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What Is the Best Sequential Treatment Strategy in the Treatment of Depression? Adding Pharmacotherapy to Psychotherapy or Vice Versa?

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Key Words

Depression · Psychodynamic psychotherapy · Pharmacotherapy · Sequential treatment strategy

Abstract

Background: Insufficient response to monotherapy for depression is a common phenomenon in clinical practice. Even so, evidence indicating how to proceed in such cases is sparse. **Methods:** This study looks at the second phase of a sequential treatment algorithm, in which 103 outpatients with moderately severe depression were initially randomized to either short-term supportive psychodynamic therapy (PDT) or antidepressants. Patients who reported less than 30% symptom improvement after 8 weeks were offered combined treatment. Outcome measures were the Hamilton Depression Rating Scale (HAM-D), the Clinical Global Impression of Severity and Improvement, the SCL-90 depression subscale and the EuroQOL questionnaire. **Results:** Despite being nonresponsive, about 40% of patients preferred to continue with monotherapy. At treatment termination, patients initially randomized to PDT had improved more than those initially receiving antidepressants, as indicated by the HAM-D and the EuroQOL, independently of whether the addition was accepted or not. **Conclusions:** Starting with psy-

chotherapy may be preferable in mildly and moderately depressed outpatients. For patients who receive either PDT or antidepressants, combined therapy after early nonresponse seems to be helpful. Nevertheless, this sequential strategy is not always preferred by patients.

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Introduction

The different forms of psychotherapy and pharmacotherapy appear to be equally effective in the acute treatment of moderate-to-severe depression [1–4]. The combination of psychotherapy and pharmacotherapy seems to be more beneficial than pharmacotherapy alone [5–8], especially in severe depression. However, the advantage of combined treatment over monopsychotherapy is less clear-cut [9–12].

It is not unusual in clinical practice to start with monotherapy: there are cost-efficacy considerations, not all treatment options are available, there are possible side effects and adherence is higher in monotherapies [13, 14]. A sequential strategy may be used in patients who fail to respond. Segal et al. [13] and Fava et al. [14, 15] recommend sequencing pharmacotherapy and psychotherapy

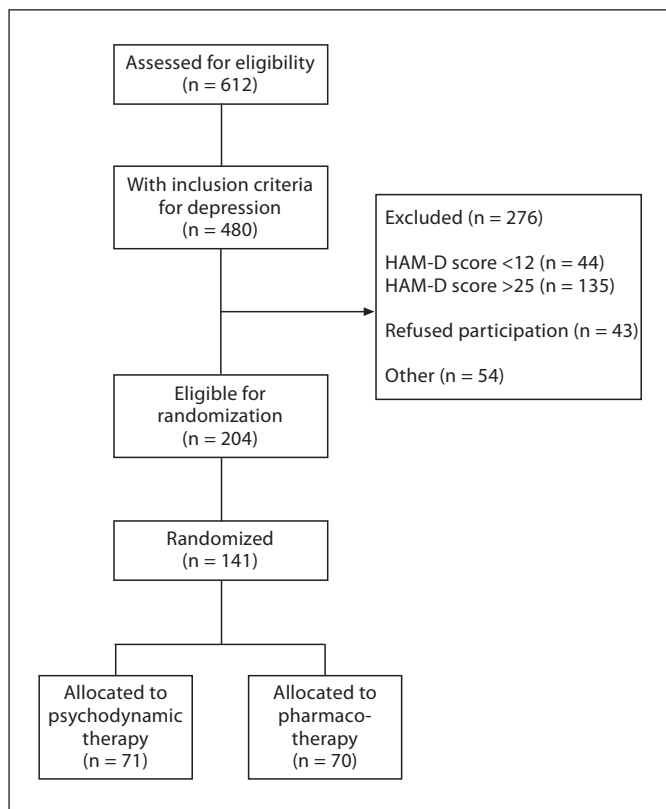


Fig. 1. Flow of participants through the first stages of the randomized trial.

for depression, especially for more severely depressed patients [13], but sequential strategies of this kind have not often been studied. We are aware of only one study (looking at women with recurrent depression [16]) in which pharmacotherapy was prescribed after unsuccessful psychotherapy. This appeared to be slightly more effective than combined therapy from the start [16]. The reverse sequence – the addition of psychotherapy after nonresponse to pharmacotherapy for depression – has been studied more frequently [17–27]. In all of these studies, the psychotherapy was a form of cognitive behavior therapy and it was mainly added to prevent relapse after partially or fully successful pharmacotherapy.

The aim of the present study was to determine which sequence is preferable for the acute treatment of depression: starting with psychodynamic therapy (PDT) or with pharmacotherapy. Although PDT is effective in depression [28–35], it has never been studied in a sequential treatment design. This study started with a randomized clinical trial of 8 weeks, making a direct comparison between antidepressants (AD) and short-term,

supportive PDT. In a previous article [36], we reported slightly better results for AD by week 4. This benefit had almost disappeared by week 8. This article covers the entire course of treatment and focuses on the differential efficacy of the treatment strategies after 24 weeks. At 8 weeks, all patients with less than a 30% decrease in symptoms were offered combined therapy for an additional period of 16 weeks. Nonresponsive patients receiving AD were therefore offered complementary PDT, while nonresponsive patients receiving PDT were offered complementary AD.

The aim of this article is to explore the acceptability, feasibility and efficacy of the sequential treatment strategies in cases of poor response after 8 weeks of treatment. Secondly, we hoped to determine which of the sequential strategies would be preferable: complementary AD after PDT or complementary PDT after AD.

Methods

Subjects

The study sample comprised all consecutive patients newly registered over a period of 3 years at two outpatient clinics of Mentrum Mental Health Care, a large psychiatric academic hospital with extensive outpatient facilities in the city of Amsterdam. The inclusion criteria were: age between 18 and 65 years, DSM-IV-defined Depressive Episode with or without dysthymia (using the CIDI), a 17-item Hamilton Depression Rating Scale (HAM-D) [37] baseline score between 14 and 26 points, and written informed consent. The exclusion criteria were: bipolar disorder, drug abuse, psychotic symptoms, serious communicative problem (language, for example) or physical restrictions (patient due to leave the country soon, for example) precluding participation, the necessity of immediate hospitalization or day treatment, and contraindication for ADs (inability to stop using present psychotropic medication, or pregnancy).

Study Design

Figure 1 shows a flow diagram for the study population. During the study period 480 patients met the inclusion criteria for depression as determined by the regular intake procedure of the departments and confirmed with the CIDI. We excluded 276 patients for the following reasons: HAM-D score <12 (n = 44), HAM-D score >25 (n = 135), and refusal to participate (n = 43) or other reasons (n = 54). In addition, another 63 patients dropped out during intake and before the randomization procedure. The reasons here were organizational: the overly long absence of the patients due to, for example, a holiday. In conclusion, 71 patients were allocated to PDT and 72 to AD.

After randomization, 8 patients (n = 1 in the PDT arm and n = 7 in the AD arm) refused the randomized intervention and decided to follow their own preferred course of treatment [36, 38]. Fifteen patients (n = 3 in the PDT arm and n = 12 in the AD arm) refused all treatment and 15 patients (n = 8 in the PDT arm and n = 7 in the AD arm) did not show up.

