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Main Section

FACTORS ASSOCIATED WITH PARTIAL REMISSION IN DEPRESSION

Peter L. Cornwall

Royal Victoria Infirmary, Newcastle upon Tyne, U.K.

Jan Scott

Gartnavel Royal Hospital, Glasgow, U.K.

Abstract. We report a subgroup analysis of 24 out of 42 subjects who were hospitalized for non-psychotic major depressive disorder and who agreed to participate in interviews at admission and 2 years afterwards (as reported previously by Domken, Scott, & Kelly, 1994; Bothwell & Scott, 1997). At 2 year follow-up, these 24 subjects were categorized according to established criteria into clients meeting criteria for full remission (FR; n = 9) and those meeting criteria for partial remission (PR; n = 15). The most striking findings were that, over time, PR subjects showed significant loss of self-esteem and showed greater divergence in self-ratings compared to observer ratings of their depressive symptoms, whilst the same ratings in the FR group changed in the opposite direction. We suggest that the persistence of depression in PR subjects may provide evidence to support Teasdale's (1988) hypothesis that some individuals "get depressed about being depressed". The research and clinical implications of the results are noted.

Keywords: Depressive disorder, treatment outcome, partial remission.

Introduction

Although the concept of partial or incomplete remission from depression has been noted in the literature for many decades, it is only recently that a precise definition of partial remission has been formulated (Frank et al., 1991). Evidence is growing that partial remission is an important adverse outcome in depression (Cornwall & Scott, 1997). Fawcett (1994) has estimated that 30% of clients are left with a partial response after acute treatment with antidepressant medication and this figure broadly concurs with the prevalence in studies using the standard criteria for partial remission (Taylor & McLean, 1993; Paykel et al., 1995). Individuals who do not attain a full remission of symptoms have a significantly higher risk of relapse into major depression (Evans

Reprint requests to Peter L. Cornwall, University Department of Psychiatry, Royal Victoria Infirmary, Newcastle upon Tyne NE1 4LP, U.K.

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et al., 1992; Faravelli, Ambonetti, Pallanti, & Pazzagli, 1986; Simons, Murphy, Levine, & Wetzel, 1986) and often experience considerable functional impairment (Mintz, Mintz, Arruda, & Hwang, 1992).

Unfortunately, knowledge about the implications of partial remission in depressive disorders is not matched by knowledge about the risk factors for the development of partial remission, nor knowledge about the best treatment strategy. Evidence is conflicting over whether biological factors or psychological factors, such as avoidant personality traits, predict partial remission (Akiskal, 1982; Kupfer & Spiker, 1981; Krantz & Moos, 1988; Ramana et al., 1995). Similarly, it is unclear whether residual symptoms are primarily psychological or physical in nature (Akiskal, 1982; Paykel et al., 1995). Further work is required on the characteristics of this client population.

Recent clinical input to clients meeting criteria for partial remission has led us to speculate that many individuals in this group get "depressed about being depressed". Before mounting a large scale prospective study to explore this hypothesis we re-analysed data from a previously published study of 42 clients with unipolar MDD that explored cognitive vulnerability to chronic depression (Bothwell & Scott, 1997). That study compared 18 clients who met criteria for chronicity with the 24 who did not meet such criteria. In this study, we analysed a subset of the available data on those remaining 24 clients who met Frank et al.'s criteria (1991) for partial ($n = 15$) or full ($n = 9$) remission at 2 years follow-up. Baseline and follow-up measures of clinical, cognitive and personality characteristics are presented.

Method

Sample

The study represents a prospective 2 year follow-up of 24 of the 42 depressed inpatients described previously in a publication on non-concordance between subjective and observer views of illness severity (Bothwell & Scott, 1997; Domken et al., 1994).

Measures

Subjects were assessed within 48 hours of admission to ensure they met DSM-IIR criteria for MDD without psychotic features (American Psychiatric Association, 1987). Cases were excluded if there was evidence of psychosis, a co-existing Axis I or Axis II diagnosis, drug or alcohol abuse, cognitive impairment, or inability to give informed consent. Using the outcome criteria of Frank et al. (1991), patients who, at 2 years, no longer met criteria for MDD were classified as fully remitted (FR; minimal or no MDD symptoms for 8 or more weeks) or partially remitted (PR; residual symptoms of MDD and Hamilton Rating Scale of Depression score of >8). Demographic and illness characteristics including endogenicity (prominant somatic symptoms) as measured on the Newcastle Diagnostic Index (NDI; Carney, Roth, & Garside, 1965) and length of index episode were recorded using methods described previously (Domken et al., 1994; Scott, Eccleston, & Boys, 1992). Severity of depression was assessed at initial and follow-up interview using two measures: the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960) and the Inventory for Depressive Symptoms (IDS; Rush et

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al., 1986). The IDS is a matched clinician (IDS-C) and self-rated (IDS-SR) questionnaire of 28 items that gives equal weighting to cognitive and somatic symptoms of depression. The IDS shows good internal reliability, internal consistency and construct/concurrent validity. Clinically, the IDS appears to minimize the need for abstract judgement. Studies have shown high order correlations between the self-ratings (IDS-SR) and clinician-ratings (IDS-C) of symptom severity, although self-report scores tend to be higher than observer rated scores (Domken et al., 1994; Rush, Hiser, & Giles, 1987). Clients also completed the following self-ratings at the initial and follow-up- interviews:

Self-esteem. Using the 10-item Rosenberg Self-Esteem Questionnaire (SEQ; Rosenberg, 1965), the five positive and five negative items are rated on a 1–4 scale. Positive and negative ratings are then summed to give the SEQ score, the higher negative scores being indicative of poor self-esteem.

