LIVE EVENT

ADHD in Adults

Valid Diagnosis and Treatment Strategies?

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Attention deficit hyperactivity disorder (ADHD) is increasingly recognized as a psychiatric disorder in adults. Although often undiagnosed in this population, it is estimated that one-third to two-thirds of those diagnosed with this disorder in childhood will continue to present symptoms as adults. This would put the prevalence of ADHD at between 1% and 6% in the adult population.[1] Nevertheless, controversy continues to surround the ADHD diagnosis in adults,[2] and questions persist about the assessment and treatment of these patients. To shed further light on these and other important issues, ***Medical Crossfire*** convened a panel of national experts—moderated by Brian Doyle, MD, CM, who is Clinical Professor of Psychiatry and of Family and Community Medicine at Georgetown Medical School in Washington, DC, and a ***Medical Crossfire*** Editorial Advisory Board member—to share their expertise.

A Valid Diagnosis in Adults?

"Adult ADHD is as valid a diagnosis as that of any other major psychiatric disorder," began Paul H. Wender, MD, who is Distinguished Professor of Psychiatry Emeritus at University of Utah School of Medicine in Salt Lake City, Utah; and Lecturer in Psychiatry at Harvard Medical School in Cambridge, Massachusetts. "Longitudinal studies have shown the persistence of ADHD symptoms into adult life.[3,4] As far back as the early 1970s, we were able to identify a group of adults with a variety of psychological symptoms suggesting ADHD.[5]

"Because ADHD begins in childhood," he continued, "we first validated the disorder in adults by contacting individuals' parents and inquiring about their now-adult children's behavior when they were of school age. We also devised standardized rating scales by which we could determine whether a patient probably had a history of ADHD as a child.[6] Finally, there is a continuity of symptoms with metamorphoses appropriate for age. The progenitors of a number of associated symptoms that may become very prominent in adults can often be identified in childhood."

"At this point we have ample prospective evidence of ADHD continuing into adulthood," concurred Lorraine E. Wolf, PhD, who is Assistant Clinical Professor of Psychiatry in the School of Medicine, and Clinical Director of the Office of Disability Services at Boston University in Massachusetts. "We also have retrospective and cross-sectional studies[7] in both referred and nonreferred populations that document the syndrome with adult variants."

"What arguments do you encounter about the validity of this diagnosis in adults?" queried Dr. Doyle.

"Many of the arguments I hear are the same ones often associated with the childhood diagnosis," responded Susan L. Montauk, MD, who is Professor of Clinical

Family Medicine at the University of Cincinnati College of Medicine in Ohio. "One is that ADHD has never actually been validated as a biological entity; the same argument, however, can be made for headache or low-back pain." Dr. Montauk also pointed out that imaging studies have demonstrated differences in brain areas in patients with ADHD.[8]

"Some of the other arguments against this diagnosis," continued Dr. Montauk, who is also Medical Director at The Affinity Center, a private center for attention deficit disorder (ADD) and related disorders, "are what I would characterize as moral arguments. Examples include: 'Some people are just smarter than others' and 'Everybody has strong and weak points, and some people are just weaker.' Adults with this disorder are particularly hard on themselves in this regard. We know that many people with ADD have very high IQ ratings."

"Another of the moral arguments is: 'These people are lazy,'" offered Dr. Wolf. "A number of medical students at Boston University have clinically valid ADHD, and these high achievers really put a nail in the coffin of this argument. Anyone who has watched a highly successful adult with ADHD knows that he has worked many times harder than his peers without ADHD."

Adult Women with ADD

"Although ADD is more prevalent in boys and men, I do not want physicians to be left with the impression that it is just adult men who have this problem," noted Dr. Doyle. "What is the incidence of ADD among adult women? Is there any difference in the presentation of the disorder in this group?"

In response, Dr. Wender noted that there are fewer data available concerning ADD in women. He added, however, that "ADD of the primarily inattentive type, which is usually accompanied by a lot of disorganization, is quite common in childhood and should be especially watched for in women."

"These are the girls who slip between the cracks because their symptoms are not as overt and disruptive," lamented Dr. Wolf. "Where there is a family history of depression or anxiety disorder, both girls and women should be considered for inattentive ADD."

