Psychotherapy of Adults with Comorbid Attention-Deficit/Hyperactivity Disorder and Psychoactive Substance Use Disorder

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Psychotherapy for comorbid attention-deficit/hyperactivity disorder (ADHD) and psychoactive substance use disorder (PSUD) is described. The authors suggest that relapse prevention is an appropriate initial treatment because it is well suited to manage both substance abuse and comorbid symptomatology such as impulsivity, distractibility, and avoidance associated with ADHD. Clinical vignettes describe typical interactions between patients and their therapists, highlighting opportunities for therapists to focus on overlapping symptoms. ADHD is one of the most common comorbid diagnoses with PSUD, and it is important that efficacious psychotherapies be developed to complement psychopharmacological approaches. Clinicians should consider psychotherapy as part of a multimodal treatment approach that includes medication and perhaps family therapy. Additional contributions from clinicians who have experience conducting psychotherapy with this population are needed in order to develop effective treatments.

(The Journal of Psychotherapy Practice and Research 2001; 10:179–186)

Recent findings indicate that attention-deficit/hyperactivity disorder (ADHD) is strongly associated with increased risk for substance abuse.[1,2] Still, relatively few adults who enter substance abuse treatment have been previously diagnosed with ADHD. Several factors may have contributed to this trend historically. For example, until recently ADHD was considered to be a childhood disorder that did not extend into adulthood.[3,4] This perception may have influenced clinicians to overlook ADHD as a possible explanation for adult symptomatology that resembled ADHD symptoms. However, more recent findings indicate that between 15% and 35% of adults with substance abuse problems had ADHD as children and continue to report significant symptoms of inattention and hyperactivity-impulsivity as adults.[2,5] Additionally, adulthood ADHD may have been masked by symptoms associated with psychoactive substance use disorder (PSUD). Indeed, evidence indicates that substance abuse often develops in teenagers with ADHD, and that the age of onset for PSUD in young people with ADHD averages 3 years earlier than for individuals who do not have ADHD.[6]

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In these cases, early onset of substance abuse may have overshadowed ADHD symptoms and could explain the low detection rates of ADHD in adult substance abusers.

The psychosocial difficulties that people with ADHD encounter are thought to contribute to increased vulnerability to drug and alcohol use; for example, they may use drugs or alcohol to enhance peer acceptance or to avoid painful feelings.[7] Adults with substance abuse problems and undiagnosed ADHD often report that they realized something was wrong with them throughout their lives but attributed their difficulties to the drug use. In the worst cases, these individuals create a lifestyle that accommodates to the difficulties they encounter. They may have learned to establish lives with few demands or responsibilities and resigned themselves to superficial and conflictual relationships. They may have stopped working and have few time commitments, which both allows them to avoid acknowledging the difficulties that stem from ADHD and permits ongoing drug use. Unfortunately, this pattern promotes a feeling of hopelessness about developing satisfying and productive lives. When the diagnosis of ADHD is made, they gain an organizing framework from which to understand a lifetime of interpersonal and work-related difficulties.

Although medications have been extremely helpful in reducing restlessness and increasing attentional capacities, there are special considerations with this comorbid population. Levin et al.[8] suggest that desipramine and bupropion may be good alternative medications to avoid the risk of abuse that is present with methylphenidate. They add that sustained-release methylphenidate could be used with individuals who do not respond to an antidepressant.

Several papers have addressed medication treatment with this population; however, we will focus here on psychotherapeutic efforts to manage this comorbid condition. As part of a multimodal treatment,[9] it is necessary to target psychological and social factors that have become problematic. In the past, the professional literature rarely discussed psychotherapeutic interventions that addressed the psychosocial difficulties arising from ADHD. More recently, however, several papers have appeared that discuss the need for incorporating therapy into the treatment plan.[9,10] In our experience, the relationship that develops with a therapist helps these individuals overcome their resistance to treatment and medications—and such resistance can otherwise lead to early withdrawal from treatment.