Dysfunctional beliefs. Using the 40-item Dysfunctional Attitudes Scale (DAS Form A; Weissman & Beck, 1978), subjects are asked to rate how strongly they agree or disagree with each belief statement on a 7-point Likert scale. Scores range from 40–280, with higher scores representing greater dysfunction.

Statistical analysis

Descriptive statistics were used to identify sample characteristics and any between group differences. Given the small sample size, non-parametric analyses were undertaken.

Results

Initial asessment and follow-up data versus outcome category

Initial observer and subjective ratings for the two outcome groups are summarized in Tables 1 and 2. Males were significantly more likely than females to experience PR (Fisher's exact test, $p = .04$). Statistical analysis showed that PR subjects differed from FR subjects in having a more severe depression as initially rated on the HRSD (Mann–Whitney U test, $p = .04$) and IDS-C (Mann–Whitney U test, $p = .02$) and a longer median duration of index episode (Kruskal–Wallis test, $p = .02$). Endogenicity of depression as assessed by scores on the NDI did not significantly predict outcome category.

Individuals who were classified as partially remitted at follow-up did not differ significantly from FR subjects on the DAS and SEQ at baseline. Interestingly, PR

Table 1. Between group differences in baseline data

	Full remission ($n = 9$)	Partial remission ($n = 15$)	Significance
Mean age (SD)	44.1 (15.9)	38.9 (14.4)	NS
Gender F : M	7 : 2	5 : 10	0.04
Median episode length (months)	4.0	6.0	0.02
NDI > 6	3	8	NS

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Table 2. Between group differences in mean scores (*SD*) of observer and subjective ratings at initial assessment and follow-up

	Initial interview			Follow-up interview		
	FR	PR	Sig.	FR	PR	Sig.
HRSD	15.6 (6.1)	20.7 (6.1)	0.04	3.3 (6.1)	10.7 (2.9)	—
IDS-C	32.4 (8.5)	39.7 (11.5)	0.02	7.6 (5.0)	23.2 (6.5)	0.01
IDS-SR	43.9 (10.6)	40.5 (8.9)	NS	15.2 (6.8)	36.1 (15.3)	0.001
delta-IDS*	−11.4 (7.4)	−0.8 (7.8)	0.02	−7.7 (6.3)	−12.9 (10.6)	0.03
SEQ	−3.0 (2.6)	−1.5 (8.3)	NS	5.3 (9.3)	−4.4 (11.7)	0.03
DAS	161 (45.1)	143 (40.5)	NS	140 (35.6)	157 (38.5)	NS

* delta-IDS = (IDS-SR) − (IDS-C).

subjects' initial self-ratings of depression (IDS-SR) were consistent with the initial clinician rating (IDS-C). The delta IDS (calculated by subtracting the IDS-C from the IDS-SR) was −0.8. Those in full remission at follow-up had initially viewed their depression as significantly more severe than the clinician (IDS-SR = 43.9; IDS-C = 32.4; delta-IDS = −11.4). The between group differences in the baseline delta-IDS scores were statistically significant (Mann–Whitney U test, $p = .02$).

The HRSD ratings were used to classify clients into PR and FR groups, so differences in scores were not subject to statistical analysis at follow-up. At follow-up, observer ratings of depression severity on the IDS-C showed that both groups had experienced a reduction in symptoms, but between group differences remained significant with FR subjects having lower scores than PR subjects. There were also significant differences between the groups on the IDS-SR (Mann–Whitney U test, $p = .001$) and the SEQ (Mann-Whitney U test, $p = .03$). The delta-IDS had reduced in the FR group, but increased markedly in the PR group.

Within group changes

Self-esteem scores of individuals within the two outcome groups changed in significantly different ways (Kruskal–Wallis test, $p = .02$). In the FR group, self-esteem improved significantly over time (mean change +7.8; *SD* 10.1) whilst in the PR group it significantly worsened (mean change −3.1, *SD* 7.5). Delta-IDS scores within each group also changed in different ways (Kruskal–Wallis test, $p = .02$). In the FR group, the delta-IDS decreased over time (mean change +3.8, *SD* 10.6). In the PR group, the trend was in the opposite direction: initially, clinician and self-ratings were in concordance, but the ratings diverged over time so that, at follow-up, the delta-IDS had significantly increased (mean change −9.7, *SD* 10.4; $t = 2.8$, $p = .02$). Changes in DAS scores showed a similar pattern with reducing levels of dysfunctional attitudes in the FR group and increasing levels of dysfunctional attitudes in the PR group (change in DAS, Kruskal–Wallis test, $p = .05$).

