

A PERUSAL ON ACUTE ALCOHOL ABSTINENCE AND ITS IMPACT WITH RESPECT TO COVID-19 SETTINGS

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ABSTRACT

Severe Acute Respiratory Syndrome Corona Virus 2 (SARS-CoV-2), causes corona virus disease (COVID-19) and was first noticed in December 2019 in Wuhan city, China which then later mushroomed to major provinces in China and then Worldwide. The first COVID-19 case in India was reported on 30 January 2020. The government of India implemented lockdown for 21 days on 24 March 2020. The activities like those related to food, groceries, healthcare, communication and basic amenities were the only few which aided the society during the period. The practice or promotion of abstinence from alcohol and related products is called Teetotalism. Acute unavailability of alcohol in addicts or heavy drinkers produced Alcohol

Withdrawal Syndrome (AWS). Kerala witnessed a considerable number of suicides with respect to alcohol withdrawal, with six such deaths as against two attributed to Covid-19, as on April 1, 2020. Initial Alcohol Withdrawal Symptoms (tremors, nausea, diaphoresis, hyperthermia, vomiting, hypertension, tachycardia, tachypnoea) and Delirium tremens is the most severe. Identification of AWS symptoms and The Clinical Institute Withdrawal Assessment for Alcohol Revised (CIWA-Ar) is better tools to diagnose AWS. A strategy like Scottish Health Action on Alcohol Problems, 2020 services shall be contemplated, to proffer information and to furnish information to usher patients in gauging risk of severe AWS, especially during COVID-19 and kindred.

KEYWORDS: Teetotalism; Alcohol Withdrawal Syndrome (AWS); CIWA-Ar.

INTRODUCTION

The first COVID-19 case in India was reported on 30 January 2020. The government of India implemented lockdown for 21 days on 24 March 2020. The activities like those related to food, groceries, healthcare, communication and basic amenities were the only few which aided the society during. During the lockdown, all states and union territories banned alcohol for a while. The ultimate aim was to reduce overcrowding and to practice social distancing in an effective manner. Central and state government initiated many steps to slow down spread of COVID-19.

In India, State Excise Laws regulates the areas of production, transport, sale and limit of personal possession of beverages/ liquors with greater than 0.5%.^[1] Hence the government has the right to stop the functioning all beverage based outlets, by passing an order, if necessary. Violation in these orders will lead to corresponding fines and penalties or even imprisonment. Some countries announced complete shutdown of alcohol outlets where as some announced limited in geography. India is one such country which dropped complete sale and production of alcohol nationwide without an exception. Acute unavailability of alcohol in addicts or heavy drinkers produced withdrawal reactions. The practice or promotion of abstinence from alcohol and related products is called Teetotalism. A person who practices teetotalism is said to be Teetotal.

Sudden abstinence from alcohol disrupted mental states of individuals and reduced ability of people to follow hygienic practices, social distancing etc, which are primary factors to be taken into consideration to reduce the spread of COVID-19 web.

A study conducted in a hospital, Bangalore says there is sound incongruity in number of people seeking treatment for alcohol withdrawal symptoms during lock down period, when compared to a foretime.^[2] Here substantial cause of abrupt cessation patients reported was alcohol ban behalf of lock down.

Kerala state is one among the state with highest rate of alcohol consumption in India. Kerala state has got a network of licensed shop beneath the monopoly of the Kerala State Beverages Corporation (BevCo). BevCo contributes considerably to the Government tax.^[3]

Kerala witnessed a considerable number of suicides with respect to alcohol withdrawal, with six such deaths as against two attributed to Covid-19, as on April 1, 2020.^[4] Based on a government order to the excise commissioner, Director General of Police, Managing Director of the Kerala State Beverages Corporation and the health department, the Beverage Corporation authorities was asked to provide limited amount of Indian Made Foreign Liquor (IMFL) to individuals possessing passes. Guideline says that the ones with Alcohol withdrawal symptoms (AWS) can visit any Government hospital in OP department. Mean while the consultant can either prescribe or provide an opinion indicating that the patient is having AWS.