It is imperative that an accurate assessment for this comorbid condition occur early in treatment. The results of such an assessment have implications for the course of illness and provide an opportunity to anticipate specific problems that may arise with this population. If comorbidity is not addressed effectively, it is likely to limit the benefit of treatment. For example, Carroll and Rounsaville[11] found that despite more treatment exposure, cocaine abusers with childhood ADHD did worse in treatment than cocaine users with no history of ADHD. Further support for the importance of an accurate assessment was reported by Wilens et al.,[12] who found that ADHD adults had slower remission rates and experienced longer duration of PSUD in comparison with non-ADHD adults. In our experience it is not so much that patients with comorbid ADHD and PSUD will have unique symptoms that are not found with either disorder independently. Rather, they present with a greater number of symptoms, that may have greater severity, than if the patient did not have the comorbid condition. For example, the combination of PSUD and ADHD is likely to exacerbate impulsivity. Similarly, distractibility can be explained by either disorder, but given that it was present in childhood, it is likely to become more pervasive because of drug use.

In all likelihood, clinicians have been treating this comorbid condition without directing specific attention to the interaction of ADHD and drug use. During the treatment of comorbid ADHD and PSUD, the prevailing wisdom stresses the importance of first getting the substance abuse under control.[13] Ideally, this would permit an accurate evaluation of ADHD symptoms, which could then be addressed. However, a pragmatic treatment should attempt to target overlapping symptoms stemming from both conditions as they arise in therapy. Our treatment team has used a brief cognitive-behavioral treatment (12–18 sessions) within a research context to treat both conditions simultaneously. We have found that relapse prevention[7] (RP) is well suited to treat sets of symptoms that are common to both conditions. Relapse prevention was developed to treat alcohol dependence and subsequently adapted to treat other addictive behaviors. In treating substance abuse, RP addresses the goal of abstinence by developing self-control strategies and healthier coping skills. The patient learns and repeatedly practices these skills to work on problem areas such as overcoming impulsive behav-

ior and managing uncomfortable affect. Similar goals are considered when treating patients with ADHD and a comorbid PSUD.

INTEGRATING TREATMENT FOR COMORBID ADHD AND PSUD

The difficulty in working with these patients is that substance abuse can exacerbate ADHD symptoms, while at the same time ADHD symptoms tend to impede patients' efforts to stop using substances. In treating these comorbid conditions, the clinician can use the same techniques that are elaborated in relapse prevention to help substance abusers cope effectively. This is possible because many symptoms associated with ADHD overlap with complaints that are common from individuals with a long-standing drug use history. For example, RP can provide the skills needed to tolerate cravings, as well as strategies that help to minimize the discomfort associated with the cravings.

In other words, RP helps individuals with substance abuse problems, but, importantly, RP is appropriate for individuals with comorbid PSUD and ADHD because it addresses development of impulse control and tolerance of physiological discomfort. Similarly, RP encourages the patient to begin to recognize internal cues and external triggers. These are important tasks for individuals with substance abuse problems, as well as those with ADHD.

Furthermore, strategies that involve writing things down, or making lists about positive and negative consequences of using drugs, model effective behaviors that help individuals cope with abstaining from drugs. Such strategies target poor organizational skills and poor memory, symptoms that are common in people with substance abuse problems and also in individuals with ADHD. Given that organization and memory tasks may be difficult for individuals with ADHD,[14] the clinician should take the opportunity to create lists during sessions.

In addition, problem-solving is a cornerstone of many cognitive-behavioral treatment programs and is emphasized as a strategy for anticipating and defusing situations before they develop into problems that could trigger substance use. Individuals with comorbid ADHD and PSUD are especially likely to have deficits in problem-solving abilities, and therefore repeated practice with this strategy not only helps with reducing risk for relapse, but also builds needed skills that they can apply in other areas of their lives.

