

ADDICTION MEDICINE ESSENTIALS

CLINICAL INSTITUTE WITHDRAWAL ASSESSMENT OF ALCOHOL SCALE, REVISED (CIWA-AR)

Many quantification instruments have been developed for monitoring alcohol withdrawal (Guthrie, 1989; Sullivan et al, 1989; Sellers and Naranjo, 1983). No single instrument is significantly superior to the others. What is clear is that there are significant clinical advantages to quantifying the alcohol withdrawal syndrome. Quantification is key to preventing excess morbidity and mortality in a group of patients who are at risk for alcohol withdrawal. Such instruments help clinical personnel recognize the process of withdrawal before it progresses to more advanced stages, such as *delirium tremens*. By intervening with appropriate pharmacotherapy in those patients who require it, while sparing the majority of patients whose syndromes do not progress to that point, the clinician can prevent over- and undertreatment of the alcohol withdrawal syndrome. Finally, by quantifying and monitoring the withdrawal process, the treatment regimen can be modified as needed.

The best known and most extensively studied scale is the Clinical Institute Withdrawal Assessment - Alcohol (CIWA-A) and a shortened version, the CIWA-A revised (CIWA-Ar). This scale has well-documented reliability, reproducibility and validity, based on comparison to ratings by expert clinicians (Knott, et al, 1981; Wiehl, et al 1994; Sullivan, et al, 1989). From 30 signs and symptoms, the scale has been carefully refined to a list of 10 signs and symptoms in the CIWA-Ar (Wiehl, et al, 1994). It is thus easy to use and has been shown to be feasible to use in a variety of clinical settings, including detoxification units (Naranjo, et al, 1983; Hoey, et al, 1994), psychiatry units (Heinala, et al, 1990), and general medical/surgical wards (Young, et al, 1987; Katta, 1991). The CIWA-Ar has added usefulness because high scores, in addition to indicating severe withdrawal, are also predictive of the development of seizures and delirium (Naranjo, et al, 1983; Young, et al, 1987).

The CIWA-Ar scale can measure 10 symptoms. Scores of less than 8 to 10 indicate minimal to mild withdrawal. Scores of 8 to 15 indicate moderate withdrawal (marked autonomic arousal); and scores of 15 or more indicate severe withdrawal (impending *delirium tremens*). The assessment requires 2 minutes to perform (Sullivan, et al, 1989).

CIWA-Ar categories, with the range of scores in each category, are as follows:

Agitation	(0-7)
Anxiety	(0-7)
Auditory disturbances	(0-7)
Clouding of Sensorium	(0-4)
Headache	(0-7)
Nausea/Vomiting	(0-7)
Paroxysmal Sweats	(0-7)
Tactile disturbances	(0-7)
Tremor	(0-7)
Visual disturbances	(0-7)

The instrument also has been adapted for benzodiazepine withdrawal assessment (Clinical Institute Withdrawal Assessment-Benzodiazepine).

A study of the revised version of the CIWA predicted that those with a score of >15 were at increased risk for severe alcohol withdrawal (RR 3.72;95% confidence interval 2.85-4.85); the higher the score, the greater the risk. Some patients (6.4%) still suffered complications, despite low scores, if left untreated (Foy, et al, 1988).

REFERENCES

Foy A, March S & Drinkwater V (1988). Use of an objective clinical scale in the assessment and management of alcohol withdrawal in a large general hospital. *Alcoholism: Clinical and Experimental Research* 12:360-364.

Guthrie SK (1989). The treatment of alcohol withdrawal. *Pharmacotherapy* 9(3):131-143.

Heinala P, Pieponen T & Heikkinen H. (1990). Diazepam loading in alcohol withdrawal: Clinical pharmacokinetics. *International Journal of Clinical Pharmacology, Therapy and Toxicology* 28:211-217.

Hoey LL, Nahun A & Vance-Bryan K (1994). A retrospective review and assessment of benzodiazepines in the treatment of alcohol withdrawal in hospitalized patients. *Pharmacotherapy* 14:572-578.

Katta BB (1991). Nifedapine for protracted withdrawal syndrome. *Canadian Journal of Psychiatry* 36:155.

Knott DH, Lerner D, Davis-Knott T & Fink RD (1981). Decision for alcohol detoxification: A method to standardize patient evaluation. *Postgraduate Medicine* 69:65-76.

Naranjo CA, Sellers EM, Chater K, Iversen P, Roach C & Sykora K (1983). Nonpharmacologic intervention with acute alcohol withdrawal. *Clinical Pharmacology and Therapeutics* 34:214-219.

Sellers EM & Naranjo CA (1983). New strategies for the treatment of alcohol withdrawal. *Psychopharmacology Bulletin* 22:88-91.

