Blue Shield of California
An Independent Member of the Blue Shield Association

RAPID AND ULTRARAPID OPIOID DETOXIFICATION (CPT 01999, H0006 – H0011)

ISSUE

Blue Shield has received requests for coverage of rapid and ultrarapid opioid detoxification of patients suffering from addiction.

CURRENT BLUE SHIELD POLICY

Blue Shield of California considers medical detoxification as a medical condition, and therefore subject to the medical benefits of the member's health plan.

Limited benefits are available on most plans for inpatient medical detoxification when medically necessary and administered in a licensed medical facility.

BACKGROUND

Addiction is defined as compulsive drug-seeking behavior, characterized by its increasing takeover of the other major activities of an individual's life, and pursuit of the drug despite resultant physical, psychological, or social harms (Kleber, 1998). The prevalence of addiction to opioids (heroin, codeine, morphine, methadone, etc.) in American adults is approximately 2% (ASAM, 2000, Attachment 9). Since the late 1990s, there has been a notable increase in heroin addiction. Opioid addiction, particularly to heroin, is associated with bacterial endocarditis, HIV infection, hepatitis, and tuberculosis (Bovill, 2000).

Management of opioid dependency involves elimination of opioid from the body (detoxification) followed by continuing abstinence (Cook et al, 1998; Bovill, 2000). Both abstinence-based and opioid-agonist maintenance (methadone or buprenorphine) treatment are accepted as safe and effective therapies for opioid addiction (ASAM, 2000, Attachment 9). (Buprenorphine is a partial mu-opioid receptor agonist with mixed agonist-antagonist properties.)

While abstinence is the ultimate goal of addiction treatment, the first step is detoxification to manage the withdrawal symptoms that result from discontinuation of the opioid (ASAM, 2000, Attachment 9).

BACKGROUND, Continued

These symptoms include nausea and vomiting, abdominal cramps and profuse diarrhea, hot and cold flushes, uncontrollable yawning and sneezing, excessive lacrimation, tachypnea, agitation, pain in the back and long bones, sweating and piloerection, dilated pupils, runny nose and eyes, and intense craving for the drug (Cook et al, 1998). These withdrawal symptoms are often extremely unpleasant, can be intense and protracted, but are rarely life-threatening (Bovill, 2000). Typically, they peak by 48-72 hours and largely disappear within 7-10 days. The ideal detoxification method would be one that is safe, relatively brief, inexpensive, painless, outpatient, and engaging for longer-term help (Kleber, 1998).

Currently available detoxification methods include decreasing doses of (tapering) methadone or buprenorphine, or discontinuation of opioids and administration of oral clonidine and other medications to relieve withdrawal symptoms (ASAM, 2000, Attachment 9). Methadone withdrawal was developed in the 1950s as a safe, simple and painless procedure. Unfortunately, there was a high rate of relapse post-withdrawal. Furthermore, federal regulations restrict its use to specifically licensed programs (O'Connor et al, 1997, Attachment 4). In 1978, clonidine, an alpha-2-adrenergic agonist, was found to ameliorate withdrawal symptoms by decreasing noradrenergic hyperactivity. However, clonidine did not relieve all withdrawal symptoms, did not shorten the time necessary for withdrawal, did not appear to affect long-term abstinence, and had the potential side-effect of hypotension (Kleber, 1998). Otherwise, these methods of detoxification and unassisted opioid withdrawal have no major health risks and the risk of death is negligible.

However, even when pharmacological agents are used to manage symptoms of opiate withdrawal such as nausea, vomiting, and diarrhea (Farrell, 1994), there is often significant patient discomfort involved in the process.

The severity of opioid withdrawal symptoms is sometimes related to the abused opioid's elimination half-life (Chanmugam et al, 2000). Patients are often unwilling, therefore, to even attempt detoxification. There is currently a dropout rate of approximately 30% in the inpatient detoxification of opioid addicts (Scherbaum et al, 1998).