Finally, 103 patients were included in the per protocol analysis (these were the patients who actually started treatment): 59 to the psychotherapy group and 44 to the pharmacotherapy group.

After 8 weeks of treatment, a sequential strategy was implemented. Insufficient response was defined as <30% HAM-D reduction. This cut-off was based on clinical consensus. On the one hand, it reflects slightly more improvement than the usual operationalization of <25% decrease for complete nonresponse [39–42]. On the other hand, it reflects a realistic approach to the expected change in the first phase of psychotherapy. These nonresponsive patients were offered the complementary treatment: additional PDT or AD for the remainder of the research period, i.e. until week 24. All other patients continued monotherapy until week 24.

Treatment

Pharmacotherapy. Pharmacotherapy was provided in accordance with an AD protocol. All patients started with the serotonin-noradrenaline reuptake inhibitor (SNRI) venlafaxine (75 mg/day). Depending on clinical response and tolerability, the dose of venlafaxine could be titrated up to a maximum of 225 mg/day. In cases of intolerance (according to both psychiatrist and patient), the first-choice AD could be replaced by citalopram (maximum dose 60 mg/day) or nortriptyline (maximum dose 150 mg/day). Patients had four fortnightly appointments with the pharmacotherapist in the first 2 months and appointments once a month in the second phase of treatment. Except for the first visit, all appointments lasted a maximum of 20 min, during which adequate clinical management was provided. All pharmacotherapists, either psychiatrists or residents, were experienced in the pharmacological treatment of depression. Residents were supervised regularly by psychiatrists.

Psychotherapy. The psychotherapy consisted of sixteen sessions of short-term, supportive PDT. A range of trials and studies have demonstrated its effectiveness in the treatment of depression [7, 9, 38, 42–52]. The first eight sessions took place weekly, the last eight fortnightly. PDT is a manual-based approach focusing on the affective, behavioral and cognitive aspects of relationships from a psychodynamic point of view [53, 54]. Initially, these areas are discussed from an interpersonal perspective, in other words the actual relationship with others. Subsequently, the therapist proceeds to an intrapersonal perspective by focusing on the internalizations of former relationships that are relevant to the vulnerability to depression.

Depending on the focus of therapy and patients' capacities, the therapists may choose more supportive interventions – such as encouraging adaptive coping mechanisms, guilt-reducing thoughts or giving praise – or interventions for enhancing insight such as exploring affects or confrontation. Manifestations of defense mechanisms and transference are recognized and discussed if appropriate but not interpreted in depth. This means that the therapy is psychodynamic in terms of the intended therapeutic process and supportive in terms of the therapist's basic attitude. It differs from IPT by using psychodynamic concepts and because of the focus on the interdependence of actual relationships and intrapersonal representations.

PDT is used regularly by the participating outpatient departments to treat depressed patients. Therapists were trained in the principles of PDT (using the SPSP manual [53, 54]) in a 15-hour course, and were required to have completed one or more super-

vised therapies (depending on previous psychotherapeutic experience) before providing treatment in the research setting. Therapist competence in PDT was evaluated by one of the supervisors before the therapists were allowed to participate in the current study. The two study supervisors were psychoanalytic psychotherapists registered with the Dutch Association of Psychoanalytic Psychotherapy. Thirteen therapists (8 female and 5 male) participated in this trial. They were either psychiatrists (n = 4), advanced residents in psychiatry (n = 3), psychotherapists (n = 3) or advanced psychotherapy trainees (n = 3). During the research project, there was weekly supervision for the residents and trainees. The other therapists met twice a week for peer supervision, together with one of the study supervisors. Supervision of integrity was based on audio-taped material of sessions and focused on the course of depressive symptoms, the optimization of the therapeutic process, and the technical quality of interventions. The supervisors also monitored adherence to the psychotherapy manual, although this was not formally assessed.

Primary and Secondary Outcome Measures

The primary instrument was the 17-item HAM-D [37]. HAM-D data were provided by independent observers (three research fellows who were blind to the treatment condition). Data were gathered using a semistructured interview [55, 56]. The reliability of observer assessments was assessed prior to participation in the study. During the study, the research assistants discussed their audiotaped assessments monthly with an experienced psychiatrist.

There were several secondary outcome measures. The Clinical Global Impression of severity and improvement (CGI-S, CGI-I [57]) was used. CGI data were provided by the treating clinicians. In addition, the depression subscale of the Ninety Symptom Checklist (SCL-D) [58] was used as a self-report measure. Finally, the EuroQOL questionnaire, an instrument developed for evaluating health and health care [59], was used to measure health status. For pragmatic reasons, only item 5 was used. This is a self-rated 10-point visual analogue scale asking the patient: 'How good or bad is your general health status today?' In short, our efficacy assessments were based on data from three sources: the treating clinicians, the patients and independent observers.

The second phase of the trial included assessments at week 8, week 16 and week 24. Efficacy was expressed as differences in mean scores. HAM-D response was defined as a 50% symptom reduction. The criterion for complementary treatment was a reduction of less than 30% on the HAM-D and it was used at week 8 only.

Psychotherapy patients who completed fewer than five therapy sessions in the first 8 weeks or who terminated participation between weeks 8 and 24 were considered to be dropouts, whatever the reasons. AD drop-out was defined as self-reported noncompliance with the medication regime or no-shows at follow-up appointments with the pharmacotherapist prior to week 16.

Statistical Analysis

Pearson χ^2 calculations were used to compare baseline characteristics, refusal rates, drop-out rates and success rates between therapy conditions. ANOVA was used to compare the baseline measurements of the two groups.

ANCOVA analyses were used to test between-group differences in terms of means, including baseline measures, and pos-

Table 1. Patient characteristics (per protocol sample)

| | Psychotherapy (n = 59, %) | Pharmacotherapy (n = 44, %) | Total (n = 103, %) |
|--|------------------------------|--------------------------------|-----------------------|
| Sex | | | |
| Male | 25.4 | 27.3 | 26.2 |
| Female | 74.6 | 72.7 | 73.8 |
| Age | | | |
| 20–29 years | 32.2 | 15.9 | 25.2 |
| 30–39 years | 35.6 | 43.2 | 38.8 |
| 40–49 years | 16.9 | 27.3 | 21.4 |
| 50–60 years | 15.3 | 13.6 | 14.6 |
| Education level | | | |
| Low | 24.1 | 38.1 | 30.2 |
| Intermediate | 50.0 | 42.9 | 46.9 |
| High | 25.9 | 19.0 | 22.9 |
| Patient was on medication 3 months prior to admission ¹ | | | |
| Yes | 30.4 | 51.2 | 39.4 |
| No | 69.6 | 48.8 | 60.6 |
| Psychiatric treatment for present episode | | | |
| Treated | 43.6 | 43.2 | 43.5 |
| Not treated | 56.4 | 56.8 | 56.5 |
| Duration of present episode | | | |
| <1 year | 48.2 | 44.1 | 46.7 |
| 1–2 years | 23.2 | 17.6 | 21.1 |
| >2 years | 28.6 | 38.2 | 32.2 |
| Depressive episodes in past 5 years | | | |
| 0 | 48.2 | 47.6 | 48.0 |
| 1 | 41.1 | 42.9 | 41.8 |
| 2 | 5.4 | 2.4 | 4.1 |
| ≥3 | 5.4 | 7.1 | 6.1 |
| HAM-D score | | | |
| Mean | 20.4 | 19.8 | 20.1 |
| SD | 3.8 | 3.7 | 3.7 |
| Median | 20.0 | 20.0 | 20.0 |
| CGI-S score | | | |
| Mean | 4.4 | 4.1 | 4.3 |
| SD | 0.7 | 0.7 | 0.7 |
| Median | 4.0 | 4.0 | 4.0 |
| SCL-D score | | | |
| Mean | 51.8 | 51.5 | 51.7 |
| SD | 10.0 | 11.6 | 10.6 |
| Median | 51.5 | 53.0 | 52.5 |