The same is submitted to Excise office, along with an ID proof. Duties of Excise officer here is to provide IMFL as per the 'Abkari Act' of Kerala and also to inform the Managing Director of the Kerala State Beverages Corporation regarding the details of each patient. There is a fixed quantity limit per day.^[4]

Pathophysiology

Alcohol (ETHANOL) is a CNS depressant which causes euphoria and excitation at a low blood concentration. This is bespoken by heightened glutamate binding to N-methyl-D-aspartate receptors (NMDA). At higher concentrations, it results in acute intoxication by potentiation of the gamma-amino butyric acid (GABA). Cerebellum, cortical areas, thalamic region and brainstem are the main areas that meet effects of alcohol intoxication. Down regulation of GABA receptors and increased expression of NMDA receptors are associated with prolonged alcohol (tolerance and physical dependence), which then results in compensatory increase in glutamate to maintain CNS transmitter homeostasis.^[5]

Chronic alcohol consumption when surceased swiftly unmask these changes with a glutamate-mediated CNS excitation, simultaneously results in autonomic over activity. This also causes neuropsychiatric complications such as delirium and seizures. As up regulation of NMDA receptors and reduced GABA receptor promptly explains clinical symptoms, treatment of AWS destined for these mechanisms. Dopamine neurotransmitter is also associated with AWS. On usage of alcohol, increase in dopamine positively influences the reward system, hence alcohol abuse is maintained. During withdrawal, increase in dopamine levels leads to autonomic hyper-arousal and hallucinations.^[6] Also, on usage of alcohol, there

is an increase in homocysteine by the stimulation of NMDA receptors. During withdrawal, by rebound activation of glutamatergic neurotransmission, there is an increase in levels of homocysteine leading to excitotoxicity. On jiffy usage of ethanol, it inhibits binding of opioid to μ -opioid receptors, and on prolonged usage of alcohol results in up regulation of opioid receptors. Opioid receptors of the nucleus accumbens and the ventral tegmental area of the brain modulate ethanol-induced dopamine release, which results in craving of alcohol. This is why, Opioid antagonists are given to prevent alcohol cravings.

Signs and Symptoms of AWS

Alcohol Withdrawal Symptoms (AWS) presents a gamut of signs and symptoms. It can vary from mild tremors to severe symptoms like delirium tremens (DT). AWS usually occurs in individuals who suddenly opt to become teetotal, sudden surcease of alcohol intake due to unavailability (like COVID-19 scenario), history of AWS. Initial AWS symptoms (tremors, nausea, diaphoresis, hyperthermia, vomiting, hypertension, tachycardia, and tachypnea) begin within a jiffy time of 6–12 hours following last alcohol consumption. Stages of AWS are classified as stage I to IV.^[7] Out of all symptoms, Delirium tremens is the most severe. DT is manifested by altered mental status, autonomic hyperactivity, visual/ auditory hallucination, profound global confusion, malignant hypertension, seizures, coma this can progress even to cardiovascular collapse^[8] (Table 1).

Table 1: Occurrence, signs and symptoms of Alcohol Withdrawal Symptoms, stages I-IV.

Stages	Time of occurrence of symptoms after intake of last drink	Signs and symptoms
I: Minor Symptoms	6–12 hours	Tremors, nausea, diaphoresis, hyperthermia, vomiting, hypertension, tachycardia, tachypnea
II: Alcoholic hallucinosis	12-24 hours	Dysperceptions with auditory and visual hallucination Paresthesia
III: Alcoholic withdrawal seizures.	24–48 hours	Generalized tonic-clonic seizure
IV: Delirium tremens (DT)	48–72 hours	delirium, psychosis, hallucinations, hyperthermia, malignant hypertension, seizures and coma

Diagnostic criteria of AWS

Based on Diagnostic and Statistical Manual of mental disorders Criteria (DSM V), identification of at least two among the following symptoms can be classified as Alcohol Withdrawal Symptoms (AWS): nausea or vomiting, autonomic hyperactivity, increased hand tremor, insomnia, hallucinations/ illusions, agitation, anxiety, generalised tonic-clonic seizures.^[9,10]

The Clinical Institute Withdrawal Assessment for Alcohol Revised (CIWA-Ar) scale is 10 item scale, which is beneficial in identifying individuals with AWS without need of patient cooperation^[11] (Table 2).

Table 2: The Clinical Institute Withdrawal Assessment for Alcohol Revised (CIWA-Ar) Scale – criteria and scores.