Accelerated (Rapid and Ultrarapid) Opioid Withdrawal Techniques

Consequently, investigators have developed various accelerated methods of opioid detoxification using an opioid antagonist agent, such as naloxone, naltrexone, or nalmephine, to displace binding of the opioid drug to the opioid receptors in the brain (San et al, 1999). Rapid opioid detoxification rapidly induces withdrawal through the monitored therapeutic administration of an opioid antagonist agent, and the resultant withdrawal symptoms are mitigated by a protocol using agents, such as clonidine, midazolam, propofol, promethazine, octreotide, and baclofen (Bovill, 2000; Bulthius et al, 2000). In ultrarapid opioid detoxification, withdrawal is precipitated by administration of the opioid antagonist while at the same time blocking patients' subjective discomfort by sedation with general anesthesia or heavy benzodiazepine sedation (ASAM, 2000, Attachment 9).

Following the procedure, the patient is usually started on oral naltrexone maintenance to discourage relapse (Bovill, 2000). In some cases, a naltrexone pellet is implanted in the subcutaneous tissue to provide continuous opioid antagonist activity (Chanmugam et al, 2000),

Major benefits of such accelerated opioid detoxification protocols include their shorter duration of acute withdrawal symptoms, immediate induction of a state of abstinence, and down-regulation of opioid receptor sensitivity (ASAM, 2000, Attachment 9). In addition, these approaches have the theoretical advantage of moving patients through detoxification rapidly. This allows for increasing numbers of addicts to be treated (Chanmugam et al, 2000), perhaps reducing the risk of relapse, and therefore enabling the more immediate start of naltrexone maintenance and other supportive interventions (O'Connor et al, 1998, Attachment 8). Finally, the proposed use of rapid detoxification in outpatient and primary care settings may further increase access to treatment of addiction (O'Connor et al, 1998, Attachment 8).

Major risks of such accelerated detoxification include the potential morbidity and mortality of anesthetic agents (Mattick et al, 1996), including cardiovascular complications (Kienbaum et al, 1998) and the possibility of aspiration during heavy sedation with consequent loss of the protective gag reflex (O'Connor et al, 1998, Attachment 8; ASAM, 2000, Attachment 9). In addition, patients emerging from sedation or anesthesia often continue to experience psychological cravings and preoccupation with obtaining and using opioids, sometimes with acute agitation and diarrhea in the period immediately following the detoxification (Alvarez et al, 1999; ASAM, 2000, Attachment 9).

Accelerated (Rapid and Ultrarapid) Opioid Withdrawal Techniques, Continued

Because of the altered opioid receptor sensitivity, detoxified patients lose their previous high degree of tolerance to the opioid. Therefore, resuming opioid use at the same high doses used before detoxification could potentially lead to overdose or even death (ASAM, 2000, Attachment 9; Bovill, 2000). Finally, the long-term efficacy of accelerated detoxification methods remain unclear, with their potential for emphasizing rehabilitation (Chanmugam et al, 2000).

Rapid Opioid Detoxification

In the 1970s, Blachley (1975) and Resnick (1977) began to use the short-acting opioid antagonist naloxone to shorten the withdrawal. Subsequently, investigators at Yale developed a successful "rapid" detoxification technique by combining the long-acting antagonist naltrexone with clonidine (O'Connor et al, 1992, Attachment 1). While the mode of action of rapid opioid detoxification remains obscure (Spanagel, 1999), some studies have suggested that opioid withdrawal can be completed in 2-3 days among outpatients using clonidine, benzodiazepines, and other medications to ameliorate symptoms and signs of withdrawal, at relatively low-cost, with high completion rate (65-85%) and up to 75% still on naltrexone 30 days later (O'Connor et al, 1992, Attachment 1).

Ultrarapid Opioid Detoxification

In 1988, Loimer in Austria (1988; 1990, Attachment 5) developed an "ultrarapid" detoxification technique, shortening the procedure by carrying it out under general anesthesia (thiopentone) followed by several days of benzodiazepine sedation. Presslich et al (1989) carried it out under barbiturate-induced anesthesia. Because the ultrarapid technique employs a general anesthetic or heavy sedation, the procedure takes place without the patient's awareness of discomfort and in a rapid (4-6 hour) time interval. Since the 1980s, the technique has been modified and improved (Brewer, 1997). One current method uses naltrexone as the opioid antagonist, propofol as the anesthetic, ondansetron as an antiemetic, octreotide as an antidiarrheal agent, and clonidine and benzodiazepines for other withdrawal symptoms (Kleber, 1998). Intubation is usually employed with use of the general anesthetic, and thus the patient is hospitalized. In some centers, midazolam (benzodiazepine) sedation is used instead of general anesthesia. Intubation is not always performed with heavy sedation, and thus the patient may be treated in an outpatient setting.