¹ $\chi^2 = 4.41$; $p = 0.036$.

sible differences in baseline characteristics between therapy conditions as covariates.

Data analyses were performed on a per protocol sample and on an observed cases sample. The per protocol sample included all the patients who started treatment. Last observation carried forward (LOCF) was applied to the per protocol sample for missing data. The observed cases sample included only the observed data for all patients who completed treatment.

A general linear model repeated-measures analysis (GLM procedure in SPSS) was conducted to test the efficacy of the two sequential strategies. Time, initial strategy (PDT or AD), complementary therapy (in case of nonresponse), and the interaction between treatment group and complementary therapy were entered as predictors of the mean HAM-D score at week 24. Possible differences between baseline characteristics in the therapy conditions were also entered.

The power of the trial was about 0.7 for 103 patients to determine a moderate Cohen effect size of 0.5 in favor of the PDT strategy.

Results

Demographics

Table 1 shows the demographic and clinical characteristics for the per protocol patient sample. No differences were found between the therapy groups, except for the use of medication in the three months preceding admission. In the pharmacotherapy group, significantly ($\chi^2 = 4.41$; d.f. = 1; $p = 0.04$) more patients had been using medication prior to intake at our outpatient clinic (51.2 vs. 30.4%).

Phase 1 (Weeks 0–8)

By week 8, sixteen (36.4%) of the randomized pharmacotherapy patients ($n = 44$) achieved a reduction of more than 30%. Eleven of the 59 randomized patients in the psychotherapy group (18.6%) achieved a reduction of more than 30%. This difference was significant ($\chi^2 = 4.09$; d.f. = 1; $p = 0.043$). In the analyses of the mean severity scores we found that, by week 8, the AD group was significantly better off than the PDT group on the HAM-D and the SCL-D depression subscale (both in the per protocol and observed cases samples) (table 2). The other assessments for more general clinical functioning, i.e. CGI and Euro-QOL, did not show any significant improvement.

The patients with a reduction of more than 30% continued with the same monotherapy. All nonresponsive patients were offered the option of moving on to the combination therapy. Not all nonresponders accepted the additional therapy. Of the 29 nonresponsive patients in the PDT condition, 17 (58.6%) started with the additional therapy. Twelve of the 18 patients (66.7%) in the AD condition did so. The remaining patients continued monotherapy as scheduled. The percentages for the acceptance of additional therapy proved (with χ^2 testing) to be about the same in both groups.

Attrition Rates

By 8 weeks, no significant differences in attrition rates were found (32.2% ($n = 19$) in the allotted psychotherapy

Table 2. Mean scores for the four outcome measures in the two study samples, with between-group test results, controlling for baseline differences (ANCOVA)

