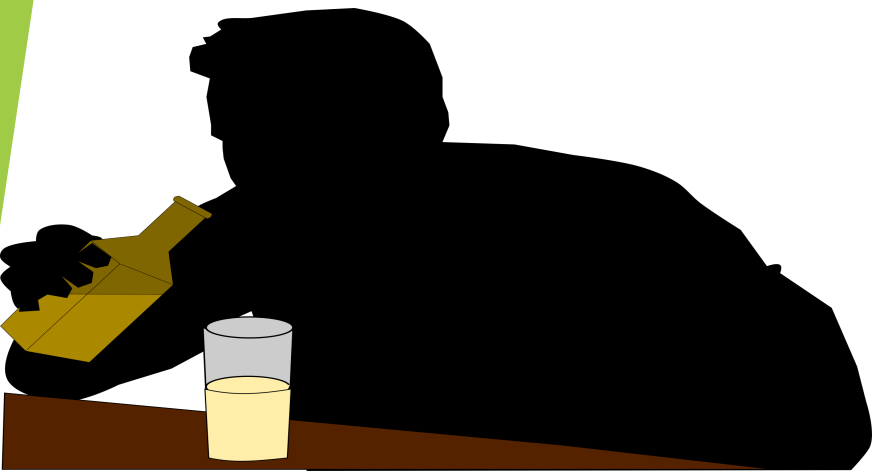
ISSUP INTERNATIONAL SOCIETY OF SUBSTANCE USE PROFESSIONALS

NIGERIA chapter

UNIVERSITY OF BENIN
BENIN CITY, NIGERIA
Knowledge for Service

Beyond Dependence: Alcohol-induced Disorders



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Outline

- Introduction
- Relevance of the topic
- Objectives
- Alcohol-induced disorders
- Elucidation and treatment of some Alcohol-induced disorders and Alcohol use disorder
- Conclusion/Recommendations

Introduction

- Alcohol is one of the most commonly used substance globally
- Largely licit, cultural and virtually ubiquitous
- Three types: isopropyl alcohol, methyl alcohol and ethanol (drinkable)
- Undistilled and distilled ethanol
- Alcohol depresses the CNS by enhancing gamma-aminobutyric acid in the brain leading to pleasurable sensation
- The brain adapts by increasing glutamate activity which is excitatory, leading to tolerance
- Alcohol also cause release of endorphins which activate opiate receptors, leading to relaxation and euphoria

Introduction

- Alcohol also stimulates the dopaminergic and serotoninergic neurones particularly in the ventral striatum
- In view of the talked about benefits and risks of drinking alcohol, 14 to 21 units of alcohol per week has been adjudged safe
- To calculate the unit of alcohol in any drink: vol (mls) x % of alcohol /1000
- Alcohol is metabolized by a competent liver at the rate of 8grams of pure alcohol or 1 unit per hour
- It is metabolized to acetaldehyde by alcohol dehydrogenase
- Acetaldehyde is metabolized to acetate by acetaldehyde dehydrogenase
- Gamma-glutamyl transferase (GGT) is the most widely used laboratory marker of hazardous alcohol use or alcohol use disorder (normal range 5 to 40 U/L)

Relevance of the topic

- The presentation will provide/improve/refresh the knowledge of alcohol use disorder and alcohol-induced disorders which is necessary for the following reasons:
- “Alcohol is one of the most commonly used substance globally
- Abuse of alcohol contributes to more than 200 diseases and injuries
- World wide, 3 million people die each year from harmful use of alcohol i.e. 343 people dying every 1 hour
- Alcohol is the cause of death in 13.5% of deaths among people who are 20 to 39 years old
- Harmful use of alcohol is the cause of significant social and economic losses to individuals, families and society”

Objectives

- In view of the foregoing, it is only imperative that professionals involved in the prevention, treatment and recovery of persons with SUD must be adept in the matter of not only alcohol use disorder but also alcohol-induced disorders

  All health care professionals and indeed the general public need to know all

  the sides of alcohol
- Consequently the presentation would draw attention to other disorders caused by alcohol while not neglecting alcohol use disorder
- Diagnostic criteria, clinical features and management would also be highlighted

Alcohol-induced disorders

- Psychotic disorder
- Bipolar disorder
- Depressive disorder
- Anxiety disorder
- Sleep disorder
- Sexual dysfunctions
- Delirium
- Neuro-cognitive disorders
- Alcohol intoxication

Alcohol-induced disorders

- Alcohol withdrawal
- Other harmful use of alcohol

  cardiomyopathy

  peptic ulcer disease

  liver disease

  pancreatic disease

  cancers including breast

  acute kidney injury

  cerebrovascular accident etc.