TA Criterion 1: The technology must have final approval from the appropriate government regulatory bodies.

Methadone is an FDA approved drug (August 1947) indicated for detoxification and maintenance of opiate dependence in adults. It is also indicated for treatment of adult pain.

Naloxone is an FDA approved drug (April 1971) for the diagnosis of opioid poisoning, Methadone overdose, Propoxyphene overdose, and opiate induced respiratory depression. It is not approved for treatment or detoxification of opioid addiction.

Naltrexone is an FDA-approved drug (November 1984) indicated for alcohol dependence and narcotic addiction. It is not approved for opioid detoxification.

TA criterion 1 is met.

TA Criterion 2: The scientific evidence must permit conclusions concerning the effectiveness of the technology regarding health outcomes.

Outcomes to be evaluated following rapid and ultrarapid opioid detoxification include: duration and intensity of withdrawal symptoms and signs; patient comfort and preference; detoxification success (defined as whether study participants received a full opioid-blocking dose [50 mg] of naltrexone); safety of treatment including its adverse effects; rate of continuation in follow-up treatment; and long-term outcomes including abstinence and relapse rates (Kasser, 1997; Scherbaum et al, 1998). The duration and intensity of withdrawal symptoms and signs has been assessed by patients using a modified 10-item version of the Short Opiate Withdrawal Scale (Gossop, 1990) and the Subjective Opiate Withdrawal Scale (Handlesman et al, 1987). For example, the following items on the Short Opiate Withdrawal Scale are each rated on a 4-point scale (0 = none, 1 = mild, 2 = moderate, 3 = severe): a) feeling sick, b) stomach cramps, c) muscle spasm, d) feelings of coldness, e) heart pounding, f) muscle tension, g) aches and pains, h) yawning, i) runny eyes, and j) insomnia. Others have utilized the Kolb (1938) or Wang (1974) scales to assess the severity of withdrawal symptoms (Loimer et al, 1991, Attachment 6; Loimer et al, 1990, Attachment 5; Seoane et al, 1997, Attachment 7).

TA criterion 2 is met.

Levels of Evidence: 1, 5

TA Criterion 3: The technology must improve the net health outcomes.

Patient Benefits

Case Reports

Several case reports of rapid and ultrarapid opioid detoxification have been published (Cook et al, 1998; De Giacomo et al, 1999; Greenberg, 2000).

Case Series

More than a dozen case series of rapid and ultrarapid opioid detoxification have been published (Resnick et al, 1977; Presslich et al, 1989; Loimer et al, 1990, Attachment 5; Legarda et al, 1994; Pfab et al, 1996; Scherbaum et al, 1998; Cucchia et al, 1998; Gold et al, 1999; Bell et al, 1999; Umbricht et al, 1999; Kienbaum et al, 2000; Elman et al, 2001; Chutuape et al, 2001). Strang and colleagues (1997) and Simon (1997) have published summaries that include many of the case series.

Nonrandomized Comparative and Randomized Comparative or Controlled Trials

Table 1 summarizes 4 nonrandomized and randomized comparative or controlled trials of rapid opioid detoxification (O'Connor et al, 1992, Attachment 1; O'Connor et al, 1995, Attachment 2; Gerra et al, 1995, Attachment 3; O'Connor et al, 1997, Attachment 4). Table 2 summarizes 3 nonrandomized and randomized comparative or controlled trials of ultrarapid opioid detoxification (Loimer et al, 1990, Attachment 5; Loimer et al, 1991, Attachment 6; Seoane et al, 1997, Attachment 7).