| | Psychotherapy | | | Pharmacotherapy | | | Total | | | F | p |
|------------------------------|---------------|-------|----|-----------------|-------|----|-------|-------|-----|--------|--------------|
| | mean | SD | n | mean | SD | n | mean | SD | n | | |
| <i>Per protocol sample</i> | | | | | | | | | | | |
| HAM-D | | | | | | | | | | | |
| Week 0 | 20.39 | 3.78 | 59 | 19.82 | 3.68 | 44 | 20.15 | 3.73 | 103 | 0.376 | 0.541 |
| Week 8 | 18.39 | 6.51 | 59 | 15.59 | 6.45 | 44 | 17.19 | 6.60 | 103 | 4.398 | 0.039 |
| Week 16 | 15.83 | 7.41 | 59 | 16.02 | 6.93 | 44 | 15.91 | 7.17 | 103 | 0.066 | 0.797 |
| Week 24 | 13.34 | 8.08 | 59 | 16.07 | 7.58 | 44 | 14.50 | 7.95 | 103 | 3.572 | 0.062 |
| CGI-S | | | | | | | | | | | |
| Week 0 | 4.42 | 0.74 | 55 | 4.14 | 0.74 | 43 | 4.30 | 0.75 | 98 | 2.667 | 0.106 |
| Week 8 | 3.60 | 1.07 | 57 | 3.32 | 0.91 | 44 | 3.48 | 1.01 | 101 | 1.822 | 0.180 |
| Week 16 | 3.05 | 1.25 | 57 | 3.07 | 1.00 | 44 | 3.06 | 1.14 | 101 | 0.154 | 0.696 |
| Week 24 | 2.65 | 1.34 | 57 | 3.00 | 1.33 | 44 | 2.80 | 1.34 | 101 | 2.663 | 0.106 |
| CGI-I | | | | | | | | | | | |
| Week 0 | | | | | | | | | | | |
| Week 8 | 3.25 | 0.91 | 57 | 3.05 | 0.94 | 42 | 3.16 | 0.92 | 99 | 1.576 | 0.212 |
| Week 16 | 2.91 | 1.15 | 57 | 2.69 | 0.84 | 42 | 2.82 | 1.03 | 99 | 1.928 | 0.168 |
| Week 24 | 2.63 | 1.17 | 57 | 2.71 | 1.15 | 42 | 2.67 | 1.16 | 99 | 0.172 | 0.680 |
| SCL-D | | | | | | | | | | | |
| Week 0 | 51.80 | 9.96 | 56 | 51.53 | 11.59 | 38 | 51.69 | 10.59 | 94 | 0.002 | 0.961 |
| Week 8 | 46.64 | 12.92 | 58 | 41.88 | 12.62 | 42 | 44.64 | 12.95 | 100 | 11.410 | 0.001 |
| Week 16 | 41.22 | 14.25 | 58 | 39.84 | 13.28 | 43 | 40.63 | 13.79 | 101 | 1.110 | 0.295 |
| Week 24 | 37.24 | 14.74 | 58 | 39.60 | 13.70 | 43 | 38.25 | 14.29 | 101 | 0.288 | 0.593 |
| EuroQOL | | | | | | | | | | | |
| Week 0 | 5.18 | 1.42 | 45 | 4.87 | 1.55 | 30 | 5.05 | 1.47 | 75 | 0.518 | 0.474 |
| Week 8 | 5.44 | 1.50 | 55 | 5.70 | 1.74 | 40 | 5.55 | 1.60 | 95 | 0.434 | 0.512 |
| Week 16 | 5.95 | 1.65 | 55 | 5.59 | 1.82 | 41 | 5.79 | 1.72 | 96 | 0.606 | 0.439 |
| Week 24 | 6.36 | 1.66 | 55 | 5.33 | 2.17 | 42 | 5.92 | 1.96 | 97 | 8.469 | 0.005 |
| <i>Observed cases sample</i> | | | | | | | | | | | |
| HAM-D | | | | | | | | | | | |
| Week 0 | 20.33 | 3.87 | 59 | 19.82 | 3.73 | 44 | 20.15 | 3.73 | 103 | 0.376 | 0.541 |
| Week 8 | 18.04 | 6.98 | 48 | 14.56 | 6.07 | 39 | 16.48 | 6.78 | 87 | 4.450 | 0.038 |
| Week 16 | 12.89 | 7.16 | 37 | 14.97 | 7.06 | 30 | 13.82 | 7.14 | 67 | 1.544 | 0.219 |
| Week 24 | 9.84 | 6.81 | 37 | 15.45 | 8.05 | 31 | 12.40 | 7.86 | 68 | 11.498 | 0.001 |
| CGI-S | | | | | | | | | | | |
| Week 0 | 4.42 | 0.74 | 55 | 4.14 | 0.74 | 43 | 4.30 | 0.75 | 98 | 2.667 | 0.106 |
| Week 8 | 3.55 | 1.04 | 42 | 3.08 | 0.84 | 26 | 3.37 | 0.99 | 68 | 2.354 | 0.130 |
| Week 16 | 2.69 | 1.17 | 36 | 2.74 | 0.99 | 19 | 2.71 | 1.10 | 55 | 0.052 | 0.821 |
| Week 24 | 2.19 | 1.11 | 31 | 2.95 | 1.54 | 19 | 2.48 | 1.33 | 50 | 4.330 | 0.043 |
| CGI-I | | | | | | | | | | | |
| Week 0 | | | | | | | | | | | |
| Week 8 | 3.24 | 0.91 | 42 | 3.00 | 1.06 | 26 | 3.15 | 0.97 | 68 | 0.664 | 0.418 |
| Week 16 | 2.75 | 1.25 | 36 | 2.42 | 0.77 | 19 | 2.64 | 1.11 | 55 | 1.707 | 0.197 |
| Week 24 | 2.20 | 1.06 | 30 | 2.63 | 1.30 | 19 | 2.37 | 1.17 | 49 | 1.647 | 0.206 |
| SCL-D | | | | | | | | | | | |
| Week 0 | 51.80 | 9.96 | 56 | 51.53 | 11.59 | 38 | 51.69 | 10.59 | 94 | 0.002 | 0.961 |
| Week 8 | 43.28 | 12.37 | 39 | 39.66 | 11.96 | 32 | 41.65 | 12.23 | 71 | 6.629 | 0.012 |
| Week 16 | 35.55 | 14.24 | 31 | 37.79 | 11.50 | 28 | 36.61 | 12.95 | 59 | 0.310 | 0.580 |
| Week 24 | 31.27 | 12.14 | 30 | 38.12 | 13.47 | 26 | 34.45 | 13.11 | 56 | 3.648 | 0.062 |
| EuroQOL | | | | | | | | | | | |
| Week 0 | 5.18 | 1.42 | 45 | 4.87 | 1.55 | 30 | 5.05 | 1.47 | 75 | 0.518 | 0.474 |
| Week 8 | 5.58 | 1.58 | 40 | 5.79 | 1.87 | 28 | 5.66 | 1.70 | 68 | 0.010 | 0.922 |
| Week 16 | 6.45 | 1.67 | 31 | 5.48 | 1.72 | 27 | 6.00 | 1.75 | 58 | 4.832 | 0.034 |
| Week 24 | 6.80 | 1.57 | 35 | 5.39 | 2.41 | 23 | 6.24 | 2.05 | 58 | 13.491 | 0.001 |

Italics = $p < 0.1$; bold = $p < 0.05$.

condition and 22.7% ($n = 10$) in the allotted pharmacotherapy condition). Between weeks 8 and 24, one patient in the PDT group dropped out of therapy at week 12 and 4 dropped out at week 16 (5 patients in total). In the AD group, 4 patients terminated their treatment at week 12 and 2 patients did so at week 16 (6 patients in total). These percentages (12% in PDT and 18% in AD) were not significantly different. It can therefore be seen that drop-out mainly occurred in the first phase. Over the total research period, 40 out of 103 patients (38.7%) dropped out from the treatment groups taken together.

Overall Efficacy of the Sequential Treatment Algorithms

Table 2 presents the efficacy results during the total treatment period expressed as mean scores in the per protocol sample and the observed cases sample (between-group differences were tested using ANCOVA to check for baseline differences).

By week 8, the AD group was better off than the PDT group. However, after week 8, the pattern of results was reversed. By week 16, the two groups had about the same scores in almost all respects, with the exception of quality of life: the PDT group had significantly higher quality of life scores. The patients who started with PDT in the per protocol sample had better results at the end of treatment than those who started with AD (according to the SCL-D and the EuroQOL). Furthermore, a trend was found with respect to the HAM-D. In the observed cases sample, all but one of the four measures significantly favored patients who started with PDT. There was a trend with respect to the SCL-D.

We used a GLM repeated measures analysis to test the influence of the independent variables – time, initial strategy, the additional treatment, and the interaction of initial strategy and the additional treatment – on the severity of symptoms during the treatment period (the dependent variables in the GLM analysis were the scores for HAM-D, CGI, SCL and EuroQOL at T0, T8, T16 and T24). Table 3 sets out the statistical parameters (the Greenhouse-Geisser F and p) for the independent variables in the analysis.

In the per protocol and observed cases samples, the sample time and initial strategy had a significant influence on the decline of severity. Symptom severity was reduced over the research period. At the end of treatment, the PDT-first strategy had produced significantly better results (using almost all measures) than the AD-first strategy.

Additional treatment after week 8 resulted in a greater reduction of the HAM-D scores than no additional treat-

ment in both samples. In the per protocol sample, additional treatment also produced better results as reported by the patients and as assessed by the therapists.

The interaction of initial strategy and additional treatment was only significant in the per protocol sample for the CGI measures. The power for testing time (as a factor), initial strategy and additional treatment factors varied from 0.70 to 0.99. The power for testing the interaction variable was too low in almost all cases (varying from 0.06 to 0.5), except in the cases of the significant interactions in the per protocol sample: power for testing CGI-S 0.93, and 0.63 for testing CGI-I.

To illustrate the slopes in the four groups, online suppl. fig. 1 (www.karger.com/doi/10.1159/000341177) shows the mean scores on HAM-D for the four groups during the treatment (from the per protocol samples).

Almost all the measures showed the same pattern. In the beginning, patients using AD improved more, but PDT led to better results in the end.