Dr. Montauk added that "there are many papers documenting the likelihood that estrogen effects cognition in perimenopausal and early postmenopausal women.[9-13] In my experience, as might be expected, hormones appear to affect ADD as well. Physicians may see exacerbations of ADD symptoms in a female patient who has premenstrual syndrome. Some women may have never received an ADD diagnosis, but when their estrogen levels drop during menopause, their ADD symptoms intensify." Dr. Montauk suggested that such women may be helped not only by stimulants but also by estrogen. "All women with ADD who are even perimenopausal need to be evaluated for what estrogen might do for them," she declared. "One should, of course, weigh both the pros and cons of estrogen replacement therapy in such patients."

Making a Diagnosis

"An important goal for clinicians is to rule out comorbid psychoneurological conditions. The first step to doing that is taking a careful history, which includes the patient's development, physical health, and, certainly, family history," offered Dr. Montauk. "But unless the primary-care physician can spend the significant amount of time with the patient that is required to do this—which we generally cannot—I do not think we can make this diagnosis by ourselves." At the private ADD facility where Dr. Montauk has

served as medical director for five years, for example, the team includes two psychologists, two psychiatric advanced practice nurses, and a clinical social worker. "I see the primary roles of the primary-care physician to be assisting in appropriate referrals and medication management," she added. "Although many primary-care physicians are not yet well versed in this area, that could change with further education."

"I don't find diagnosis to be an overwhelming task, and I don't require a team at all," countered Dr. Wender. "At the present time, the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* [DSM-IV] does not provide diagnostic criteria for ADHD in adults. In our studies, we administered the Wender Utah Rating Scale [WURS][6] to patients, from which we can determine the probability that they had ADHD in childhood." He added that ADHD in childhood is sometimes the progenitor of other conditions, including bipolar disorder, psychosis, and antisocial personality. However, a patient must have had ADHD as a child to be diagnosed with ADHD as an adult.

"Empirically," he continued, "we have found a cluster of seven symptoms that covary and that respond to treatment with stimulant medication. These are: hyperactivity, inattentiveness and distractibility, mood lability of a kind not described in DSM-IV, disorganization, impulsivity, restlessness, and a quick temper.[14] One need not have all of these symptoms, but they should be inquired about. To help clinicians make this diagnosis, I have published a structured interview that can be done in 20 to 30 minutes.[15] The question primary-care physicians need to be asking is: What are the 'red flags' for ADHD in adults?"

"I agree," responded Dr. Montauk. "However, assessing for comorbid conditions and identifying the situations that are going to be difficult to treat may lead many

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primary-care physicians toward ancillary consults. Scales make a huge difference. But, of course, any of the ADHD scales—whether it is the Wender Utah Rating Scale, which I certainly consider to be an excellent one, or Conner's Rating Scales—do not diagnose the disorder by themselves. They give us an idea of the likelihood that a person has this disorder."

"I always tell residents that rating scales are not as good as interviews," remarked Dr. Wender.

"Exactly," responded Dr. Montauk.

"I would add," interjected Dr. Wolf, "that I strongly advocate neuropsychological testing for these individuals, particularly in the case of patients who are refractory to treatment or patients with complicating comorbid conditions. Such testing would not necessarily be used as a tool to establish a diagnosis but instead, as Dr. Montauk stated, to identify the complications and the functional limitations that the patient is going to be facing, particularly if he or she is a young adult or student.

"The most commonly reported comorbid conditions," she continued, "are substance abuse, antisocial personality, mood disorders, anxiety, and learning disorders. They have all been reported with very high comorbidity rates of 30% and higher. Some studies have shown comorbidity rates in children as high as 80%.[16] Managing the comorbid diagnoses is as critical as managing the ADHD."

"I would point out that we have no epidemiological data about comorbidity in adults," noted Dr. Wender. "We know that ADHD children are frequently comorbid for conduct disorders and we know that about 40% of children with conduct disorders grow up to have antisocial personality disorder. The one thing that does have a high comorbidity rate clinically in adults is learning disorders."

Interestingly, several of the panelists noted that adult patients, or their spouses, often diagnose the ADHD. This occurs, for example, after a child receives an ADHD diagnosis and the parent recognizes similar symptoms from his own childhood and current life.

"I have been seeing more of these patients in my practice," noted Dr. Doyle. "They come in, sheepishly saying, 'My wife (or my husband) made the diagnosis because I'm so much like our child who was recently diagnosed with ADHD.'"