Rapid Detoxification

O'Connor and colleagues (1992, Attachment 1) conducted a pilot study to determine the feasibility of primary care-based ambulatory opiate detoxification, comparing two regimens: clonidine versus clonidine plus naltrexone. Among 62 opiate addicts in a medical clinic referred for detoxification, 40 patients selected clonidine, and 22 clonidine-naltrexone. The groups (clonidine and clonidine-naltrexone) were similar in baseline features, including: craving scores and withdrawal scores. Overall, 61% of detoxifications were successful, including 43% of those using clonidine and 95% of those using clonidine/naltrexone ($p<.0001$). Of 45 patients who ultimately completed ambulatory opiate detoxification, 78% remained in treatment for at least one month.

TA Criterion 3 (Rapid Detoxification), Continued

In a separate, prospective, nonrandomized clinical trial, O'Connor and colleagues (1995, Attachment 2) compared the same two ambulatory opioid detoxification strategies: clonidine versus clonidine plus naltrexone. In the clonidine protocol, clonidine was administered every 4 hours "as needed" for up to 12 days. In the clonidine plus naltrexone protocol, clonidine was administered and naltrexone was administered in increasing doses over five days. Both protocols included adjuvant medications for muscle cramps, insomnia, and vomiting. Successfully detoxified patients were referred to ongoing drug treatment. A total of 125 opioid-addicted intravenous drug users enrolled in the study: 57 selected clonidine and 68 selected clonidine plus naltrexone. Results showed that detoxifications were successful among 42% of the clonidine group and 94% of the clonidine plus naltrexone group ($p < 0.001$). The authors concluded that the clonidine plus naltrexone strategy might be more effective in a primary care ambulatory setting than clonidine alone.

However, in both of these studies, participants were allowed to select their protocol group assignment, raising the possibility of selection bias. In addition, long-term outcomes were not reported.

Table 1. Nonrandomized and Randomized Trials of Rapid Opioid Detoxification

Author, Year	Type of Study	No. Patients	Detox Method	Withdrawal symptom scores	Detox Success	Ongoing Rx Maintenance	Relapse	Complications
O'Connor et al, 1992	Prospective;	40	Clonidine		43%		1month:	
Attachment 1	nonrandomized;						23%	Hypotension (2.5%)
	comparative; rx	vs.	vs.		vs.		vs.	
	self-selection	22	Clonidine +		95%		21%	
			Naltrexone		(p <.0001)			
O'Connor et al, 1995	Prospective;	5.7	Clonidine		42%			
Attachment 2	nonrandomized;							
	comparative;	vs.	vs.		vs.			
	rx self-selection	68	Clonidine +		94%			
			Naltrexone		(p <.001)			
Gerra et al, 1995	Prospective;	33	Clonidine	48h: 72h:			3 month: 6 month:	
Attachment 3	randomized;	vs.	vs.	5.44 3.77			40.1 59.5	
	placebo-controlled;	42	Clonidine +					
	double-blind		Naltrexone	22.88 5.22			4 17.9	
		vs.	vs.					
		58	Clonidine +					
			Naloxone	15.22 4.33			7.2 19.5	
		vs.	vs.					
		19	Placebo	49.11 55.88			71.8 74	
				(p < .05) (p < .001)			(p <.005) (p<.005)	
O'Connor et al, 1997	Prospective;	55	Clonidine	17.8	65%	8 days:		
Attachment 4	randomized;	vs.	vs.	vs.	vs.	65%		
	comparative	54	Clonidine +	17.6	81%	vs.		
			Naltrexone			54%		
		vs.	vs.	vs.	vs.	vs.		
		53	Buprenophine	13.2	81%	60%		
			+ Clonidine					
			+ Naltrexone					
				(p = .01)	(p = N.S.)	(p = N.S.)		

