Efficacy of Interpersonal Psychotherapy for Depressed Adolescents

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**Background:** Psychotherapy is widely used for depressed adolescents, but evidence supporting its efficacy is sparse.

**Methods:** In a controlled, 12-week, clinical trial of Interpersonal Psychotherapy for Depressed Adolescents (IPT-A), 48 clinic-referred adolescents (aged 12-18 years) who met the criteria for DSM-III-R major depressive disorder were randomly assigned to either weekly IPT-A or clinical monitoring. Patients were seen biweekly by a “blind” independent evaluator to assess their symptoms, social functioning, and social problem-solving skills. Thirty-two of the 48 patients completed the protocol (21 IPT-A–assigned patients and 11 patients in the control group).

**Results:** Patients who received IPT-A reported a notably greater decrease in depressive symptoms and greater improvement in overall social functioning, functioning with friends, and specific problem-solving skills. In the intent-to-treat sample, 18 (75%) of 24 patients who received IPT-A compared with 11 patients (46%) in the control condition met recovery criterion (Hamilton Rating Scale for Depression score ≤6) at week 12.

**Conclusions:** These preliminary findings support the feasibility, acceptability, and efficacy of 12 weeks of IPT-A in acutely depressed adolescents in reducing depressive symptoms and improving social functioning and interpersonal problem-solving skills. Because it is a small sample consisting largely of Latino, low socioeconomic status adolescents, further studies must be conducted with other adolescent populations to confirm the generalizability of the findings.

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**Numerous clinical trials show the efficacy of drugs and psychotherapy, individually or combined, for acute or maintenance treatments with depressed adults.** Similar data for depressed adolescents are sparse. Trials of tricyclic antidepressants with adolescents have failed to demonstrate efficacy. These studies have been criticized on methodological grounds, including small sample size, diagnostic variability, comorbidity, variable dosing, and insufficient treatment time. Recently, Emslie et al demonstrated the efficacy of 8 weeks of treatment with fluoxetine, a selective serotonin reuptake inhibitor, in comparison to placebo. Fifty-six percent of the patients treated with fluoxetine showed an improvement of their condition on the Clinical Global Impressions Scale (CGI) in comparison to 33% who received placebo.

Several studies have tested the efficacy of group or individual psychotherapy for the depressed adolescents. Brent et al demonstrated the efficacy of 12 to 16 weeks of individual cognitive behavior therapy (CBT) for depressed adolescents. The recovery rates were: CBT (64.7%); systemic behavioral family therapy (37.9%); and nonsupportive therapy (39.4%). Symptom relief was more rapid in CBT according to both interviewer and patient reports. All 3 treatments showed similar reductions in suicidality and improvement in social functioning.

This article reports the results of a randomized controlled clinical trial of Interpersonal Psychotherapy for Depressed Adolescents (IPT-A) in comparison to clinical monitoring in a sample of clinic-referred depressed adolescents. An open clinical trial and 1-year follow-up provided preliminary support for the use of IPT-A with depressed adolescents. This study hypothesis was that at the end of 12 weeks of treatment, patients treated with IPT-A in comparison to the control treatment would show a notably greater de-
PATIENTS AND METHODS

PATIENTS

English-speaking patients of normal intelligence, aged 12 to 18 years, with a legal guardian who could give informed consent, and who met criteria for DSM-III-R major depressive disorder with an intake Hamilton Rating Scale for Depression (HRSD) score of 15 or more were eligible to participate. Patients who were actively suicidal; were in another treatment for the same condition; had a chronic medical illness; or met criteria for psychosis, bipolar I or II, conduct disorder, substance abuse disorder, current eating disorder, and/or obsessive-compulsive disorder were excluded.

Patients were recruited from the Child Anxiety and Depression Clinic at Babies Hospital Columbia Presbyterian Medical Center, New York, NY, and the Clinical Research Center, New York State Psychiatric Institute, New York, between 1993 and 1996. Most patients were self-referred or referred by parents or mental health professionals from school-based clinics. Seventy-nine adolescents suspected of being depressed were screened by one of us (L.M.) who conducted a clinical interview using the HRSD. Of the 57 adolescents eligible to participate, 48 agreed to randomization. Treatment was free.

A randomization schedule for the first 100 patients was constructed by drawing 100 random numbers from the uniform distribution on [0,1] using the Statistical Analysis System (SAS Inc, Cary, NC) (seed = 071430). The lowest 5 numbers within each block of 10 numbers were assigned to IPT-A; the highest 5 numbers within each block were assigned to the control condition.