THE PSYCHOTHERAPY CONTEXT

Although at times individuals with ADHD, and especially with comorbid ADHD and PSUD, can struggle with restlessness, distractibility, and boredom, in our experience the structure of the psychotherapy session has been an organizing context that has allowed patients to focus effectively on tasks such as developing coping strategies and solving problems. The predictability of the therapy frame,[15] with its starting and ending time and weekly schedule, helps individuals organize tasks and activities surrounding the scheduled appointment. Yet even with the structure that is provided by the therapy session, these patients may be late for appointments on a regular basis. Without discounting the possibility of ambivalence or resistance in therapy, the lateness should be understood as an aspect of the ADHD for which compensatory strategies can be developed.[9] Alternatively, lateness may stem from drug use prior to the session or even the night before. Tracking the behavior that led to the drug use provides a method of slowing down the thinking process and helps individuals link negative consequences, such as lateness, with the choice to use drugs prior to the session.

In therapy, clinicians should keep in mind that adults with comorbid ADHD and PSUD tend to have limited coping skills. Often, stressful situations that require attention to details or thinking through alternative behaviors could become overwhelming, and in response, they may use drugs in an effort to cope with or avoid their current problems. Furthermore, these individuals have learned to look as if they are paying attention, but in fact they could easily become distracted. Therefore, the session provides a perfect context to practice techniques and rehearse new strategies to cope with urges to use drugs. The in-session practice is particularly important with this group given that they may have difficulty completing practice exercises between sessions. In addition, the therapist must continually seek examples that integrate the interaction of ADHD and substance use, since this may increase the patient's interest in session material. Such creative efforts by therapists are all the more important with these patients because of their limited attention span and tendency toward boredom.

Patients frequently use many "techniques" to help

control their urges to use drugs without realizing that they are doing so. Identifying and encouraging more consistent use of these attempts at self-control can help patients feel more confident about their ability to resist drug use urges and cravings. Patients need help in recognizing their "self-talk,"—cognitions that can either lead to a decision to use drugs or can help to mediate the urge to use. In addition, patients may already be engaging in positive coping behaviors such as attempting to stay busy with multiple activities as a way to distract themselves from cravings. When patients make these efforts, it is helpful to label them as active coping strategies or techniques and offer praise for using them. This labeling helps encourage patients' active engagement with the struggle to stay abstinent, rather than leaving them with a passive feeling that their drug use or abstinence "just happens for no particular reason."

The following is an example of an approach that highlights the patient's strengths and labels these behaviors as coping skills and techniques. This vignette is an example of this process early in treatment:

THERAPIST: How did you manage not to use yesterday when you had the craving?

PATIENT: I just started to wash the dishes, and I told myself that I am not going to use anyway so forget it.

THERAPIST: That's great, you know, what you are describing are real skills and strategies. And you use them naturally. I want to label them, give them a name, so you can know exactly what you do when you do it. That way you have more control and you can use this skill consciously in the future when you are craving. So, we'll call what you did when you started to wash dishes a distracting activity, and when you told yourself that you are not going to use, let's call that positive self-talk.

Most patients will be able to describe self-statements that they have employed to try to cope with cravings. When patients are unable to identify self-statements because of an "automatic thinking process," there is an opportunity to discuss the importance of becoming aware of what is being said "in their head." Presenting skills in this way acknowledges that these individuals have skills already and that they can be successful when using them. In therapy with these individuals, the clinician is continually adjusting the focus from the substance abuse to symptoms that are associated with ADHD. Whenever possible, it is helpful to draw a connection between drug use behavior and ADHD behaviors.

In the following section we elaborate stages of treatment and general themes that may emerge when treating individuals with comorbid ADHD and PSUD in psychotherapy.

STAGES OF TREATMENT

In addition to the required rapport-building and discussion about patient responsibilities in psychotherapy, the *early* phase of treatment should help patients understand about the neurological disinhibition that promotes the symptoms of ADHD.[9] This phase should also include education that can help patients become aware of actions that characterize ADHD. It is likely that these individuals have not identified their problematic behavior as being symptomatic of a clearly defined and recognizable disorder. Therefore, spending time talking about behaviors that they know have been problematic and associating those behaviors with the diagnosis of ADHD begins the process of normalizing their difficulties and suggests that their behavior is treatable. This early teaching phase helps people learn that their behavior is not unpredictable and that they can begin to compensate for weaknesses and control inappropriate behavior. Even in these first few sessions, where education about ADHD is emphasized, it should also be stressed that an important goal of treatment is to reduce and stop drug use.