Symptoms	Scores
Nausea/ vomiting	0 [no nausea, no vomiting] to 7 [constant nausea and / vomiting]
Tremor	0 [no tremor] to 7 [severe tremor]
Paroxysmal sweats	0 [no sweats] to 7 [drenching sweats]
Anxiety	0 [no anxiety] to 7 [acute panic states]
Agitation	0 [normal activity] to 7 [constantly trashes out]
Tactile disturbances	0 [none] to 7 [continuous hallucinations]
Auditory Disturbances	0 [none] to 7 [continuous hallucinations]
Visual Disturbances	0 [none] to 7 [continuous hallucinations]
Headache	0 [not present] to 7 [extremely severe]
Orientation/altered or Clouding of sensorium	0 [oriented] to 7 [disoriented]

Interpretation of CIWA-Ar Scale

CIWA-Ar scores less than 8 denotes mild withdrawal, 8–15 denotes moderate withdrawal with autonomic arousal and score greater than 15 indicates severe withdrawal, indicative of seizures and delirium. Pharmacological treatment and considerations is not required for individuals with CIWA –Ar score <8–10. Whereas treatment should be considered in patients with score between 8 to 15. This is to prevent progression to severe stage. Pharmacological treatment is very important and indicated in patients with CIWA-Ar score > 15. CIWA-Ar score should be taken and interpret it at every 8 hours in less severe cases and every one hour in severe stages.

De-addiction helplines during lockdown period

The National de-addiction help lines reports says that there is a massive spike in number of calls they received. Reports says during the month of April 2020 received a call of 4996, highest since January 2020. On comparison, the helpline received 266 calls per day from the end of March – April first week (LOCK-DOWN 1), rather than only 90 calls prior to lockdown.

Officials say that the intensity and reasons of conversation they received varies, that is, mild-moderate-severe withdrawal symptoms, suicidal ideation, stress due to unavailability of drugs and alcohol. The Ministry of Social Justice & Empowerment (MSJE) reported that helpline officials gave tele-counselling and connected the individuals to the de-addiction centres to promote them to adopt treatment for de-addiction in systematic manner. Also, the number subsequently had a decline since the Country is approaching to unlock procedures. The Government plans to start de-addiction facilities and care in 272 districts of Country, identified as vulnerable.^[12]

Advisory on alcohol withdrawal during the lockdown

Ministry of Social Justice and Empowerment, Government of India & National Drug Dependence Treatment Centre (NDDTC), AIIMS, New Delhi provides an advisory on alcohol withdrawal during lockdown^[13] (Table 3).

Table 3: Ministry of Social Justice and Empowerment, Government of India & National Drug Dependence Treatment Centre (NDDTC), AIIMS, New Delhi advisory.

People with Alcohol Dependence – upon cessation of alcohol use:	
Mild/moderate alcohol withdrawal	Strategy
Psychological symptoms: Anxiety, irritability, restlessness Craving.	Majority of people with these symptoms will get better within a few days with adequate fluids and nutritional supplementation
Psychological and physical symptoms: Difficulty in sleeping Tremors Increased sweating Palpitations Headache Stomach upset poor appetite	Visit the nearest health facility for prescription of appropriate medicines of benzodiazepine group (diazepam or lorazepam) and high doses of vitamin B (particularly Thiamine)

Severe : Seizures (convulsions) Delirium Tremens Wernicke-Korsakoff syndrome (a variety of neurological and cognitive symptoms) especially common in malnourished patients.	Requires emergency medical care and hospitalization.
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This may be useful for those individuals experience withdrawal symptoms and those who purposefully utilise lockdown period to quit alcoholism.

CONCLUSION

In similar situations it is mandatory to foreseen barriers to help-seeking. Thus, a care for future or such contingency plans can be taken into consideration, for persons dependent on alcohol to ensure continuity of care.^[14] A strategy like Scottish Health Action on Alcohol Problems, 2020^[15] services shall be contemplated, to proffer and furnish information to usher patients in gauging risk of severe AWS and planning to undergo safe domiciliary detoxification. However in short, foreseeing, preparing, planning, implementing plans and addiction treatment assurance are steps in all kindred.

Conflict of interest

The author (s) declared no conflict of interest with respect to the authorship or publication of the article.

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