TREATMENT

Interpersonal Psychotherapy for Depressed Adolescents

Interpersonal Psychotherapy for Depressed Adolescents is a brief, specified psychotherapy originally developed by Klerman et al21 for depressed adult outpatients and adapted for adolescents.22 The adaptation for adolescents (IPT-A) addresses common adolescent developmental issues, eg, separation from parents, exploration of authority in relationships to parents, development of dyadic interpersonal relationships, initial experience with the death of relative or friend, and peer pressure. In addition, a fifth problem area of single-parent families was added.22 Patients were seen weekly for 12 weeks with once weekly additional telephone contact between therapist and patient during the first 4 weeks of treatment.

Clinical Monitoring

Patients were assigned a therapist and told they would be seen monthly for 30-minute sessions, with an option for a second session within the month, to discuss their symptoms and functioning. The therapists were given a brief treatment manual instructing them to refrain from advice giving or skills training, and to use the sessions to review depressive symptoms, school attendance, assess suicidality, and just listen supportively. The therapist was available by beeper during regular clinic hours. Clinical monitoring was chosen as a comparison treatment in an effort to create an ethical wait-list condition and was modeled after a “call-me-if-you-need-me” control condition previously used in an adult IPT study.23

Patients in both treatment conditions were told that if they felt worse in between sessions that they should contact their therapist for an immediate evaluation. Patients in IPT-A could have up to 3 extra sessions during the protocol without necessitating removal from the study, while the control patients could have 1 extra session a month without being removed from the study. If therapists or independent evaluators (IEs) felt the patient needed a change in treatment, a child psychiatrist (D.M.) blind to treatment condition evaluated the patient. If the patient's depression had worsened, if he or she was suicidal and/or if functioning was deteriorating (ie, chronic school refusal), the patient was removed from the study and referred for other active treatment. Patients also were removed if they had failed to attend 3 consecutive appointments with their therapist and/or IE.

Therapist Training and Treatment Quality

The IPT-A training program was supervised by one of us (L.M.), an expert IPT-A therapist. Therapists included 2 child psychiatrists, a licensed clinical psychologist, and a masters' level psychologist with more than 10 years of previous clinical experience. All therapists participated in didactic and clinical practicum. Each therapist treated 2 depressed adolescents for 12 weeks each. Three sessions per case were randomly rated by the 2 expert IPT-A raters (M.M.W. and D.M.) using the Therapist Strategy Rating Form and the Therapy Process Rating Form, both of which were used in the National Collaborative Study for the Treatment of Depression.24

All 4 therapists were rated as competent. Patients treated during therapist training were excluded from the study sample. All the training and study therapy sessions (for both conditions) were videotaped for treatment adherence and integrity. Therapists received weekly supervision by one of us (L.M.) based on the videotapes.

RESULTS

BASELINE CHARACTERISTICS

Patients in both treatment groups did not differ on sex, mean age, ethnicity, parental education, socioeconomic status, history of suicide attempt, suicidal ideation, or baseline diagnoses (Table 1).

COMPLETION RATES AND EARLY TERMINATION

Completion of treatment was significantly higher in the IPT-A (88%) compared with the control condition (46%). Reasons for noncompletion in the control condition were worsening of symptoms and functioning as well as noncompliance (Table 2). Five patients in the control condition were removed from the study at week 2—4 for suicidality and 1 for psychotic features. The rate of attrition for the control condition was 3 patients at week 6; 3 at week 8, and 2 at week 10. Patients in IPT-A attended a mean number of 9.8 (75%)
same therapists treated patients in both the IPT-A and clinical monitoring condition.

**ASSESSMENTS**

All patients were scheduled to be seen at weeks 0, 2, 4, 6, 8, 10, and 12 by an IE who administered the research assessments of clinical status blind to the treatment being received. At week 8, the clinical status of patients in both groups were evaluated by a child psychiatrist (D.M.) blind to treatment group to determine if treatment should be terminated. The patients were asked not to tell the IE the treatment they were receiving. If a blind was inadvertently broken, the patient would be reassigned to a different IE.

The main outcomes were diagnosis, symptoms, global and social functioning, and problem-solving skills. The Diagnostic Interview Schedule for Children Version 2.3 (DISC 2.3) interview and the Schedule for Affective Disorders and Schizophrenia for School-Aged Children (K-SADS-E)26 anxiety and depression sections were administered to make a full DSM-III-R diagnosis at week 0 prior to study enrollment. The structured interviews, clinical interview note, and baseline ratings on the HRSD, Beck Depression Inventory (BDI),27 and the Children’s Global Assessment Scale (C-GAS)28 were given to an independent child psychiatrist to make a best-estimate diagnosis for each patient at baseline and termination.