Table 2.	**Nonrandomized and Randomized Trials of Ultrarapid Opioid Detoxification**						
Author, Year	Type of Study	No. Patients	Detox Method	Withdrawal symptom scores	Withdrawal Signs	Detox Success	Complications
Loimer et al, 1990	Prospective;	9	Methohexitone-		~ 7		
Attachment 5	randomized;	vs.	Naloxone				
	placebo-controlled		vs.		vs.		
		9	Methohexitone-		~ 24		
			Placebo		(p < .01)		
Loimer et al, 1991	Prospective;	15	Abrupt	33.49	pupilometry	100%	
Attachment 6	nonrandomized;		Methohexitone-				
	comparative		Naloxone				
		vs.	vs.	vs.		vs.	
		29	Gradual	46.63		86.2%	
			Methadone taper	(p = N.S.)	(p = N.S.)		
Seoane et al, 1997	Prospective;		Naloxone -		4.9	100%	Intubation
Attachment 7	randomized;		Light sedation				1.3%
	comparative		vs.		vs.		vs.
			Naloxone -		4.8	100%	2.6%
			Heavy sedation		(p = N.S.)		

TA Criterion 3 (Rapid Detoxification), Continued

Gerra et al (1995, Attachment 3) evaluated withdrawal symptoms in 152 heroin-abusing patients after therapy with (a) clonidine only, (b) clonidine plus naltrexone, (c) clonidine plus naloxone, and (d) placebo only. Results showed fewer withdrawal symptoms in the clonidine only group than in the clonidine plus naltrexone, clonidine plus naloxone, or placebo groups at both 48 hours ($p<.05$) and 72 hours ($p<.001$). However, relapse was significantly less in the clonidine plus naltrexone and clonidine plus naloxone groups than in the clonidine only or placebo groups at 3 months (4% and 7.2% versus 40.1% and 71.8%, respectively, $p<.005$) and 6 months (17.9% and 19.5% versus 59.5% and 74%, respectively, $p<.005$).

In the most recent randomized, double-blind clinical trial, O'Connor and colleagues (1997, Attachment 4) randomized 162 heroin-dependent adults to one of 3 rapid detoxification protocols: clonidine; clonidine plus naltrexone; or buprenorphine, then clonidine plus naltrexone. The outcomes included successful detoxification; treatment retention (at 8 days); and withdrawal symptoms. All patients who completed detoxification were referred for naltrexone maintenance. Results showed that 65% of participants who received clonidine, 81% who received clonidine plus naltrexone, and 81% who received buprenorphine-clonidine-naltrexone were successfully detoxified (p=N.S.). Retention did not differ significantly across the groups: 65% of participants who received clonidine, 54% who received clonidine plus naltrexone, and 60% who received buprenorphine-clonidine-naltrexone (p=N.S.). However, participants who received the buprenorphine-clonidine-naltrexone regimen had a significantly lower mean withdrawal symptom score than those who received clonidine or clonidine plus naltrexone ($p<.01$). The authors concluded that participants in the clonidine plus naltrexone group and those in the buprenorphine-clonidine-naltrexone group were more likely to complete detoxification, although retention at 8 days did not differ among the groups. Participants who were assigned to the buprenorphine-clonidine-naltrexone group experienced less severe withdrawal symptoms than those assigned to the other two groups. Again, long-term outcomes were not reported.

Ultrarapid Detoxification

In a double-blind, randomized placebo-controlled trial by Loimer et al (1990, Attachment 5), methohexitone blocked objective signs of opiate withdrawal caused by a bolus injection of naloxone in 18 patients.

TA Criterion 3 (Ultrarapid Detoxification), Continued

Furthermore, continued naloxone therapy for 48 hours prevented signs of withdrawal from appearing, and withdrawal symptoms resolved within 6 days. The authors concluded that this approach was an effective and well-tolerated withdrawal therapy.

Using both computer-assisted pupilometry and rating of severity of withdrawal symptoms, Loimer et al (1991, Attachment 6) documented a similar efficacy of ultrarapid (naloxone with methohexitone) and gradual (methadone taper) opiate detoxification. Withdrawal symptoms resolved after rapid naloxone withdrawal treatment of 15 patients within 6 days, and after inpatient methadone withdrawal treatment of 29 patients within 21 days. None of the naloxone-treated patients, but 4 of the 29 methadone-tapered patients, withdrew from the trial.