In the *middle* phase of treatment the focus is directed at barriers to abstinence, such as ambivalence about stopping drug use or continued exposure to triggers that are easily avoided. Patients are taught to anticipate high-risk situations and to recognize decisions that lead to drug use. Patients' failure to use these skills and strategies do not necessarily stem from ADHD, but if coping abilities are not well implemented, then it is possible that the skills needed to succeed are poorly developed as a result of the ADHD. The therapist should address this factor as contributing to the patient's difficulties in using the coping skills learned in sessions.

The *termination* phase of treatment continues to strengthen the skills that have been developed and highlights how those skills are being used in new as well as familiar situations. An overview of progress should be initiated by asking the patient what he or she believes has changed over the course of treatment. Therapist and patient should address disappointment about what has not been accomplished and discuss how the skills that the patient has mastered can be implemented beyond treatment to reach additional goals.

TREATMENT CONSIDERATIONS

In treatment, several consistent problems can be anticipated with this population. In the following section we describe problems most typically experienced by these patients and how they may present in therapy. The list of behaviors we focus on is by no means exhaustive, but we have chosen to highlight impulse control, distractibility, and avoidance as core issues to address as they arise in therapy. Other difficulties that may have to be addressed during psychotherapy with these individuals include disorganization, emotional lability, interpersonal problems, procrastination, and low self-esteem.[3,10] Table 1 summarizes problem areas and struggles that can become targets for intervention.

Impulse Control

Adults with ADHD are frequently viewed as rude or intrusive when they inappropriately cut people off during conversations, talk excessively, or say or do things without thinking ahead of time. It will not be clear if this behavior stems from the ADHD or from ongoing drug use. Undoubtedly, the impulsivity contributes to automatic reactions that lead to drug use; likewise, being high or having a long-standing drug use history tends to lead to impulsive behavior. When impulsivity is problematic, these adults often report that their partners complain about this behavior, or they may report that they feel guilty about having responded inappropriately and hurt someone's feelings. These interpersonal missteps can become part of a circular process that leads to continuing episodes of drug use. Inevitably, therapists will also be cut off during sessions. At first this may appear as though the patient is self-absorbed or uninterested in what the therapist is saying. Highlighting the education about ADHD that was introduced in earlier sessions, the therapist can respond to this behavior, after it is repeated several times, by drawing a connection between ADHD, impulsivity, and drug use. The following vignette describes this situation; the patient was talking about his last slip over the weekend.

PT.: In bed I was thinking about using the next day.
TH.: So you were setting it up the night before.
PT.: I believe you are right, I was setting it up the night before.
TH.: Did something happen even . . . ? (therapist was cut off from adding, " . . . before going to bed to get you thinking about it").
PT.: You're right, I was thinking about it the night before and I wanted to use the next day real bad.
TH.: Do you remember you told me about how your wife complains that you cut her off? You know about this yourself, too. It just happened between us. Did you notice?
PT.: I did, but I was thinking about how I was already thinking about using the night before, and I just said it.
TH.: That is important to recognize, but also how it is hard to stop yourself sometimes when you get something in your head.
PT.: You're right, it is.
TH.: That is what I mean about the ADHD part that makes it hard to pull back. For us to recognize this is impor-

TABLE 1. Target behaviors stemming from comorbid ADHD/PSUD and related interventions