Depression was assessed using both a clinician rating scale, the HRSD, and a self-report measure, the BDI. A score of 15 or greater on the BDI was used to signify a moderate to severe depression, and 9 or less is viewed as recovered from a major depressive episode. The BDI is reliable in assessing depression in adolescents.27,30 Internal consistency using this sample was excellent (α = .89). The 24-item structured HRSD, reliable in adolescents,30 was used to assess changes in depressive symptoms during the course of treatment. A score of 13 or greater was used to indicate a major depression, and a score of less than 6 was used to indicate recovered from a major depressive episode.

Global functioning was assessed using the C-GAS, a clinician-rated instrument modified from the adult GAS by Shaffer et al30 for use with children, and completed by the IEs at evaluation week and week 12 or termination. Using the CGI form, clinicians rated the patient on current severity of mental illness and current level of improvement.

Change in social functioning over the course of therapy was assessed using the Social Adjustment Scale–Self-report version (SAS-SR)31 for adolescents, a brief self-report instrument that contains 23 questions that fall into 4 major categories: school, friends, family, and dating. Patients rate themselves for the past 2 weeks and receive 5 scores, 1 for the total of all the domains, and 1 for each domain. Use with adolescents has been reported.19,32

Social problem-solving skills were assessed using the 52-item Social Problem-Solving Inventory–Revised self-report measure.31 It comprises 5 scales: positive problem orientation, negative problem orientation, rational problem solving, impulsive/careless problem-solving style, and avoidant coping style based on a model that states that social problem-solving outcome is largely determined by problem orientation and problem-solving skills.32 It has been demonstrated to have adequate reliability and validity in general3,32 and with adolescents.19,32

Suicidality, including ideation, plan, or attempt, was assessed in the K-SADS-E depression section and suicide screen section.

The K-SADS-E interviews were administered by a trained nurse clinician and audiotaped versions were co-rated by another trained interviewer to assess reliability in 12 cases. There was 82% agreement between the 2 raters for the major depressive disorder diagnosis according to the K-SADS-E. The IEs rated 13 audiotapes of each other’s clinical interviews to establish interrater reliability for the HRSD (intraclass correlation coefficient = 0.95) and C-GAS (intraclass correlation coefficient = 0.84).

**DATA ANALYSES**

The comparability of the patients in the 2 treatment groups was examined for demographics. Sex differences and ethnicity were examined using the χ² test. Mean age and parental education were analyzed using an unpaired t test. Between group differences at baseline and at week 12 or termination were calculated using unpaired t tests for outcome measures including the 52-item Social Problem-Solving Inventory–Revised and the C-GAS. Analyses were conducted for both an intent to treat sample and completer sample. The intent to treat sample included all subjects who were enrolled in treatment (N = 48). The completer analysis included all subjects who had completed the 12 week protocol (n = 32). The overall efficacy of treatment was assessed by conducting an analysis of covariance (ANCOVA) controlling for pretreatment scores when such scores were expected to affect outcomes, on all the major outcome measures by treatment condition at termination except Social Problem-Solving Inventory due to missing data on this latter form. Clinical recovery was defined as a score of 6 or less on the HRSD, and/or a score of 9 or less on the BDI. Data were analyzed for the percentage of patients who reached these cutoff scores at the point of termination using χ² analyses on an intent to treat sample. The α level was set at .05 for data analyses.

of 13 sessions including the parent session while the those in the control condition attended a mean number of 2.8 (56%) of 5 sessions. Patients in IPT-A attended a mean number of 5.8 (83%) of 7 independent evaluations in comparison to the patients in the control group who attended a mean number of 4.2 (60.0%) of 7 independent evaluations.

**TREATMENT OUTCOME**

An intent-to-treat analysis with last score carried forward was conducted with the HRSD and BDI (Table 3). No significant differences were noted in depression (HRSD and BDI) scores at week 0 between groups. An ANCOVA controlling for baseline levels of depression showed that the IPT-A group reported fewer depressive symptoms than the control group at week 12 (HRSD, P < .02; BDI, P < .05) (Table 3).