Secondary Analyses

In the analyses above, we allocated all the patients to four subgroups: ADT or PDT patients with or without addition. Another approach to making subgroups in this complex study is to divide all the patients into three subsamples: responders (without addition), nonresponders with addition and nonresponders without addition. We used GLM to test the possible differences in outcome between the two initial strategies (AD or PDT) in these three subsamples. Because of the smaller sample sizes, we also state the observed power here.

In the secondary GLM subgroup analyses (of the HAM-D scores at T0, T8, T16 and T24) for responders only, the interaction effect was a trend ($F = 2.46$; $p = 0.079$; observed power = 0.54). The AD responders did not improve significantly any further between weeks 8 and 24 (mean T0: 19.21; mean T8: 9.95; mean T16: 13.11; mean T24: 12.95). This contrasted with the PDT responders (mean T0: 18.31; mean T8: 9.46; mean T16: 9.31; mean T24: 6.77).

In similar secondary GLM subgroup analyses of the group of nonresponders who refused additional therapy, we also found an interaction effect that was a trend ($F = 2.37$; $p = 0.10$; observed power = 0.46). The AD nonresponders who refused additional PDT did not improve significantly between weeks 8 and 24 (mean T0: 21.00; mean T8: 20.92; mean T16: 20.58; mean T24: 21.75). This contrasted with the nonresponsive PDT patients who refused additional AD. There was a trend of improvement between week 8 and week 24 (mean T0: 20.81; mean T8: 20.46; mean T16: 19.35; mean T24: 18.12).

Table 3. Influence of time, intervention, addition, interaction intervention and addition on symptoms during treatment

| Independent variables | Dependent variables | | | | | | | | | |
|-------------------------|---------------------|--------------|-------|--------------|-------|--------------|-------|--------------|---------|--------------|
| | HAM-D | | SCL-D | | CGI-S | | CGI-I | | EuroQOL | |
| | F | p | F | p | F | p | F | p | F | p |
| Per protocol sample | | | | | | | | | | |
| Time | 20.29 | 0.000 | 23.55 | 0.000 | 39.65 | 0.000 | 13.78 | 0.000 | 3.90 | 0.014 |
| Intervention AD or PDT | 5.61 | 0.002 | 4.02 | 0.016 | 7.39 | 0.000 | 4.00 | 0.020 | 3.25 | 0.030 |
| Addition | 10.16 | 0.000 | 3.72 | 0.021 | 2.10 | 0.115 | 6.11 | 0.003 | 1.48 | 0.225 |
| Intervention * addition | 0.86 | 0.449 | 0.80 | 0.464 | 5.36 | 0.003 | 3.37 | 0.037 | 0.89 | 0.434 |
| Observed cases sample | | | | | | | | | | |
| Time | 19.89 | 0.000 | 19.74 | 0.000 | 11.23 | 0.000 | 2.47 | 0.096 | 4.81 | 0.008 |
| Intervention AD or PDT | 5.46 | 0.003 | 2.12 | 0.111 | 10.48 | 0.000 | 3.90 | 0.028 | 4.14 | 0.015 |
| Addition | 10.50 | 0.000 | 1.83 | 0.156 | 1.84 | 0.157 | 0.12 | 0.874 | 1.05 | 0.367 |
| Intervention * addition | 0.05 | 0.970 | 0.05 | 0.976 | 2.02 | 0.130 | 0.46 | 0.621 | 1.20 | 0.312 |

Italics = $p < 0.1$; bold = $p < 0.05$.

In similar secondary GLM subgroup analyses of the nonresponders who accepted additional therapy, there was a trend indicating an interaction effect ($F = 2.93$; $p = 0.063$; observed power = 0.54). The AD nonresponders who accepted additional PDT had improved significantly less between weeks 8 and 24 (mean T0: 20.17; mean T8: 20.08; mean T16: 17.00; mean T24: 15.75) than the PDT nonresponders who accepted additional AD (mean T0: 21.53; mean T8: 22.35; mean T16: 15.71; mean T24: 10.94).

Discussion

Stepped care strategies seem clinically logical, but about 40% of the patients declined the offer of additional therapy in this study, despite the limited effect of monotreatment. The acceptance rate was similar in both conditions. Given the widespread support for and implementation of stepped care and sequential treatment strategies [13–15], this was a rather unexpected finding. In the STAR*D trial, psychotherapy (cognitive therapy) as a sequential step also proved difficult to implement after unsuccessful AD treatment [27, 60]. However, some clear obstacles reported in the STAR*D trial, such as travelling to a different department and no payment by insurance companies, were absent from our sample.

As in STAR*D, the decision to proceed with combined therapy in our study was based on the independent assessment of HAM-D scores. However, the HAM-D does not differentiate between core depression symptoms –

such as mood, anhedonia or suicidal thoughts – and accessory symptoms like lack of appetite or sleeping problems [61–64]. Nor does it measure patients' own evaluations of the relative importance of symptoms, which may be a more decisive factor in the decision to accept a new therapy option than symptom change only.

A total of 38% of all patients included at the outset of the study dropped out, mainly in the first 8 weeks. Pharmacotherapy in depression has often been associated with high drop-out rates varying from 30 to 68% [65, 66], especially during the first month of treatment.

Reported psychotherapy drop-out rates in depression vary from 10 to 50% [67–70]. Settings similar to ours also found drop-out rates of around 40% [9, 71]. Consequently, we do not assume that drop-out is caused by the psychodynamic feature of the psychotherapy.

A study by Warden et al. [72] indicated that the initial intent of the patient with respect to continuing treatment is more relevant for drop-out than perceived side effects or a lack of efficacy during treatment. Discussing intent with patients at risk of drop-out before the start of therapy could therefore enhance adherence, alongside telephone support [66] and motivational interviewing [73].

The main issue addressed by this study was the efficacy of sequential strategies. Overall, the group receiving PDT from the outset is better off at the end of the acute phase of treatment. The AD strategy produced better results in the first 8 weeks (significantly lower HAM-D scores and more responders). However, from week 16 onwards, the pattern of results was reversed and, at week 24,

the PDT group overtook the original AD group in most of the assessments, including quality of life scores.

A partial explanation of the fact that the PDT sequential strategy produces better results emerges from the findings from the secondary analyses: the PDT patients who refused pharmacotherapy also remitted without ADs and they were better off in relative terms than the AD patients who refused additional psychotherapy. Another – additional – explanation is that pharmacotherapy responders lost their gain of the first 8 weeks, as opposed to the PDT responders who enhanced their gain (a finding that emerged from the secondary analyses). Secondary analyses indicated that, with the CGI-I, clinicians tended to overestimate the actual result of pharmacotherapy compared to patient reports. It may be advisable to use more specific instruments than the CGI, such as a short form of the HAM-D [74], which can be easily administered during pharmacotherapy consultations.

Additional psychotherapy or pharmacotherapy after unsuccessful monotreatment produced significantly better results than no additional therapy. This result is comparable with those of Frank et al. [16] and the STAR*D study [27]. Nevertheless, because of the quasi-experimental design from week 8 onwards in this study, we do not know the precise reasons for the better results of the additional therapy approach. It is possible that the preference for addition affected factors such as hope and/or positive expectations, with a positive impact on outcome [75].