ADHD and PSUD Target Behavior	Treatment Intervention
Missed appointments/lateness.	Structure and organization: structure of session.
Limited coping skills.	Anticipating stressful situations and high-risk behavior; in-session practice of drug refusal skills or thinking about alternative responses to triggers.
Poor memory and difficulty keeping goals in mind.	Writing things down; e.g., positive and negative consequences of drug use assessed with functional analysis.
Poor impulse control: cutting people off, impulsive drug use, cognitive impulsivity (making it difficult to break automatic thinking).	Recognition of internal cues and external triggers; role plays.
Difficulty tolerating discomfort; e.g., boredom, restlessness.	Distracting activities; problem solving; planning ahead.
Limited self-control.	Recognition of positive and negative self-talk.
Distractibility: inability to filter out extraneous stimuli; forgetfulness; lapses in ability to remain focused on relapse prevention techniques.	In-session practice to keep patient focused; rehearsing of strategies to cope with urges to use drugs.
Avoidance: ADHD used to rationalize drug use and other problems, minimize contribution of ADHD to problems by stating that drug use is the sole cause of problems.	Functional analysis to assess PSUD; psychoeducation and discussion of ADHD.

Note: ADHD = attention-deficit/hyperactivity disorder; PSUD = psychoactive substance use disorder.

tant, because I think that this is like the times when you get the idea to use; it's hard to pull back, and that is what you need to do, but first you have to recognize that you're having a craving.

In the vignette above, impulse control was associated with both interpersonal behavior and drug use behavior. This shows how the ADHD symptom of verbal impulsivity provides an opportunity to discuss impulsivity as it relates to drug use. The impulsive experience was first associated with interpersonal difficulties that have been highlighted by his wife, and so it is personally meaningful. When impulsive behavior was evident in the session, the therapist was able to associate this behavior with drug use behavior, which may also be enacted impulsively.

Distractibility

For many adults with ADHD, the primary difficulty is distractibility.[16] This can be manifested, for example, as an inability to keep one's mind on conversations, as being easily distracted because of an inability to filter out extraneous stimuli, or as frequent forgetfulness.[17] This limited ability to focus makes the task of maintaining abstinence more difficult. During the recovery process, the need to remain vigilant about self-talk, automatic thinking, or cravings and triggers is a constant challenge. These individuals have lapses in their ability to concentrate, which can lead to drug use episodes. One patient described this experience in the following way:

PT.: I go a week and it's like I lose focus and I use again. I always use again.
TH.: That's a pattern that you are recognizing and that gives us a chance to plan to break that routine.
PT.: It's like I don't think about it any more and that's when I use.
TH.: When you try to stay focused on that one thing, how to continue not using, and then you lose focus, we need to think about that as an ADHD problem. It might be even harder for you to keep focused than someone without ADHD who is trying to stop.

Again, the patient is discussing a behavior that is directly associated with drug use but is also very much a symptom of ADHD. Distractions can lead to drug use because the patient has an especially difficult time staying focused on the goal of abstinence. This could be a convenient rationalization, or the goal could be blocked out of awareness in an effort to avoid other difficulties. Drug use may have been the most immediate solution for avoidance of problems, but the patient may not be aware that the drug use is serving this purpose. Thus, distractibility, which is a common symptom of ADHD, may have taken on other meanings and functions that need to be explored in therapy. By understanding more about this behavior, the patient gains a greater ability to overcome it.

Avoidance

The interaction between ADHD and PSUD complicates the treatment process by exacerbating symptoms. Patients may use their comorbid diagnosis as a way to rationalize their drug use and other problems. The interaction between ADHD and drug use in both causing and avoiding problems thus needs to be carefully explored. In some cases patients may try to use the ADHD diagnosis as a way to account for the difficulties associated with drug use instead of acknowledging the role that drug use plays in causing problems. Others may have turned to drugs as a way to avoid experiencing the discomfort and shame stemming from problems created by ADHD. These patients may minimize the contribution of ADHD and explain their difficulties as solely caused by their drug use.

The challenge for therapists is to identify the links between the cognitive, behavioral, and physiological symptoms associated with ADHD and those associated with drug use. The patient's creation of a vicious circle, in which limitations stemming from ADHD along with negative self-worth may lead to drug use that further limits coping abilities and thus maintains the drug use, must be countered in treatment by providing tangible coping skills and strategies, many of which are incorporated in the relapse prevention model.