Discussion

This study is hampered by the small sample size, which reduces the power of the statistical tests and deferred us from using more sophisticated methods of analysis. Most

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Table 3. Between group differences in change in mean scores (*SD*) of observer and subjective ratings between initial assessment and follow-up

	Full remission	Partial remission	Significance
Change in HRSD	−12.3	−10.0	NS
Change in IDS-C	−24.8	−16.5	NS
Change in IDS-SR	−28.7	−4.4	0.02
Change in delta-IDS	+3.8 (10.6)	−9.7 (10.4)	0.02
Change in SEQ	+7.8 (10.1)	−3.1 (7.5)	0.04
Change in DAS	−21.0	+14.0	0.05

importantly, the data used were drawn from a previously published study that explored differences between chronic and non-chronic depressions. That analysis showed that, at initial assessment, HRSD, IDS-C, IDS-SR, delta IDS, SEQ and DAS scores were higher in the 18 clients who went on to meet criteria for chronic depression (as compared to the 24 subjects reported here) and that ratings in clients with chronic depression changed very little between initial and 2 year follow-up (Bothwell & Scott, 1997). Our justification for performing a further analysis of the previously published data is that we wished to learn more about partial recovery from MDD. We acknowledge that such re-analysis is fraught with difficulties, and that we could be accused of duplicate publication. The latter is certainly not our intention. We simply wish to draw attention to the interesting results that we uncovered and to encourage other researchers to explore models that may explain the development of partial remission in depression.

Although retrospective analysis revealed that statistically significant differences existed between the two outcome groups at initial assessment, the partially remitted group were not easy to identify clinically. It is interesting that males are over-represented in the PR group; however, cognitive and personality factors that are purported to increase vulnerability to persistent depression were not in evidence on admission (Bothwell & Scott, 1997). In fact, PR individuals showed lower levels of cognitive dysfunction on the DAS and had higher levels of self-esteem than those who subsequently made a full recovery. Also, the subjects' initial perception of the severity of their depression in the PR group (on the IDS-SR) was more in keeping with the clinician's view (IDS-C) than those in the FR outcome group. Whilst the greater concordance between IDS-SR and IDS-C ratings may be a feature of those at risk of partial remission, it may also be associated with the increased prevalence of endogenous depression in this group (53%). We have previously demonstrated that observer and self-ratings of non-endogenous depression are significantly more likely to show non-concordance (Domken et al., 1994).

At follow-up assessment, the FR and PR groups begin to diverge. The PR group showed a greater change over time than the FR group in the level of agreement between clinician and self-ratings of depression severity. Indeed, the change in the PR subjects' delta-IDS, self-esteem and DAS scores were in the opposite direction to the FR group.

There is no easy explanation for these results, and life events, treatment non-adherence or other factors may all play a role. However, a tentative hypothesis can be put forward based on Teasdale's (1988) work on cognitive theories of depression and our

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own clinical observations. Teasdale describes how persistent depressive symptoms may develop in some individuals because of the negative bias in thinking that occurs *after* an initial mood shift. The mood shift may result from an internal (biological) or external (life event) precipitant. These individuals are characterized by Teasdale as "people who get depressed about being depressed". Clinically, we have noted that a number of patients with more resistant disorders describe their depression as evidence of personal failure. This attitude seems to be more prevalent in males. It may be that those who experience partial remission fit this profile.

The above explanation is hypothetical, but it does provide some guidelines for further research. First, it is important to establish whether there are more valid and reliable measures of psychopathology or cognitive dysfunction that should be employed. More sensitive assessments, such as autobiographical memory tests (Scott, Williams, Brittlebank, & Ferrier, 1995) or the inclusion of biological factors (such as neuroendocrine tests) may provide a clearer picture of those at risk of partial remission. The Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974) or other measures of an individual's perception of the future may be better predictors of risk for PR. Second, a larger scale prospective study with more frequent assessment points may allow earlier identification of those likely to experience residual symptoms. Subscale scores on the DAS could be assessed separately and changes in individual items on the IDS scales could be analysed. Third, with larger outcome groups, the use of logistic regression or statistical procedures that control for the confounding effects of mood and symptom severity would allow the sensitivity and specificity of hypothesized predictor variables or combinations of variables to be evaluated.

Clinically, it should be noted that residual depressive symptoms were present in a significant number of clients who were assessed as having received adequate doses of pharmacotherapy for an adequate period of time (Bothwell & Scott, 1997). It may be important to introduce a structured psychological therapy such as cognitive behaviour therapy as an additional treatment strategy. Indeed, if future studies support the findings of this project, it could be argued that such interventions may particularly need to be targeted at clients experiencing partial remission of major depression.

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