There are several factors that may have affected the validity of this study and that should be addressed. The study population was restricted to outpatients with mild to moderate depressive episodes. We did not take into account the influence of personality factors or attitude towards treatment options and these may be associated with both the acceptability and efficacy of treatment strategies [76]. Furthermore, we did not take into account subtypes of depression [77–79] and the decision to change therapy was based solely on insufficient improvement based on the HAM-D. However, treatment resistance may also be related to an inadequate approach to different subtypes of depression. As Bech [80] pointed out, primary depression and secondary depression associated with anxiety and pursuant to childhood trauma or in response to separation stress may require specific treatment options.

Finally, patients were only offered two options for additional therapy (PDT or AD). They did not have the option of other AD treatments or different forms of psychotherapy, combined therapy from the outset, psychosocial support or long-term psychotherapy, or augmentation of dose [81].

On the other hand, there were also enough strengths. At week 8, patients were not randomized at that point but offered a choice. Despite the complexity of this quasi-experimental design, we see it as a strength because it involves a choice that approximates the real world and enhances the external validity of the study. The fact that the data were from multiple sources (independent observers, patients and therapists) is also a strength, as was our implementation of the sequential strategy.

This study shows that patients receiving psychotherapy from the outset were, compared to those receiving pharmacotherapy, better off by week 24, when treatment ended. In both groups, proceeding to combined therapy after initial nonresponse appeared to be a beneficial strategy after early nonresponse to monotreatment.

There was a trend in which the patients who initially responded to pharmacotherapy failed to improve any further and patients who did respond and who receive psychotherapy continued to improve throughout the treatment.

Finally, in order to investigate the usefulness of sequential and stepped care strategies, complex and, from a scientific point of view, suboptimal designs have to be used.

Our study indicates that such studies are possible and could generate new data about the effectiveness of sequential strategies that are frequently used in day-to-day clinical practice.

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References

- 1 Casacalenda N, Perry JC, Looer K: Remission in major depressive disorder: a comparison of pharmacotherapy, psychotherapy and control conditions. *Am J Psychiatry* 2002;159:1354–1360.
- 2 Cuijpers P, van Straten A, Andersson G, van Oppen P: Psychotherapy for depression in adults: a meta-analysis of comparative outcome studies. *J Consult Clin Psychol* 2008; 76:909–922.
- 3 Cuijpers P, van Straten A, van Oppen P, Andersson G: Are psychological and pharmacological interventions equally effective in the treatment of adult depressive disorders? A meta-analysis of comparative studies. *J Clin Psychiatry* 2008;69:1675–1685.
- 4 Hollon SD, Jarrett RB, Nierenberg AA, Thase ME, Trivedi M, Rush AJ: Psychotherapy and medication in the treatment of adult and geriatric depression: which monotherapy or combined treatment? *J Clin Psychol* 2005;66:455–468.