THE LIMITS OF RELAPSE PREVENTION

Often people who are diagnosed with both ADHD and PSUD have struggled with many problems for a long time. As a result, they generally have poor self-esteem and little sense of self-efficacy. Many of these patients also have developed personality disorders that further complicate their attempts at treatment compliance and success. For individuals with these problems, difficulties that may be tolerable for others could lead to highly stressful situations that may precipitate a relapse of drug use.

A short-term treatment that makes use of relapse prevention can provide important skills that offer alternative ways to cope with physical and emotional discomfort. As such, a treatment that uses a relapse prevention model is a good initial treatment, especially for managing the drug use problems. However, the chronic nature of both ADHD and substance abuse could compromise the effectiveness of newly learned coping skills and strategies unless the long-standing intrapersonal and psychosocial issues are addressed in treatment.

Other approaches have also been effective in treating substance abuse. These include Motivational Enhancement Therapy,[18] Community Reinforcement,[19] and 12-step programs,[20] although the usefulness of these programs for treating comorbid ADHD and PSUD needs to be examined. Couple therapy and group therapy are also commonly employed to treat either substance abuse or ADHD, although, again, the effectiveness of these treatment modalities for this comorbid condition has not been discussed in the literature.

Unfortunately, relapse is common following treatment for substance abuse regardless of the presence of ADHD, but the dually diagnosed patient is even more at risk and is likely to require a longer treatment that incorporates a focus on developmental factors that may be maintaining drug use behavior.

CONCLUSIONS

Attention-deficit/hyperactivity disorder is made up of a broad array of symptoms that create problems affecting multiple life domains. These problems are compounded when substance abuse is present. Individuals with comorbid ADHD and PSUD face the difficulty of overcoming two disorders in which each disorder can exacerbate the symptoms of the other, and thereby efforts to cope with one are limited by the other. These two disorders also appear to interact in such a way that each one maintains the other. In treatment, it becomes apparent that symptoms that stem from ADHD, such as poor impulse control or limited ability to maintain focus in thought processes, exacerbate substance use by limiting strategies that can be used to cope with cravings and reactions to triggers. Similarly, the symptoms that develop from long-term substance use, such as impulsiveness or poor memory, mimic behaviors of ADHD and compound the difficulty of trying to change.

In the early stages of treatment, as patients try to cope with substance abuse, their ADHD symptoms are prominent and they struggle to avoid drugs that would otherwise be used to distract them from this discomfort. Relatedly, Hoegerman et al.[21] reported that newly abstinent substance abusers may have impaired attention that is comparable to levels of performance by adults diagnosed with ADHD in childhood. This finding implies that as substance abuse is reduced, individuals with comorbid ADHD and PSUD may experience symptoms that could be misinterpreted as a worsening of ADHD symptoms.

Similarly, when patients try to cope with ADHD they may feel that their drug urges are getting stronger. They must work hard to overcome typical ADHD symptoms that distract them from being mindful of the skills and strategies that can help them to cope with their cravings. This dilemma may be further complicated if medications for ADHD have been prescribed. There is some evidence suggesting that after initiating medication for treating ADHD, patients may experience things so differently that, paradoxically, they may feel uncomfortable.[9] In either case the focus of treatment is the same; the effort is to increase impulse control and affect tolerance, while at the same time building skills to stay focused on tasks such as problem-solving or learning to attend to internal cues or thoughts. During early recovery, either disorder can become an excuse for drug use and avoidance of the difficulties inherent in trying to change.

The clinician's goal is to help patients integrate their understanding of difficulties stemming from both conditions. The rationale of treatment for this comorbid condition is to reduce and stop drug use in order to be able to use coping strategies for ADHD more effectively. The challenge in working with this population is that the coping strategies that patients need to learn in order to stop drug use are the very strategies that they need to master to overcome ADHD, and therefore these patients are starting treatment with limited abilities. The question of which problem to address first is often dependent on the difficulties presented by the particular patient, but abstinence should be a central focus of the initial treatment. Although cessation of drug use may be presented as the focus of treatment, the behavior that is changing is very much associated with ADHD.