Sullivan JT, Sykora K, Schneiderman J, Naranjo CA & Sellers EM (1989). Assessment of alcohol withdrawal: The revised Clinical Institute Withdrawal Instrument for Alcohol Scale (CIWA-Ar). *British Journal of Addiction* 84:1353-1357.

Young GP, Rores C, Murphy C & Dailey RH (1987). Intravenous phenobarbital for alcohol withdrawal and convulsions. *Annals of Emergency Medicine* 16:847-850.

Wiehl WO, Hayner G & Galloway G (1994). Haight Ashbury Free Clinics drug detoxification protocols, Part 4: Alcohol. *Journal of Psychoactive Drugs* 26:57-59.

CLINICAL INSTITUTE WITHDRAWAL ASSESSMENT OF ALCOHOL SCALE, REVISED (CIWA-AR)

Patient: Jenny Date: _____ Time: _____ (24 hour clock, midnight = 00:00)

Pulse or heart rate, taken for one minute: 70 beats/minute Blood pressure: 102/52 mmHg

NAUSEA AND VOMITING — Ask “Do you feel sick to your stomach? Have you vomited?” Observation.

- 0 no nausea and no vomiting
- 1 mild nausea with no vomiting
- 2
- 3
- 4 **intermittent nausea with dry heaves**
- 5
- 6
- 7 constant nausea, frequent dry heaves and vomiting

TREMOR — Arms extended and fingers spread apart. Observation.

- 0 **no tremor**
- 1 not visible, but can be felt fingertip to fingertip
- 2
- 3
- 4 moderate, with patient's arms extended
- 5
- 6
- 7 severe, even with arms not extended

PAROXYSMAL SWEATS — Observation.

- 0 **no sweat visible**
- 1 barely perceptible sweating, palms moist
- 2
- 3
- 4 beads of sweat obvious on forehead
- 5
- 6
- 7 drenching sweats

ANXIETY — Ask “Do you feel nervous?” Observation.

- 0 no anxiety, at ease
- 1 mild anxious
- 2
- 3
- 4 **moderately anxious, or guarded, so anxiety is inferred**
- 5
- 6
- 7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

AGITATION — Observation.

- 0 normal activity
- 1 somewhat more than normal activity
- 2
- 3
- 4 **moderately fidgety and restless**
- 5
- 6
- 7 paces back and forth during most of the interview, or constantly thrashes about

TACTILE DISTURBANCES — Ask “Have you any itching, pins and needles sensations, any burning, any numbness, or do you feel bugs crawling on or under your skin?” Observation.

- 0 **none**
- 1 very mild itching, pins and needles, burning or numbness
- 2 mild itching, pins and needles, burning or numbness
- 3 moderate itching, pins and needles, burning or numbness
- 4 moderately severe hallucinations
- 5 severe hallucinations
- 6 extremely severe hallucinations
- 7 continuous hallucinations

AUDITORY DISTURBANCES — Ask “Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?” Observation.

- 0 **not present**
- 1 very mild harshness or ability to frighten
- 2 mild harshness or ability to frighten
- 3 moderate harshness or ability to frighten
- 4 moderately severe hallucinations
- 5 severe hallucinations
- 6 extremely severe hallucinations
- 7 continuous hallucinations

VISUAL DISTURBANCES — Ask “Does the light appear to be too bright? Is its color different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?” Observation.

- 0 **not present**
- 1 very mild sensitivity
- 2 mild sensitivity
- 3 moderate sensitivity
- 4 moderately severe hallucinations
- 5 severe hallucinations
- 6 extremely severe hallucinations
- 7 continuous hallucinations

HEADACHE, FULLNESS IN HEAD — Ask “Does your head feel different? Does it feel like there is a band around your head?” Do not rate for dizziness or lightheadedness. Otherwise, rate severity.

- 0 no present
- 1 very mild
- 2 **mild**
- 3 moderate
- 4 moderately severe
- 5 severe
- 6 very severe
- 7 extremely severe

ORIENTATION AND CLOUDING OF SENSORIUM — Ask “What day is this? Where are you? Who am I?”

- 0 **oriented and can do serial additions**
- 1 cannot do serial additions or is uncertain about date
- 2 disoriented for date by no more than 2 calendar days
- 3 disoriented for date by more than 2 calendar days
- 4 disoriented for place/or person

The CIWA-Ar is *not* copyrighted and may be reproduced freely.
Sullivan, J.T.; Sykora, K.; Schneiderman, J.; Naranjo, C.A.; and Sellers, E.M.
Assessment of alcohol withdrawal: The revised Clinical Institute Withdrawal
Assessment for Alcohol scale (CIWA-Ar). *British Journal of Addiction* 84:1353-1357, 1989.

Patients scoring less than 10 do not usually need additional medication for withdrawal.

Total CIWA-Ar Score 14

Rater's Initials JQ

Maximum Possible Score 67