Thirty-two of 48 patients completed the protocol and were included in a completer analysis (Table 3). The ANCOVAs for the completer sample similarly demonstrated that the IPT-A group in comparison to the control group reported significantly fewer depressive symp-
CAMS and Sample Characteristics

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<th>Characteristics</th>
<th>Clinical Monitoring Group</th>
<th>IPT-A–Treated Group</th>
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<tr>
<td>Mean (SD) age, y</td>
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<td>History of suicide attempt</td>
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*Numbers may vary due to missing data. IPT-A indicates Interpersonal Psychotherapy for Depressed Adolescents. All values are expressed as percentages unless otherwise indicated.

Numbers: 1, 2, 3, 4, 5, 6; BDI, Beck Depression Inventory; SAS-SR, Social Adjustment Scale–Self-report version; and ellipses, not applicable. Values expressed as mean (SD).

Reasons for Early Termination

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<td>21 (88)†</td>
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*Numbers may vary due to missing data. IPT-A indicates Interpersonal Psychotherapy for Depressed Adolescents. All values are expressed as the sample of the population under study unless otherwise indicated.

Clinical Global Impressions

The intent-to-treat sample was missing CGI data at week 12 on 8 control patients. No significant group differences were noted in baseline CGI scores. At week 12, an ANCOVA shows that those patients in the IPT-A group were rated as significantly less depressed (mean = 2.4, SD = 1.6) than those in the control group (mean = 4.2, SD = 1.1) (F1,37 = 18.8, P < .001) by the treating clinicians. Significantly more IPT-A patients were reported as improved than control patients (χ² = 16.7, P < .001, Fisher exact test, 2 tailed). Patients were categorized as improved if they were rated as very much, much, or minimally improved; no change; or as worse if they were rated as minimally, much, or very much worse. Specifically, the conditions of 20 (95.5%) of the 21 IPT-assigned patients were reported better compared with 7 (61.5%) of the 11 control patients; the conditions of 2 (15.4%) of the control patients were rated as the same at week 12 than baseline; and the condition of 1 (4.5%) of the control patients was rated as worse.
IPT-A–assigned patients was reported worse vs 3 (23.1 %) of the control patients.

**Social Adjustment Scale-Self-Report**

In an ANCOVA controlling for baseline scores, the IPT-A–treated patients reported significantly better functioning in comparison to control patients for their overall level of functioning ($F_{1,44} = 7.1, P = .01$), functioning with their friends ($F_{1,44} = 5.8, P = .02$), and functioning in dating relationships ($F_{1,43} = 5.9, P = .02$). No significant differences were noted between groups for the domains of school and family (Table 3).

**52-Item Social Problem-Solving Inventory—Revised**

Adolescents in the IPT-A–assigned group showed significantly better skills at week 12 on positive problem-solving orientation ($t_{12} = −2.4, P < .05$) and rational problem-solving ($t_{12} = −2.4, P < .05$). No significant group differences were noted at baseline on any subscales and no significant differences were noted between groups on the general subscales of negative-problem orientation, impulsivity/carelessness, and avoidance style. Among the subscales of the rational problem-solving scale, the IPT-A–assigned patients in comparison to control patients reported better functioning in generation of alternatives ($t_{12} = −2.8, P < .01$), and solution implementation and verification ($t_{12} = −2.9, P < .01$).

**COMMENT**

Data from the initial IPT-A–treated study show that IPT-A compared with clinical monitoring is acceptable (low rate of attrition and high rate of attendance) and efficacious for depressive symptom reduction and social functioning improvement. The attrition rates suggest that almost weekly review of symptoms and functioning is not as therapeutic as IPT-A for many depressed adolescents. According to both clinician and self-report instruments, patients who received IPT-A treatment reported a significantly greater decrease in depressive symptoms and a significantly greater improvement in social functioning overall and with friends and dating relationships, a primary focus of adolescent life. The rate of recovery on the HRSD was significantly better for those patients receiving IPT-A treatment. They also reported improvement in the ability to think of alternative solutions to problems, to try them out, and then use them adaptively. However, due to missing data, these latter analyses must be viewed as preliminary. The results must be viewed in the context of the study limitations and the most recent clinical trials with depressed adolescents.