The authors thank Drs. Sarah Church, Jamie Rothenberg, Ken Carpenter, and Lydia Kim, and Aparna Kalpeg for their comments during the preparation of this paper.

REFERENCES

1. Mannuzza S, Klein RG, Bessler A, et al: Adult outcome of hyperactive boys: educational achievement, occupational rank and psychiatric status. Arch Gen Psychiatry 1993; 50:565–576
2. Van King M, Brooner R, Kidorf M, et al: Attention deficit hyperactivity disorder and treatment outcome in opioid abusers entering treatment. J Nerv Ment Dis 1999; 187:487–495
3. Ratey J, Greenberg M, Bemporad J, et al: Unrecognized attention-deficit hyperactivity disorder in adults presenting for outpatient psychotherapy. J Child Adolesc Psychopharmacol 1992; 2:267–275
4. Clure C, Brady K, Saladin M, et al: Attention-deficit/hyperactivity disorder and substance use: symptom pattern and drug choice. Am J Drug Alcohol Abuse 1999; 25:441–448
5. Levin F, Evans S, Kleber H: Prevalence of adult attention-deficit hyperactivity disorder among cocaine abusers seeking treatment. Drug Alcohol Depend 1998; 52:15–25
6. Wilens T, Biederman J, Mick E, et al: Attention deficit hyperactivity disorder (ADHD) is associated with early onset substance abuse. J Nerv Ment Dis 1997; 185:475–482
7. Marlatt G, Baer J, Donovan D, et al: Addictive behaviors: etiology and treatment. Am Rev Psychol 1988; 89:223–252
8. Levin F, Evans S, Kleber H: Practical guidelines for the treatment of substance abusers with adult attention-deficit hyperactivity disorder. Psychiatr Serv 1999; 50:1001–1003
9. Bemporad J, Zambenedetti M: Psychotherapy of adults with attention-deficit disorder. J Psychother Pract Res 1996; 5:228–237
10. Ratey J, Hallowell E, Miller A: Psychosocial issues and psychotherapy in adults with attention deficit disorder. Psychiatric Annals 1997; 27:582–587
11. Carroll K, Rounsaville B: History and significance of childhood attention deficit disorder in treatment-seeking cocaine abusers. Compr Psychiatry 1993; 34:75–81
12. Wilens T, Biederman J, Mick E: Does ADHD affect the course of substance abuse? Findings from a sample of adults with and without ADHD. Am J Addictions 1998; 7:156–163
13. Spitz H: Group Psychotherapy and Managed Mental Health Care. New York, Brunner/Mazel, 1999
14. Weiss M, Hechtman L, Weiss G: Psychological therapies, in ADHD in Adulthood: A Guide to Current Theory, Diagnosis, and Treatment. Baltimore, John Hopkins University Press, 1999, pp 188–202
15. Langs R: Making interpretations and securing the frame: sources of danger for psychotherapists. Int J Psychoanal Psychother 1984; 10:3–23
16. Silver L: Diagnosis of attention-deficit hyperactivity disorder in adult life. Child Adolesc Psychiatr Clin N Am 1992; 1:325–334
17. Wender P: ADHD in adults. Psychiatric Times, July 1996, pp 41–44
18. Miller W, Zweben A, DiClemente C, et al: Motivational Enhancement Therapy Manual. Washington, DC, National Institutes of Health, 1995
19. Budney AJ, Higgins ST: Community Reinforcement Plus Vouchers Approach: Treating Cocaine Addiction. Washington, DC, National Institutes of Health, 1998
20. Nowinski J, Baker S, Carroll K: Twelve-Step Facilitation Therapy Manual. NIAAA Project MATCH Monograph Series, vol 1. DHHS Publ. No. (ADM)92-1893. Rockville, MD, National Institute on Alcohol Abuse and Alcoholism, 1992
21. Hoegerman GS, Resnick RJ, Schnoll SH: Attention deficits in newly abstinent substance abusers: childhood recollections and attention performance in thirty-nine subjects. J Addict Dis 1993; 12:37–53