- 5 de Maat SM, Dekker J, Schoevers RA, de Jonghe F: Relative efficacy of psychotherapy and combined therapy in the treatment of depression: a meta-analysis. *Eur Psychiatry* 2007;22:1–8.
- 6 Cuijpers P, Dekker J, Hollon SD, Andersson G: Adding psychotherapy to pharmacotherapy in the treatment of depressive disorders in adults: a meta-analysis. *J Clin Psychiatry* 2009;70:1219–1229.
- 7 de Jonghe F, Kool S, van Aalst G, Dekker J, Peen J: Combining psychotherapy and antidepressants in the treatment of depression. *J Affect Disord* 2001;64:217–229.
- 8 Keller MB, McCullough JP, Klein DN, Arnow B, Dunner DL, Gelenberg AJ, Markowitz JC, Nemeroff CB, Russell JM, Thase ME, Trivedi MH, Zajecka J: A comparison of nefazodone, the cognitive behavioral-analysis system of psychotherapy, and their combination for the treatment of chronic depression. *N Engl J Med* 2000;342:1462–1470.
- 9 de Jonghe F, Hendriksen M, van Aalst G, Kool S, Peen J: Psychotherapy alone and combined with pharmacotherapy in the treatment of depression. *Br J Psychiatry* 2004;185:37–45.
- 10 de Maat S, Dekker J, Schoevers R, de Jonghe F: Relative efficacy of psychotherapy and combined therapy in the treatment of depression: a meta-analysis. *Eur Psychiatry* 2007;22:108.
- 11 de Maat S, Dekker J, Schoevers R, van Aalst G, Gijbbers-van Wijk C, Hendriksen M, Kool S, Peen J, Van R, de Jonghe F: Short psychodynamic supportive psychotherapy, antidepressants, and their combination in the treatment of major depression: a mega-analysis based on three randomized clinical trials. *Depress Anxiety* 2008;25:565–574.
- 12 Blom MBJ: *Combination Treatment for Depressed Outpatients: Efficacy and Prediction of Outcome*. Amsterdam, Free University of Amsterdam, 2008.
- 13 Segal Z, Vincent P, Levitt A: Efficacy of combined, sequential and crossover psychotherapy and pharmacotherapy improving outcomes in depression. *J Psychiatry Neurosci* 2002;18:1–19.
- 14 Fava M, Ruini C, Rafanelli C: Sequential treatment of mood and anxiety disorders. *J Clin Psychiatry* 2005;66:1392–1400.
- 15 Fava A, Tomba E: New modalities of assessment and treatment planning in depression. The sequential approach. *CNS Drugs* 2010;24:453–465.
- 16 Frank E, Grochocinski VJ, Spanier CA, Buysse DJ, Cherry CR, Houck PR: Interpersonal psychotherapy and antidepressant medication: evaluation of a sequential treatment strategy in women with recurrent major depression. *J Clin Psychiatry* 2000;61:51–57.
- 17 Fava GA, Grandi S, Zielezny M, Canestrari R, Morphy MA: Cognitive behavioral treatment of residual symptoms in primary major depressive disorders. *Am J Psychiatry* 1994;151:1295–1299.
- 18 Fava GA, Grandi S, Zielezny M, Rafanelli C, Canestrari R: Four year outcome for cognitive behavioral treatment of residual symptoms in major depression. *Am J Psychiatry* 1996;153:1443–1445.
- 19 Fava GA, Rafanelli C, Grandi S, Canestrari R, Morphy MA: Six-year outcome for cognitive behavioral treatment of residual symptoms in major depression. *Am J Psychiatry* 1998;155:1443–1445.
- 20 Paykel ES, Scott J, Cornwal PL, Abbot R, Crane C, Pope M, Johnson AL: Duration of relapse prevention after cognitive therapy in residual depression: follow-up controlled trial. *Br J Psychiatry* 2005;35:59–68.
- 21 Teasdale JD, Segal ZV, Williams JMG, Ridgeway VA, Soulsby JM, Lou MA: Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *J Consult Clin Psychol* 2000;68:615–623.
- 22 Perlis RH, Nierenberg AA, Alpert JE, Pava J, Matthews JD, Buchin J, Sickinger AH, Fava M: Effects of adding cognitive therapy to fluoxetine dose increase on risk of relapse and residual depressive symptoms in continuation treatment of major depressive disorder. *J Clin Psychopharmacol* 2002;22:474–480.
- 23 Petersen T, Harly R, Papakostas G, Montoya HD, Fava M, Alpert JE: Continuation cognitive behavioral therapy maintains attributional style improvement in depressed patients responding acutely to fluoxetine. *Psychol Med* 2004;34:555–561.
- 24 Ma SH, Teasdale JD: Mindfulness-based cognitive therapy. *J Consult Clin Psychol* 2004;72:31–40.
- 25 Bockting CLH, Schene AH, Spinhoven P, Koeter MW, Wouters LF, Huyser J, Kamphuis JH: Preventing relapse/recurrence in recurrent depression with cognitive therapy: a randomized controlled trial. *J Consult Clin Psychol* 2005;73:647–657.
- 26 Kuyken W, Byford S, Taylor RS, Watkins E, Hoden E, White K, Barrett B, Byng R, Evans A, Mullan E, Teasdale JD: Mindfulness-based cognitive therapy to prevent relapse in recurrent depression. *J Consult Clin Psychol* 2008;76:966–978.
- 27 Thase ME, Friedman ES, Biggs MM, Wisniewski SR, Trivedi MH, Luther JF, Fava W, Nierenberg AA, McGrath PJ, Warden D, Niederehe G, Hollon SD, Rush AJ: Cognitive therapy versus medication in augmentation and switch strategies as second-step treatments: a STAR*D report. *Am J Psychiatry* 2007;164:739–752.
- 28 Leichsenring F, Rabung S, Leibing E: The efficacy of short-term psychodynamic psychotherapy in specific psychiatric disorders: a meta-analysis. *Arch Gen Psychiatry* 2004;61:1208–1216.
- 29 Driessen E, Cuijpers P, de Maat SCM, Abbass A, de Jonghe F, Dekker JM: The efficacy of short-term psychodynamic psychotherapy for depression: a meta-analysis. *Clin Psychol Rev* 2010;30:25–36.
- 30 Abbass A, Driessen E: The efficacy of short-term psychodynamic psychotherapy for depression: a summary of recent findings (letter to the editor). *Acta Psychiatr Scand* 2010;121:398–399.
- 31 Blagys M, Hilsenroth M: Distinctive features of short-term psychodynamic-interpersonal psychotherapy: an empirical review of the comparative psychotherapy process literature. *Clin Psychol Sci Pract* 2000;7:167–188.
- 32 Leichsenring F: Comparative effects of short-term psychodynamic psychotherapy and cognitive-behavioral therapy in depression: a meta-analytic approach. *Clin Psychol Rev* 2001;21:401–419.
- 33 Maina G, Rosso G, Crespi C, Bogetto F: Combined brief dynamic therapy and pharmacotherapy in the treatment of major depressive disorder: a pilot study. *Psychother Psychosom* 2007;76:298–305.
- 34 Maina G, Rosso G, Bogetto F: Brief dynamic therapy combined with pharmacotherapy in the treatment of major depressive disorder: long-term results. *J Affect Disord* 2009;114:200–207.
- 35 Salminen J, Karisson H, Hietala J, Kajander J, Aalto S, Marikkula J, Rasi-Hakala H, Toikka T: Short-term psychodynamic psychotherapy and fluoxetine in major depressive disorder: a randomized comparative study. *Psychother Psychosom* 2008;77:351–357.
- 36 Dekker JJM, Koelen JA, Van H, Schoevers RA, Peen J, Hendriksen M, Kool S, van Aalst G, de Jonghe F: Speed of action: the relative efficacy of short psychodynamic supportive psychotherapy and pharmacotherapy in the first 8 weeks of a treatment. *J Affect Disord* 2008;109:183–188.
- 37 Hamilton M: Development of a rating scale for primary depressive illness. *Br J Soc Clin Psychol* 1967;6:278–296.
- 38 Van HL, Dekker J, Koelen JA, Kool S, van Aalst G, Hendriksen M, Peen J, Schoevers RA: Patient preference compared with random allocation in short-term psychodynamic supportive psychotherapy with indicated addition of pharmacotherapy for depression. *Psychother Res* 2009;19:205–212.
- 39 Fava M, Davidson KG: Definition and epidemiology of treatment-resistant depression. *Psychiatr Clin North Am* 1996;19:179–200.
- 40 Fava M: Diagnosis and definition of treatment-resistant depression. *Biol Psychiatry* 2003;53:649–659.
- 41 Fava M, Uebelacker LA, Alpert JE, Nierenberg AA, Pava JA, Rosenbaum JF: Major depressive subtypes and treatment response. *Biol Psychiatry* 1997;42:568–576.
- 42 Van Henricus L, Dekker J, Peen J, van Aalst G, Schoevers RA: Identifying patients at risk for complete nonresponse in the outpatients treatment of depression. *Psychother Psychosom* 2008;77:358–364.
- 43 Dekker J, Molenaar PJ, Kool S, van Aalst G, Peen J, de Jonghe F: Dose effect relations in time-limited combined psycho-pharmacological treatment for depression. *Psychol Med* 2005;35:47–58.