In a randomized, controlled study, Seoane and colleagues (1997, Attachment 7) enrolled 300 treatment-refractory, heroin-addicted patients for ultrarapid intravenous detoxification using naloxone infusion, then oral naltrexone, and then randomized them to either monitored light intravenous sedation or unmonitored deep intravenous sedation. Results showed that 100% of patients were successfully detoxified and 93% remained abstinent one month later. Severity of withdrawal symptoms was 4.9 points in the light sedation group versus 4.8 in the deep sedation group (p = N.S.). Two patients (1.3%) in the light sedation group and four (2.6%) in the deep sedation group required tracheal intubation (p = N.S.). One severe complication occurred, a case of aspiration pneumonia that improved with antibiotic treatment. The authors concluded that successful ultrarapid intravenous detoxification could be achieved using light sedation.

Meta-Analysis

In 1998, O'Connor et al (1998, Attachment 8) published a detailed examination of 12 studies of rapid detoxification, including several case series and the comparative trials of O'Connor et al (1992, Attachment 1; 1995, Attachment 2; 1997, Attachment 4) and Gerra et al (1995, Attachment 3), and 9 studies of ultrarapid detoxification, including several case series and the comparative trials of Loimer et al (1990, Attachment 5), Loimer et al (1991, Attachment 6), and Seoane et al (1997, Attachment 7). The 12 rapid detoxification studies reviewed enrolled 641 subjects (range, 1-162); only 4 of the 12 studies enrolled more than 50 patients.

TA Criterion 3 (Meta-Analysis), Continued

Of the 12 rapid detoxification studies, 7 were inpatient studies, and the protocols varied considerably, though all except 1 included clonidine along with opioid antagonist (naloxone or naltrexone). The analysis noted that outcomes assessed varied considerably. Only 3 studies included a control group, only 2 employed a randomized design, and only 3 reported outcomes beyond 12 days.

The 9 ultrarapid detoxification studies reviewed enrolled 424 subjects (range, 6-300); only 1 of the 9 studies enrolled more than 50 patients. All were inpatient studies, and the detoxification and anesthesia protocols varied. Only 3 included a control group, only 2 employed a randomized design, and only 2 reported outcomes beyond 7 days.

In both sets of studies, in addition to opioid addiction and heroin abuse, subjects included patients in methadone maintenance programs and even a patient dependent on prescription opioids. The authors concluded that the existing literature on rapid and ultrarapid detoxification was limited in terms of the number of subjects evaluated, a variable clinical spectrum of subjects, the variation in protocols studied, the lack of randomized design and use of control groups, and the short-term nature of the outcomes reported. They concluded that further research is needed using more rigorous research methods, longer-term outcomes, and comparisons with other methods of treatment for opioid dependence.

Long-Term Follow-Up Studies

Unfortunately, some observational studies have shown that the rapid and ultrarapid detoxification techniques do not improve abstinence rates, even in naltrexone-maintenance patients. Reported abstinence rates after 3 months of naltrexone maintenance range widely from 18% to 93%. Abstinence rates have been documented as follows: 93% at 1 month (Seoane et al, 1997, Attachment 7); 57% at 2 months (Elman et al, 2001); 76% at 3 months (Bell et al, 1999); 35% at 6 months (Albanese et al, 2000); 31% at 6 months (Chutuape et al, 2001); 20% at 6 months (Cucchia et al,1998); 57% at 12 months (Rabinowitz et al., 1997; Rabinowitz et al,1998); 68% at 12 months (Hensel et al, 2000); 18% at $\leq$ 18 months (Gold et al, 1999). It should be noted that some of these rates are based on telephone interviews of patients (Rabinowitz et al., 1997; Rabinowitz et al,1998) rather than urine tests for opioid metabolites (Chutuape et al, 2001).