Treatment Strategies

The Pharmacological Armamentarium

Asked by Dr. Doyle to review the pharmacological treatment options for ADHD in adults, Dr. Wender lamented that the options "are exceedingly limited."

He began by noting that studies have demonstrated the efficacy of stimulants in treating adults with ADHD.[17-19] Writing in *Annals of New York Academy of Sciences*,[1] Wender and colleagues stated that "[i]n crossover- and parallel-design studies about 60% to 70% of patients receiving stimulant medication showed moderate-to-marked improvement, as compared with 10% of those receiving placebo…Amphetamines have been used since 1937 with no long-term toxicities reported. However, both methylphenidate and dextroamphetamine increase heart rate and blood pressure, which must be carefully monitored in adult patients."

Another pharmacological therapy that has been studied is pemoline, which, according to Dr. Wender, "has been shown to be effective at reducing symptoms of ADHD—although not as effective as methylphenidate and amphetamines. It has also been associated with hepatotoxicity.[20] The tricyclic antidepressants," he continued, "were introduced in the 1970s for ADHD because we wanted a drug that worked 24 hours a day. The immediate experience was that, although they began working in just a few days, they worked best on symptoms other than atten-

tion and in two months the children became entirely refractory. Furthermore, if the dose was increased the children became unpleasant and more agitated."[21]

Finally, Dr. Wender noted that bupropion has been used in this patient population.[22,23] He suggested that this agent is most effective for treating the temper and mood lability symptoms and least effective for treating inattention. He also referred to a study by Reimherr and colleagues that compared bupropion with methylphenidate and found the former to be less effective than the latter.[24]

"Although they do not replace stimulants, another class of drugs for adults with ADHD is the alpha agonists," added Dr. Montauk. "I have had only a few adults who I felt really benefited from either clonidine or longer-acting medications such as guanfacine. Usually the dose would be similar to that associated with the lower antihypertensive doses, 1 mg to 3 mg t.i.d. or the equivalent patches. But that medication is usually only for the patient who is extremely hyperactive, the one who walks into your office and you can diagnose hyperactivity immediately."

"What is the usefulness of the selective serotonin reuptake inhibitors [SSRIs] in these patients?" asked Dr. Doyle.

"Except in the case of comorbidity with major depression or dysthymia, giving SSRIs to a patient with ADHD results in a person who can't sleep and is complaining about sexual side effects," replied Dr. Wender. "Unfortunately, they really do not work."

"There is also a certain subgroup of people with ADD in whom the SSRIs may also negatively affect cognition—particularly at very high doses," added Dr. Montauk.

"What recommendations can you make about how long patients are likely to take these medications?" asked Dr. Doyle.

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the medication at any point and see if the symptoms are still present," said Dr. Wender. "The other thing I am obsessed about is the timing of the dosing. It is important for primary-care physicians to remember that they have to adjust the dose and frequency until the patient gets an optimal response."

He continued, "I typically move immediately into the longer-acting agents because they are simpler for patients to take." Dr. Wender emphasized that this is especially important because these patients—who are typically very disorganized—must otherwise take their medication according to a rigid schedule.

"Dr. Montauk, what has your experience been with some of the longer-acting medications?" asked Dr. Doyle.

"I find that Concerta [oros-methylphenidate, Alza Corporation] very commonly is effective for between 8.5 and 10 hours," replied Dr. Montauk. "I do have a few patients who respond for 11 hours, but I am not yet convinced that anyone gets 12 hours of response." She proposed that the standard duration of action "is still a nice long time. I would add that we often have to augment Concerta in the morning with a slight amount of short-acting methylphenidate for more immediate release because the former has a slower onset."

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She continued, "With Metadate CD [methylphenidate, Celltech Group] I find the duration of action is closer to 7 to 7.5 hours, although I tell my patients that whatever immediate relief they get from immediately released methylphenidate, they are likely to get twice that from Metadate CD. Interestingly, I have found that if I switch an appropriately dosed patient from short-acting methylphenidate to either Metadate CD or Concerta and he or she does not do well, I can often achieve good results by switching to the other long-acting agent."

"Have you had enough experience with the new extended form of Adderall [dextroamphetamine, Shire Pharmaceuticals Group] to comment on?" questioned Dr. Doyle.

