The impact of alcohol-related brain injury on dental care: A case study on Wernicke-Korsakoff Syndrome

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Introduction

- Oral health is impacted by several factors, one of which is alcohol misuse and its sequalae. An example of long-term cerebral injury resulting from alcohol misuse is Wernicke-Korsakoff syndrome.
- As this is potentially preventable, it is vital to ensure awareness and education of alcohol misuse amongst care staff, patients and their families.
- Management of these patients is often complex and needs a holistic, pragmatic and multidisciplinary team approach.

Case Report

Medical History

- **Wernicke-Korsakoff syndrome**
- **Dementia**
- **Epilepsy**
- **Hypertension**
- **Low BMI – under dietician**
- **Anxiety**
- **Depression**
- **Previous A&E attendances due to recurrent seizures and sepsis due to parotitis**

Dental History

- **Referred by the Oral Surgery Department to Community Dental Services for a domiciliary assessment and joint care**
- **Brushing done solely by carers twice daily with Corsodyl toothpaste**
- **Diet consists of mainly pureed food and thickened liquids**

Female
59 years

Social History

- **Lives full time in a residential care home with 24 hour support**
- **Next of kin - Husband lives locally in own residence**
- **Cannot mobilise independently, needs support to transfer from chair to bed and requires a wheelchair to mobilise within the care home**
- **Ex-smoker**
- **History of alcohol misuse**
- **Non verbal**

Presenting complaint

No current concerns of dental pain was reported but carers inform they have difficulty with oral care.

Husband was not present at the assessment. He was contacted post domiciliary visit and informed us he was not aware of any dental concerns.

Examination

The examination was challenging as the patient was wheelchair bound, non-compliant with instructions and non-verbal. The extraoral examination was unremarkable. Intraorally there was evidence of poor oral hygiene, soft plaque at dental margins and inflamed gingivae.

Several lost restorations and retained roots were present. No obvious intraoral swelling or signs of infection were noted.

Diagnosis

- Lost restorations UR1, UL2
- Retained roots UR6, UR7, LL6, LL7
- Amalgam restoration UL6
- Teeth present:

7*	6*		4	3	2	1	1	2	3	4		6	7
	6	5	4	3	2		1	2	3	4	5	6*	7*

Appointments

- Patient has not had a dental assessment for several years since moving to the care home.
- Carers report difficulty in registering with a dentist due to the COVID pandemic and patient unable to leave the care home easily.
- Initial assessment done by the Community Dental team as a domiciliary visit. Following this, phone contact was made with the patient's husband to discuss findings and treatment options.
- Plan for future review of the patient and liaising with the Oral Surgery Department, following further data gathering, risk assessment and best interest decision with husband and care home staff.

Treatment Plan

1) <u>Stabilisation</u>: Reducing patient's caries, periodontal and oral cancer risk factors.

- Care home team leader and staff were educated and training was given on oral hygiene and diet advice, and techniques for brushing demonstrated.
- High fluoride toothpaste was prescribed.

2) <u>Details of a ReSPECT form</u>: (Recommended Summary Plan for Emergency Care and Treatment) was also obtained which included a DNACPR (Do not attempt cardiopulmonary resuscitation) in place.

3) <u>Capacity</u>: An independent assessment was performed to assess the patient's mental capacity – and this confirmed a lack of capacity (as per the Mental Capacity Act 2005)[1] .

4) <u>Communication</u>: The treatment plan was discussed with the care team leader and the patient's husband.

5) <u>Past Medical History</u>: Correspondence with the patient's GP was initiated so that a full past medical, dental and social history was made available as part of the dental risk assessment.

6) <u>Recall</u>: Reinforcement of oral health and diet advice and regular follow up with the Community Dental Service according to NICE guidance[2].

This applies to adults who drink regularly or frequently i.e. most weeks

The Chief Medical Officers' guideline for both men and women is that:

- To keep health risks from alcohol to a low level it is safest not to drink more than 14 units a week on a regular basis.
- If you regularly drink as much as 14 units per week, it is best to spread your drinking evenly over 3 or more days. If you have one or two heavy drinking episodes a week, you increase your risks of death from long term illness and from accidents and injuries.
- The risk of developing a range of health problems (including cancers of the mouth, throat and breast) increases the more you drink on a regular basis.
- If you wish to cut down the amount you drink, a good way to help achieve this is to have several drink-free days each week.