Elucidation and treatment of some Disorders

Alcohol intoxication

Features:

- Recent alcohol use
- Slurred speech, ataxic gait and disinhibition or somnolence
- Smell of alcohol on breath (breathalyser may be useful)
- Warm extremities
- Red eyes
- Increase pulse rate
- Systolic hypertension

Elucidation and treatment of some Disorders

Treatment:

- Nil per oral
- Nurse in left lateral position
- IV fluids (N/S, dextrose only after vit B1) with thiamine supplementation 100mg IV
- Anti PUD medicine
- Antiemetic
- Haloperidol 2.5mg to 5mg IM/IV for agitation
- Metadoxine
- Haemodialysis (when blood conc. of alcohol is greater than 130mmol/l)
- Watch out for withdrawal symptoms

Elucidation and treatment of some Disorders

Alcohol withdrawal syndrome

- Follows cessation or reduction of regular heavy alcohol use
- Within 4 to 6 hours
- May persist for 10 to 14 days
- Uncomplicated withdrawal- tachycardia, hypertension, sweating, tremors, insomnia, nausea, vomiting, psychomotor agitation and anxiety
- Complicated withdrawal- hallucinosis, hallucinations, seizures and delirium tremens
- The syndrome is monitored using Clinical Institute Withdrawal Assessment - Alcohol Revised (CIWA- Ar) scale

Elucidation and treatment of some Disorders

Treatment of alcohol withdrawal syndrome:

- Main stay is benzodiazepines
- Long acting benzodiazepines are preferred in most cases since they achieve a smooth control of withdrawal symptoms.
- Short acting benzodiazepines in elderly, patients with hepatic or respiratory dysfunction.
- Fixed dose regimen
- Front loading regimen
- Symptom triggered regimen

Elucidation and treatment of some Disorders

- Fixed dose regimen:
- 5mg of Diazepam or 1mg of Lorazepam for each unit of alcohol per day (max 60mg of Diazepam or 12mg of Lorazepam)
- The total dose per day is given in 3 or 4 divided doses and tapered over 7 to 10 days with day doses decreased before night doses
- Preferred method in the outpatient setting

Elucidation and treatment of some Disorders

- Front loading regimen:
- 20mg diazepam is given every 2 hours until the withdrawal signs abate
- May be used for mild alcohol dependence
- Absence of hepatic dysfunction
- Absence of history of complicated withdrawals

Elucidation and treatment of some Disorders

- Symptom triggered regimen:
- Doses of benzodiazepines are based on CIWA-Ar score
- CIWA-Ar score is determined every 1 hourly if withdrawals is severe and every 4 or 6 hours for mild to moderate withdrawals
- If CIWA-Ar score is greater than 10, 10mg of diazepam is given
- Understandably used in inpatient setting
- In practice, usually a combination of symptoms triggered and fixed dose regimen is used

Elucidation and treatment of some Disorders

Alcohol withdrawal seizure

- Commonest 12 to 24 hours after cessation or reduction of alcohol use
- Generalized tonic clonic seizures + other signs of alcohol withdrawal

Treatment:

- Diazepam 10mg or lorazepam 2 mg IV every 10 to 15 minutes
- Then use symptom triggered approach
- Be cautious of delirium tremens

Elucidation and treatment of some Disorders

Alcohol withdrawal delirium:

- Commonest 48-72 hours after cessation or reduction of alcohol use
- Hyperactive delirium
- Autonomic arousal
- Confusion, visual and auditory hallucinations
- Consider other causes of delirium if starting after 5 days of cessation of alcohol use, hypoactive, fever, focal neurological signs, absence of autonomic arousal