"I have, and I find that one dose of Adderall XR [dextroamphetamine, Shire Pharmaceuticals Group] is very similar to two doses of Adderall," replied Dr. Montauk. "I also find that people who were on three doses of Adderall, which is not at all uncommon, now have to take two different kinds of medication because they need both Adderall and Adderall XR." She noted that these patients must make two co-payments for the two formulations, a fact they sometimes find upsetting.

"Duration of action is a problem," remarked Dr. Wender. "I sometimes obviate it by giving a second dose of Concerta, for example, at 1 p.m. I find this is particularly useful for people who awake at 6:30 a.m. and so their medicine is disappearing and their ADHD is acting up at just the time they are coming home to their families. Another option is to give supplemental doses of the immediate-release formulation."

"When talking about medication for ADHD," added Dr. Montauk, "one thing that unfortunately is often left out of the discussion is that patients with ADHD, whether adults or children, need to be closely followed up by physicians to understand where their problems are and what needs to be done. It is

highly likely that a physician can find a medication that an adult is not only helped by but is also very comfortable on. However, physicians may have to change things around a little bit here and there and see the patient frequently for a while, which is something some primary-care physicians do not typically do in today's managed care environment."

"Am I hearing a consensus from our panelists that you would use medication with all patients? Are there some patients with whom you would not use medication?" asked Dr. Doyle.

"I use medications whenever possible because I think that they are by far the best therapy we have," confirmed Dr. Montauk. "The only situations in which I am hesitant to use medications are if I believe they are going to be abused, or if I feel I have not been able to stabilize some other disorder, such as obsessive-compulsive disorder, that is likely to worsen." She added that she also "sometimes encounters resistance from patients about the idea of taking medications for the disorder."

"That certainly has been my experience with adult patients," concurred Dr. Doyle.

"I do a great deal of educating about stimulants," noted Dr. Wender, "and I tell patients that stimulants have been used to treat children since the late 1930s and problems with abuse or tolerance have not arisen. We have had a similar experience so far with ADHD adults who do not have a substance abuse problem. I have found that a patient on too large a dose often feels edgy or unpleasant, but tolerance is exceedingly rare. I also emphasize to all my patients that they always have the option of discontinuing their medications at any time."

Nonpharmacological Strategies

"Education is a mandatory component of treatment for ADHD in both adults and children,"[25] declared Dr. Wender. "This requires a lot of time, which is typically not something that a primary-care physician can provide." As an illustration of his therapeutic strategy, explained Dr. Wender, "I tell adults with ADHD that for 30 years they have been living with the equivalent of having one leg shorter than the other. Now the shorter leg has miraculously been lengthened—but they still have a limp and therefore need physical therapy." He also noted that "in addition, many secondary psychological problems may become apparent once the ADHD is under control."

"I have seen many patients who have had very good results with coaching," observed Dr. Wolf. "This essentially involves pairing an individual with a personal organizer with whom he frequently checks in and who holds him accountable for his daily schedule and for his actions. Many patients have found that—in conjunction with medication, psycho-education, and other adjunctive treatments—coaching offers a way to learn an organizational and time-management system.

"A good source for finding an ADHD coach," she continued, "is the National Attention Deficit Disorder Association, which is accessible on the Web. It is important that an individual finds a coach who has been trained to address the target symptoms of ADHD and how they interfere with a patient's life."

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Patients can also often find a coach through local ADHD support organizations, suggested Dr. Montauk. "There are many coaches on the Internet," she added, "and I know a number of them and they are wonderful. But I have no doubt that there are also people out there calling themselves coaches who are not very good and do not have a legitimate stamp of approval."

"There is a credential that coaches can obtain," noted Dr. Wolf, "but for the reasons Dr. Montauk just stated I would again recommend working through a national organization to find a coach who is both certified and reputable."

Changing direction somewhat, Dr. Wender remarked that he invariably employs the help of a patient's partner or significant other in the treatment process. "I tell the patient, 'You have been looking at the world through distorted lenses. Your partner, who does not have ADHD, will see things differently. Similarly, you may not be as acute at noticing changes at first. Because we will be adjusting your medication and doing other things based on how you are changing, your partner's input can be extremely useful.'"

"That is really important," concurred Dr. Montauk.

Responding to a question from Dr. Doyle about the use of cognitive or behavioral interventions in adults with ADHD, Dr. Wolf noted that such interventions are considerably less well researched in this patient population than they are in children. "We do not have the benefit of the multimodal treatment study for adults. But I think that the general tenets of intervention in children probably hold true in addressing various aspects of an adult's life. For example, finding the appropriate treatment—be it couple therapy or working with the person's supervisor—is important," she said.