TA Criterion 3, Continued

Patient Risks

There have been serious and life-threatening complications and deaths following rapid and ultrarapid opioid detoxification (Justins, 1998). Kienbaum and colleagues (1998; 2000) reported profound increases in plasma epinephrine concentrations and cardiovascular stimulation during naloxone-precipitated opioid withdrawal under anesthesia. Allhof et al (1999) documented an association of ultrarapid opioid detoxification with a risk of QT-interval prolongation and bradycardia. Rapid and ultrarapid opioid detoxification have produced thyroid hormone suppression (Pfab et al, 1999), marked elevations of plasma ACTH and cortisol levels (Elman et al, 2001), increases in plasma epinephrine and norepinephrine levels (Kienbaum et al,1998; Kienbaum et al, 2000), pulmonary edema (Taft, 1983), respiratory failure (San et al, 1995; Pfab et al, 1999), tachypnea (Elman et al, 2001), increases in spontaneous ventilation reflecting increased metabolism and muscle activity (Hoffman et al, 1998), rhabdomyolysis (Chanmugam et al, 2000), first-degree heart block (Brewer et al, 1997), Mallory-Weiss tear (Chanmugam et al, 2000), renal failure (Pfab et al, 1999), catheter-related thrombosis and sepsis (Scherbaum et al, 1998) and psychosis (Shreeram et al, 2001). Deaths have been described with anesthesia-assisted rapid detoxification (Brewer et al, 1996; Stephanson, 1997; Kleber et al, 1998; Dyer, 1998; Gold, 1999). Finally, because opioid tolerance is much reduced or absent following detoxification, resuming opioid use at the same high doses used before detoxification could potentially lead to overdose or even death (ASAM, 2000, Attachment 9; Bovill, 2000).

Pending Trials

Whittington and colleagues (2000) are conducting an NIH-funded randomized trial that compares the effectiveness and safety of anesthesia-assisted rapid opioid detoxification with two alternative methods of opioid detoxification. A large, multicenter controlled study is also apparently underway in the Netherlands (Bovill, 2000).

TA Criterion 4: The technology must be as beneficial as any established alternatives.

Alternatives to rapid and ultra rapid opioid detoxification include: methadone maintenance, supervised methadone taper, and naltrexone maintenance; counseling-supported abstinence; cognitive-behavioral techniques; and toxicological surveillance (Cook et al, 1998).

Methadone maintenance may be the treatment of choice for many patients, especially those with high levels of dependence, daily users, those with unstable social situations, those who failed detoxification-initiated treatments on previous attempts, and those who prefer agonist treatment. On the other hand, naltrexone maintenance may be the treatment of choice for selected populations of opioid-dependent individuals, particularly those who report relatively low levels of opioid use, who are highly motivated, and who have socially stable situations (O'Connor et al 1998, Attachment 8).

The lack of control groups in most published studies of rapid and ultra rapid detoxification means that direct comparisons of the effectiveness of these new techniques to more traditional detoxification approaches (e.g., methadone taper or clonidine) is not possible (O'Connor et al 1998, Attachment 8). It is possible that the more prolonged detoxification using traditional techniques might allow more time for the patient to engage in an ongoing addiction treatment program. Relapse rates following detoxification without careful follow-up after the treatment are extremely high (Mattick et al, 1996; O'Brien et al, 1996).

There has been no randomized controlled trial comparing methadone maintenance with rapid or ultrarapid detoxification techniques. However, Sees et al (2000) reported better results from traditional methadone maintenance than from a 180-day psychosocially enriched detoxification program in treatment of 154 adults with opioid dependence. Patients were randomized to methadone maintenance therapy (n = 91), which required 2 hours of psychosocial therapy per week during the first 6 months; or detoxification (n = 88), which required 3 hours of psychosocial therapy per week, 14 education sessions, and 1 hour of cocaine group therapy, if appropriate, for 6 months, and 6 months of (nonmethadone) aftercare services.

TA Criterion 4, Continued

Results showed that methadone maintenance therapy resulted in greater treatment retention (median, 438.5 vs 174.0 days) and lower heroin use rates than did detoxification. Methadone maintenance therapy resulted in a lower rate of drug-related (mean at 12 months, 2.17 vs 3.73) HIV risk behaviors and in a lower severity score for legal problems (mean at 12 months, 0.05 vs 0.13). These results confirmed the usefulness of methadone in reducing heroin use and HIV risk behaviors and did not provide support for diverting resources from methadone maintenance into long-term detoxification.

TA Criterion 5: The improvement must be attainable outside the investigational setting.

Whether rapid or ultrarapid opioid detoxification improve health outcomes for opioid addiction more than established treatments has not been established in the investigational setting, let alone under conditions of usual medical practice.