Elucidation and treatment of some Disorders

Investigations: RBS, LFT, E/U/Cr, FBC, ECG, Chest X-Ray, CT-Brain

Treatment:

- General measures
- Non pharmacological measures
- Pharmacological measures

Elucidation and treatment of some Disorders

- General measures:
- Nil per oral
- Nurse in left lateral position
- Monitor and correct fluid and electrolyte imbalance
- Cardiac and respiratory monitoring

Elucidation and treatment of some Disorders

- Non pharmacology measures:
- Nurse in a calm and non-threatening environment
- Talk loudly and clearly
- Reorient the patient to time, place and person
- Prevent injury to self and others

Elucidation and treatment of some Disorders

- Pharmacological measures
- IV diazepam 5 to 10mg every 10 minutes or IV lorazepam 2 to 4mg every 15 minutes until mild sedation is achieved
- If no sedation after a total dose of 50mg of Diazepam or 10mg of lorazepam, it is refractory delirium tremens and patient is taken to ICU
- If mild sedation is achieved resort to symptom triggered approach
- IV Thiamine 500mg 8hrly for 3 days
- Then 250mg daily for one week
- Vitamin B complex supplementation

Elucidation and treatment of some Disorders

Wernicke-Korsakoff syndrome

- Wernicke's encephalopathy is an acute neurological syndrome caused by thiamine deficiency
- Characterised by ataxia (cerebellar dysfunction), ophthalmoplegia (oculomotor abnormalities) and confusion
- Korsakoff's syndrome is characterized by an irreversible recent memory loss and confabulation. It often happens when Wernicke's encephalopathy is untreated or undertreated

Elucidation and treatment of some Disorders

Treatment:

- IV thiamine 500mg 8 hourly for the first 3 days
- If there is response, then continue 250mg per day till symptoms resolve
- Vitamin B complex supplementation

Elucidation and treatment of some Disorders

Alcohol Use Disorder

- "Problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

1. Alcohol is often taken in larger amounts or over a longer period than was intended
2. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use

Elucidation and treatment of some Disorders

3. A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects
4. Craving, or a strong desire or urge to use alcohol
5. Recurrent alcohol use resulting in a failure to fulfil major role obligations at work, school, or home
6. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol
7. Important social, occupational, or recreational activities are given up or reduced because of alcohol use

Elucidation and treatment of some Disorders

8. Recurrent alcohol use in situations in which it is physically hazardous
9. Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol
10. Tolerance, as defined by either of the following:
    a. A need for markedly increased amounts of alcohol to achieve intoxication or desired effect
    b. A markedly diminished effect with continued use of the same amount of alcohol

Elucidation and treatment of some Disorders

11. Withdrawal, as manifested by either of the following:
    a. The characteristic withdrawal syndrome for alcohol
    b. Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms”

Elucidation and treatment of some Disorders

Treatment:

- Anti-craving agents
- Deterrent
- Psychosocial interventions

Elucidation and treatment of some Disorders

Anti-craving agents:

- Naltrexone
- Acamprosate
- Baclofen
- Topiramate

Elucidation and treatment of some Disorders

Deterrent agent:

- Disulfiram

Psychosocial intervention:

- Brief interventions for hazardous or harmful alcohol use
- Motivational interview
- Motivation enhancement therapy
- Cognitive behavioural therapy
- Self-help groups such as Alcoholics Anonymous (AA)

Conclusion

The Presentation shows that:

- Alcohol greatly impacts physical and mental health
- It also has profound social and economic implications
- It also looked at the physical, mental and behavioural illnesses associated with alcohol use, including the diagnoses and management of some of them

Recommendations

- Every one involved or interested in the prevention, treatment and recovery of individuals who have alcohol related disorders must get a good knowledge of alcohol-induced disorders and alcohol use disorder: presentation/clinical features and management
- Clinicians need to have a high index of suspicion since alcohol-induced illnesses can manifest in diverse ways

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Thank You