Pigott and Sean (1997) and Saxena *et al* (2002), who found a relationship between poor therapeutic response and longer duration of the disorder. However, mentioned studies were focused only on OCD and our research was focused on a broad spectrum of anxiety disorders. Another explanation could be that patients referred to our centre are mostly

those repeatedly did not respond to outpatient treatment with antidepressants. Thus, our sample represents a selection while in studies mentioned above this was not the case.

Our second hypothesis has been also partially confirmed. Patients with baseline BAI scores lower than 25 points achieve remission more often than patients with higher baseline scores. However, it is not true for reaching the clinical response, which is more relative issue. It could be reflecting the possibility; that patient with lower initial BAI scores could achieve clinical remission more efficiently than patient with higher initial scores despite the relative change in BAI is not so high. However, the logistic regression shows that the baseline BDI scores lower than 20 points are a better predictor of the improvement and remission, that baseline BAI scores. It seems that higher level of depressive symptoms is highly connected with lower response and remission rate in patients suffering from anxiety disorders. These results are consistent with the findings of Shetti *et al* (2005), where comorbid depressive disorder influenced the therapeutic response in OCD patients. On the other side, we have found no impact of comorbid anxiety disorders on response or remission rate that is consistent with the study of Pigott and Sean (1997). In accord with our hypothesis, we found a significant impact of comorbid personality disorder on both response and remission rate. In opposition to our hypothesis lower or higher levels of psychic dissociation according DES, scores had no effect on response or remission rate. The results are in opposition to the outcome of the study of Rufer *et al* (2005) and Spitzer *et al* (2007), who found

poorer psychotherapy efficacy in patients with higher levels of dissociation.

Despite the percent of responded or remitted patients in specific diagnoses of anxiety disorder look different; there were no statistical differences between them. That is why the third hypothesis stressed the influence of a specific diagnosis of anxiety disorder on response or remission rate had no been confirmed in our study. This result can be doubly influenced by relatively small number of patients with social phobia and obsessive compulsive disorder in the study.

CONCLUSION

To identify predictors of therapeutic response in anxiety disorder patients, further studies with one diagnostic group of anxiety disorder and larger numbers of patients and their long-term follow-up are needed. That could contribute to the selection of an optimal therapeutic strategy for each patient according to his baseline characteristics. With regards to the fact that current treatment options are not able to help all the patients, and a number of them remain treatment-resistant, it is necessary to explore alternative therapeutic approaches further.

ACKNOWLEDGEMENT

This paper was supported by the research grants IGA MZ ČR NS 9752-3/2008

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