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"I wholeheartedly agree," stated Dr. Wender, adding that persons with ADHD "almost always have problems with their partners. They don't listen when the other person is speaking, they interrupt the other person's sentences, and they have hot tempers. They are often not approachable with couple therapy until they are treated with medication and respond to it, at which time they become excellent candidates for such therapy. That kind of psychotherapy is most useful."

"Another area that is somewhat less researched is the impact on the management of symptoms of an ADHD child when his or her parent with ADHD has been treated successfully," offered Dr. Wolf. "In other words, this is a highly disorganized parent who is being asked to organize the life and medication regimen of a child. Until the parent has been treated, we can not really expect the full results of treatment in the child."

"I just had that experience the other day," related Dr. Doyle. "A mother with ADD had to make a phone call during her appointment with me because she forgot to tell her child with ADD to take his medicine that morning."

"Activities like meditation, guided imagery, tai chi, and yoga can also be helpful once patients are on medication," suggested Dr. Montauk. "Not only can they help with patients' focus problems but they are also helpful techniques for dealing with stress. And ADHD—like so many other conditions—is very much affected by stress."

Impact of Treatment on Patients' Lives

"I have seen really remarkable results when adult patients with ADHD receive appropriate treatment," observed Dr. Doyle. "Many of my patients with this disorder have a number of compensatory mechanisms in place that have enabled them to get as far as they have. Once they get effective treatment, they really do much better. Has that been the other panelists' experience?"

"Absolutely," declared Dr. Wender. "I have treated doctors and lawyers with ADHD who worked extremely hard to be in the bottom third of their classes. After receiving appropriate medication, they often go skyrocketing up. Treatment enabled them to use abilities that they were never able to fully utilize, and that is very gratifying to see."

"Although I agree with that, one of the compensatory mechanisms that is often used by bright people with untreated ADD is obsessive-compulsive behaviors," pointed out Dr. Montauk. "So if their behavior gets worse, which it can with stimulants, treatment of their ADHD symptoms actually works against them. I would add that this obviously can be dealt with, but another medication is usually called for. Fortunately, I have not seen many cases where I could not treat the obsessive-compulsive behaviors well enough to reverse the negative impact of stimulants."

Legal and Disability Issues

"Physicians should note that adults who are disabled by ADHD may be eligible under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act for accommodations and adjustments in the school environment and in the workplace," explained Dr. Wolf. "Someone who is functioning quite well on or off medication and has essentially remitted with their ADHD may not be considered disabled, but someone who still has persistent organizational and time-management problems may ask an employer for an accommodation and have a reasonable expectation of receiving it. Individuals may also be eligible for disability payments, again, depending on the severity of their disability."

"Sometimes some of the most important education we can do outside of the family is in the workplace or school environment," noted Dr. Montauk. "The most common place where I run into legal and disability issues is the college environment. It is common for college staff who do not know the law to make blanket statements like 'We can't do that' when asked about making accommodations. The way we typically handle this at our center is for someone to set up an appointment to speak with the person, describe the law, and explain that the individual's ADHD qualifies him or her for certain accommodations."

Final Thoughts

Dr. Wender concluded his comments by urging primary-care physicians to be on the watch for adults who have multiple life problems (vocational, educational, marital) and difficulty coping with them; who manifest depression, confusion, and an inability to solve problems; and who are inattentive. "And if primary-care physicians suspect ADHD and can't diagnose it themselves, they

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should refer the patient to a knowledgeable psychiatrist," he stated.

Dr. Wolf concurred with this advice, adding that "adult ADHD is by no means a simple diagnosis. It is as complicated as any other neuropsychiatric syndrome that we see, and clinicians should be mindful of that."

"When primary-care physicians like myself see adults who are struggling chronically with learning or employment or inappropriate impulsivity, we need to suspect ADHD," emphasized Dr. Montauk. "Physicians should consider doing some initial screening to see if we can make the ADHD diagnosis ourselves. If necessary, we can refer our patients to someone else with more experience in this area. I would also urge my colleagues not to be afraid to medicate patients with well-documented ADHD and a lack of comorbid conditions. These medications are very safe when used in appropriate ways." ■

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