TA criterion 5 is not met.

RECOMMENDATIONS OF OTHERS

Blue Cross Blue Shield Association

The BCBSA has not reviewed this topic.

American Society of Addiction Medicine (ASAM)

The ASAM Public Policy Statement (ASAM, 2000, Attachment 9) states in part, "opioid detoxification is only a first step, and is not in itself an effective treatment of opioid addiction. ASAM does not support the initiation of opioid detoxification interventions when these are not part of a continuum of services that promote ongoing recovery from addiction…. Opioid Antagonist Agent Detoxification Under Sedation or Anesthesia (OADUSA) can be an appropriate withdrawal management intervention for selected patients, provided that such services are performed by adequately trained staff with access to appropriate emergency medical equipment…. More research is needed to better define its role in opioid detoxification. Further studies of outcome are needed, including both the safety and efficacy of OADUSA as compared to other opioid detoxification modalities, as well as any differential effects on the long-term rehabilitation of opioid addicts."

California Society of Addiction Medicine (CSAM)

CSAM has provided a position statement (5/13/02) which reads in part, "Therefore, when discussing the modalities which facilitate opiate withdrawal CSAM endorses a limited role for rapid opioid detoxification (without anesthesia)…Rapid opioid detoxification without anesthesia has limited use with persons who are extremely motivated for abstinence, those who need to attain abstinence rapidly due to external factors, those who are not anticipating a severe withdrawal, and those who want to facilitate being placed upon a chronic antagonist, such as naltrexone…CSAM, however, does not support the routine use of Anesthesia Assisted Opioid Detoxification. AAROD may have a role in helping persons enter and engage into opioid antagonist maintenance, or non-opioid based treatment. However, until its safety and efficacy have been proven, and the procedure has been standardized, AAROD should only be used under research conditions with careful informed consent, monitoring, and treatment evaluation. Two components of this procedure, precipitated withdrawal and anesthesia, are known to have risks that are not present in the more commonly used detoxification and withdrawal treatments. Any benefits of the procedure have not yet been shown to be with these added risks."

"However, focusing our discussion upon facilitating alternative methods of opiate detoxification is in many ways misleading. No matter the method of detoxification, and no matter the criteria for patient selection for detoxification, poor long-term outcomes (40-60% relapse by six months, approaching 90% by 12 months) suggest a chronic disease – perhaps a long lasting abstinence syndrome – that is not being addressed by detoxification of any kind. The excellent outcomes of methadone maintenance and the poor outcomes of opiate abstinence raise questions about the role of detoxification for the treatment for opiate addicted patients".

California Society of Anesthesiologists

The Society has been asked to provide a policy statement and representation at the meeting.

California Psychiatric Association

The Association does not have a formal policy statement. Representation at the meeting has been requested.

CONCLUSION

Existing published studies of rapid detoxification and ultra rapid detoxification have raised the prospect of new approaches to opioid detoxification. However, methodological limitations limit the generalizability of the studies, and thus these techniques, to widespread clinical application. Lack of randomization and blinding, sample size variations, different clinical profiles of studied patients, and diverse pharmacologic treatment used and clinical settings, preclude comparisons between studies and the drawing of any firm conclusions regarding the efficacy and safety of these procedures. The post-detoxification relapse rate for these techniques appears to be quite variable. The most suitable patients for these procedures must still be defined.

Both rapid and ultra rapid opioid detoxification must undergo further scientific evaluation in randomized, controlled trials to determine whether their clinical effectiveness and safety outweigh their risks. Further research is also warranted to evaluate longer-term outcomes and compare these methods with other treatments for opioid addiction such as methadone maintenance supervised methadone taper, naltrexone maintenance, counseling-supported abstinence, and toxicological surveillance.

Accelerated detoxification techniques are not a cure for addiction.

RECOMMENDATION

- **It is recommended that rapid opioid detoxification does not meet Blue Shield TA criteria.**

- **It is recommended ultra-rapid opioid detoxification does not meet Blue Shield TA criteria.**

Committee Approval as Recommended.

06/12/02

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