The severity of depression and suicidality in these patients was comparable to those patients included in recent studies. In the study by Brent et al.17 the mean percentage of adolescents with a history of suicide attempt was 23.4% vs our mean rate of 27.5%. Emslie et al.23 did not report rates of suicidality. Our mean baseline C-GAS score was 52 which is not significantly different from the mean of 48 reported by Emslie et al.23 and the mean of 56.5 reported by Brent et al.17 Not all adolescent depression studies used the HRSD as an entrance criterion, but all did have baseline BDI scores allowing for baseline comparison of self-reported depression severity. Brent et al.17 report a mean (±SD) baseline BDI score of 24.2 ± 8 and Emslie et al.13 report a baseline mean (±SD) Children’s Depression Inventory/BDI of approximately 15.5 ± 11. This is consistent with our mean (±SD) baseline BDI score of 20 ± 10. Patients in all 3 studies reported high comorbidity with anxiety disorders and disruptive disorders when measured. Brent et al.17 report a remission rate of 64.7% for CBT in comparison to a rate of 75% for IPT-A–treated patients. Their remission criteria were more stringent in that they had to have an absence of major depressive disorder for 3 consecutive weeks while this study required a one time termination rating. Therefore, the rates are not totally comparable. Still, it does appear that our sample is quite comparable to the recent medication and psychosocial treatment studies11,17 for depression severity and level of functioning.

The study results must be seen in light of the following limitations and need to be considered preliminary: (1) a small sample (only 24 patients in each treatment condition), (2) substantial attrition from the control condition, and (3) the use of self-report measures of social functioning. While a significant outcome in and of itself, the attrition hampered some of the analyses because of missing data.

Another possible limitation is the nature of the control condition. The control condition had only one mandated 30-minute session per month vs the IPT-A condition having four 45-minute mandated sessions per month. The control condition could include a second monthly session if desired. There was a difference in therapist time and contact that may have translated into therapist expectations for greater patient improvement in the IPT-A condition which could bias the results. However, most outcomes were self-reports or IE reports, so the outcomes should be independent of the bias.

Much consideration went into the selection of the control condition following Rush’s guidelines30 for developing new psychosocial treatments. A wait-list or no treatment condition was deemed unethical by the institutional review board and this clinical monitoring condition had a history of use in an adult IPT study.23 At the time of the study design, there were no published studies on the efficacy of any other individual psychotherapy for depressed adolescents nor of any psychopharmacological agent, thus the choices of tested comparison therapies were few. While the condition does have its limitations, the results still demonstrate as in phase 2 drug studies, that the active treatment (IPT-A) was better than no treatment or minimal treatment (placebo) for adolescent depression.

Lastly, there is limited generalizability of the findings due to the effects of the inclusion and exclusion criteria. Patients in the study were selected on the basis of having major depression, but excluded if they had psychotic features, conduct disorder, substance abuse, or active eating disorder or obsessive-compulsive disorder. Therefore, it was a relatively “clean” sample with mostly comorbid anxiety disorders. The sample also is largely

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female and Latino and includes more late than early adolescents. Thus, the results cannot be viewed as generalizable to the larger adolescent population with major depression and other comorbid disorders (particularly substance abuse), but rather are specific to late adolescents with depression and comorbid anxiety disorders. Treatment modifications may need to be made for younger adolescents and males, although the male patients in this study were no less active participants in the IPT-A treatment than the female patients.

Our response rate in the control condition for the intent-to-treat sample (46%) is consistent with or greater than placebo response rates in other studies\(^{(39)}\) (35%, 68%\(^{(40)}\). It may be that those patients who were able to maintain themselves in the control treatment were those patients who go on to spontaneous remission. However, our attrition rate (54%) for the control condition is somewhat higher than that found in other medication studies.\(^{(21)}\) Patients in placebo medication conditions may believe they are getting active medication which could be a stronger motivator for attendance and compliance with the treatment protocol, resulting in a lower attrition rate.

No significant differences were noted between groups on the HRS-D and BDI before week 12, although the trend was in the direction of greater improvement in the IPT-A condition. While medication studies are generally shorter (approximately 8 weeks), these results are consistent with the adult studies showing that psychosocial treatment effects usually take longer to emerge.\(^{(24)}\) Close monitoring of the adolescent patients shows that the clinical symptoms can change rapidly from week to week depending on the current psychosocial stressor suggesting greater mood reactivity than in adults.

Given the strong, albeit initial findings on IPT-A in this study and in a recently completed but unpublished study in Puerto Rico (William Bernal, PhD, written communication, 1998), IPT-A deserves further study and replication. In light of recent published studies with depressed adolescents, study designs such as IPT-A vs serotonin reuptake inhibitor or CBT, or IPT-A vs IPT-A plus serotonin reuptake inhibitor are possible future designs that seem warranted.

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### REFERENCES