Figure 1 – Current weekly drinking guidelines recommended by the UK Chief Medical Officers

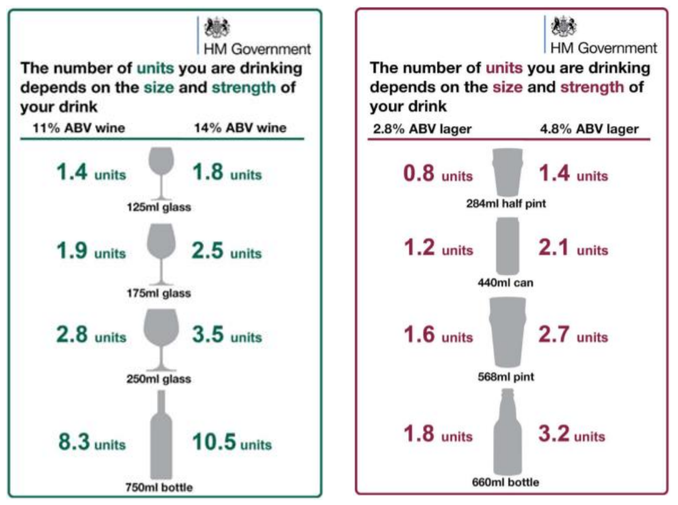

Figure 2 – Alcohol unit guide

Challenges

- Options were limited in a domiciliary setting and due to a lack of compliance from the patient, utilisation of the atraumatic restorative technique (ART) was also not possible.
- The patient's medical background affects treatment modalities such as IV sedation and general anaesthesia, and required further investigations including blood tests pre-op.
- Treatment planning was challenging due to patient co-morbidities to reach a best interest decision that would also be the least restrictive option.

References

1. Mental Capacity Act (2005). England and Wales.
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6. Public Health England (2016) Making every contact count consensus statement. Available at: https://www.england.nhs.uk/wp-content/uploads/2016/04/making-every-contact-count.pdf (Accessed 27th October 2021).
7. Department of Health England, Welsh Government, Department of Health Ireland, Scottish Government. UK Chief Medical Officers' Low Risk Drinking Guidelines 2016. London: Departments of Health; 2016.
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Discussion

❖ **Wernicke-Korsakoff syndrome**

- Caused by a thiamine or Vitamin B1 deficiency
- Most common cause is alcohol misuse
- Acute phase: Wernicke's encephalopathy; reversible if treated
- Chronic phase: Korsakoff syndrome; long-lasting damaging effects on the brain

❖ **Issues surrounding capacity and consent**

❖ **Barriers to dental care**

- Challenging access for dental treatment
- Adverse effects on liver function and drug metabolism
- Bleeding risk and local anaesthetic considerations in the pre, peri and post operative management [3]

❖ **Education and training of carers**

- Guidance from Delivering Better Oral Health guidance (PHE)[4] and Oral health for adults in care homes (NICE)[5]
- Utilisation of oral health educators

❖ **Health behaviour changes**

- Making Every Contact Count (MECC) advice from Chief Medical Officers (CMO)[6]

Future Considerations

- **<u>The Impact of COVID</u>**
- Changes to Standard Operating Procedures (SOPs) for domiciliary care
- New government guidance from 11th November 2021, whereby all staff entering a care home need to be vaccinated, unless exempt
- Delays for domiciliary visits due to restrictions on staff and resources

- **<u>Frailty intervention</u>**
- Medical team input required with gradual deterioration of a patient's independence

- **<u>Pragmatic dietary advice</u>**
- Nutritional supplements can be cariogenic but the patient's low BMI and nutritional needs may outweigh this risk

- **<u>Best interests decision</u>**
- Careful consideration needed for active intervention under general anaesthesia due to risks to life and/or worsening of dementia
- The effect of medical conditions and polypharmacy in IV sedation
- The implication of the DNACPR

Conclusion

➢ Alcohol misuse not only impacts dental care but is a public health issue and a contributory factor for many medical conditions.

➢ It is imperative education and advice on alcohol reduction is disseminated across staff and service users alike (Figure 1 and Figure 2) according to CMO guidance[7].

➢ Alcohol misuse may not always be disclosed by the patient; consumption values should always form part of the dental assessment. Implementation of simple alcohol screening tests[8] can help to assess those at risk.

➢ Clinical signs and symptoms such as dental erosion, spider naevi, tremor in hands and impaired wound healing[3] can alert the dental practitioner to alcohol misuse in the patient.

➢ This case demonstrates the importance of multidisciplinary input and support, such as the patient's general practitioner, medical consultant, dietetic team, oral health educators, care home staff and dental team in the care of patients with alcohol-related degenerative disorders.