- 44 Hendriksen M, Van HL, Schoevers RA, de Jonghe F, Gijbbers-van Wijk CM, Peen J, Dekker JJ: Therapist judgment of defense styles and therapeutic technique related to outcome in psychodynamic psychotherapy of depression. *Psychother Psychosom* 2011; 80:377-379.
- 45 Kool S, Dekker J, Duijsens IJ, de Jonghe F, Puite B: Changes in personality pathology after pharmacotherapy and combined therapy for depressed patients. *J Pers Disord* 2003;17:60-72.
- 46 Kool S, Dekker J, Duijsens IJ, de Jonghe F, Puite B: Efficacy of combined therapy and pharmacotherapy with depressed patients with or without personality disorders. *Harv Rev Psychiatry* 2003;11:133-141.
- 47 Dekker J, Koelen JA, Van HL, Schoevers RA, Peen J, Hendriksen M, Kool S, van Aalst G, de Jonghe F: Speed of action: the relative efficacy of short psychodynamic supportive psychotherapy and pharmacotherapy in the first 8 weeks of a treatment algorithm for depression. *J Affect Disord* 2008;109:183-188.
- 48 de Jonghe F, Hendriksen M, van Aalst G, Kool S, Peen J, Van R, van den Eijnden E, Dekker J: Psychotherapy alone and combined with pharmacotherapy in the treatment of depression. *Br J Psychiatry* 2004;185: 37-45.
- 49 de Maat S, Dekker J, Schoevers R, van Aalst G, de Jonghe F, Gijbbers-van Wijk C, Hendriksen M, Kool S, Peen J, Van R: Short psychodynamic supportive psychotherapy, antidepressants, and their combination in the treatment of major depression: a meta-analysis based on three randomized clinical trials. *Depress Anxiety* 2008;25:565-574.
- 50 Molenaar, P, Dekker J, Schouws S, Peen J, Schoevers R: Recovery of social functioning during the treatment of depression. *Depress Anxiety* 2006;23:1-10.
- 51 Van HL, Schoevers RA, Kool S, Hendriksen M, Peen J, Dekker J: Does early response predict outcome in psychotherapy and combined therapy for major depression? *J Affect Disord* 2008;105:261-265.
- 52 Van HL, Dekker J, Koelen J, Kool S, van Aalst G, Hendriksen M, Peen J, Schoevers R: Patient preference compared with random allocation in short-term psychodynamic supportive psychotherapy with indicated addition of pharmacotherapy for depression. *Psychother Res* 2009;19:205-212.
- 53 de Jonghe F, Rijniere P, Janssen R: Psychoanalytic supportive psychotherapy. *J Am Med Assoc* 1994;271:421-446.
- 54 de Jonghe F: Kort en Krachtig (Brief and Potent). Short Psychodynamic Supportive Psychotherapy. Amsterdam, Benecke, 2005.
- 55 de Jonghe F, Dekker J, Kwakman H, Huyser J: Sensitivity of the depression and anxiety list (DAL) to early response in patients with major depression treated with antidepressants. *Int J Methods Psychiatr Res* 1996;5:1-5.
- 56 Huyser J, de Jonghe F, Jonkers F, Schalken HFA: The Manual for the Diagnosis of Major Depression (MDMD): description and reliability. *Int J Methods Psychiatr Res* 1996;6: 1-4.
- 57 Guy W: ECDEU Assessment Manual for Psychopharmacology (revised). US Department of Health, Education and Welfare Pub. Rockville, National Institute of Mental Health, DHEW Publ No ADM 76-338, 1976.
- 58 Arrindell WA, Ettema JMM: SCL-90. Handleiding bij een multidimensionele psychopathologie-indicator. Lisse, Swets and Zeitlinger, 1986.
- 59 Tuynman-Qua H, de Jonghe F: Quality of Life Depressie Schaal. Houten, Ibero, 1992.
- 60 Wisniewski SR, Fava M, Trivedi MH, Thase ME, Warden D, Niederehe G, Friedman ES, Biggs MM, Sackeim HA, Shores-Wilson K, McGrath PJ, Lavori PW, Miyahar AS, Rush AJ: Acceptability of second-step treatment of depressed outpatients: a STAR*D report. *Am J Psychiatry* 2007;164:753-760.
- 61 Pigott HE, Leventhal AM, Alter GS, Boren JJ: Efficacy and effectiveness of antidepressants: current status of research. *Psychother Psychosom* 2010;79:267-279.
- 62 Hoyer J, Höfler M: Do pharmacotherapy and/or psychotherapy work in depression? It depends! *Psychother Psychosom* 2011;80: 245.
- 63 Huf W, Kalcher K, Kasper S: Widespread methodological problems limit validity of meta-analytic results. *Psychother Psychosom* 2011;80:246.
- 64 Pigott HE, Alter GS: In response to 'Do pharmacotherapy and/or psychotherapy work in depression? It depends!' and 'Widespread methodological problems limit validity of meta-analytic results'. *Psychother Psychosom* 2011;80:247-248.
- 65 Linham R, Scott J: Treatment non-adherence in affective disorders. *Acta Psychiatr Scand* 2002;105:164-172.
- 66 Demyttenaere K: Risk factors and predictors of compliance in depression. *Eur Neuropsychopharmacol* 2003;13(suppl 3):S69-S75.
- 67 Simons AD, Levine JL, Lustman PJ, Murphy GE: Patient attrition in a comparative outcome study of depression: a follow-up report. *J Affect Disord* 1984;6:163-173.
- 68 Reynolds CF, Frank E, Perel JM, Imber SD, Cornes C, Morycz RK, Mazumdar S, Miller MD, Pollock BG, Rifai AH: Combined pharmacotherapy and psychotherapy in the acute and continuation treatment of elderly patients with recurrent major depression: a preliminary report. *Am J Psychiatry* 1992; 49:1687-1692.
- 69 Christensen H, Griffiths KM, Mackinnon AJ, Brittliffe K: Online randomized controlled trial of brief and full cognitive behaviour therapy for depression. *Psychol Med* 2006;36:1737-1746.
- 70 Cahill J, Barkham M, Hardy G, Rees A, Shapiro DA, Stiles WB, Macaskill N: Outcomes of patients completing and not completing cognitive therapy for depression. *Br J Clin Psychol* 2003;42:133-143.
- 71 Blom MB, Spinhoven P, Hoffman T, Jonker K, Hoencamp E, Haffmans PM, van Dyck R: Severity and duration of depression, not personality factors, predict short term outcome in the treatment of major depression. *J Affect Disord* 2007;104:119-126.
- 72 Warden D, Trivedi MH, Wisniewski R, Lesser IM, Mitchell J, Balasubramani GK, Fava M, Shores-Wilson K, Stegman D, Rush AJ: Identifying risk for attrition during treatment for depression. *Psychother Psychosom* 2009;78:372-379.
- 73 Cheng M: New approaches for creating the therapeutic alliance: solution-focused interviewing, motivational interviewing, and the medication interest model. *Psychiatr Clin North Am* 2007;30:157-166.
- 74 Ruhé HG, Dekker JJ, Peen J, Holman R, de Jonghe F: Clinical use of the Hamilton Depression Rating Scale: is increased efficiency possible? A post hoc comparison of Hamilton Depression Rating Scale, Maier and Bech subscales, Clinical Global Impression, and Symptom Checklist-90 scores. *Compr Psychiatry* 2005;46:417-427.
- 75 Mergl R, Henkel V, Allgaier A, Kramer D, Hautzinger M, Kohlen R, Coyne J, Heger U: Are treatment preferences relevant in response to serotonergic antidepressants and cognitive-behavioral therapy in depressed primary care patients? Results from a randomized controlled trial including a patients' choice arm. *Psychother Psychosom* 2011;80:39-47.
- 76 Lacoviello BM, Alloy LB, Abramson LY, Whitehouse WG, Hogan ME: The role of cluster B and C personality disturbance in the course of depression: a prospective study. *J Pers Disord* 2007;21:371-383.
- 77 Lichtenberg P, Belmaker R: Subtyping major depressive disorder. *Psychother Psychosom* 2010;79:131-135.
- 78 Smits JAJ, Minhajuddin A, Thase ME, Jarrett RB: Outcomes of acute phase cognitive therapy in outpatients with anxious versus non-anxious depression. *Psychother Psychosom* 2012;81:153-160.
- 79 Tomba E: Nowhere patients. *Psychother Psychosom* 2012;81:69-72.
- 80 Bech P: Struggle for subtypes in primary and secondary depression and their mode-specific treatment or healing. *Psychother Psychosom* 2010;79:331-338.
- 81 Fava M, Mischoulon D, Iosifescu D, Witte J, Pencina, Flynn M, Harper L, Levy M, Rickels K, Pollack M: A double-blind, placebo-controlled study of aripiprazole adjunctive to antidepressant therapy among depressed outpatients with inadequate response to prior antidepressant therapy (ADAPT-A study). *Psychother Psychosom* 2012;81:87-97.