CLINICAL VIGNETTE

Alcohol Use Disorder in the Preoperative Setting

Khushboo Kaushal Akkad, MD

Case Summary

A 58-year-old male presented to preoperative clinic for evaluation prior to robotic prostatectomy. His history includes prostate cancer, diabetes, hypertension and hypercholesterolemia. The patient lives outside of the United States and presented for evaluation for a second opinion regarding his prostate cancer. Prostate specific antigen (PSA) was 10 ng/mL and prior biopsy showed Gleason score 9 (4 + 5) adenocarcinoma of the prostate. Robotic prostatectomy was recommended, and the patient was evaluated in preoperative clinic the day prior to surgery.

He reported alcohol use, drinking one bottle of red wine per day or a twelve pack of beer daily for the past ten years. He last drank alcohol the prior day. He denied history of alcohol withdrawal though he had not stopped drinking alcohol for ten years. Concerns about alcohol withdrawal and associated complications in the perioperative setting were discussed in detail with the patient. He was not amenable to alcohol cessation and, as he traveled internationally for his surgery, he was not amenable to rescheduling his surgery.

The surgeon was informed that the patient would be at high risk of alcohol withdrawal and complications in the perioperative setting. If surgery was not urgent, abstinence and treating his alcohol use disorder were recommended prior to proceeding with surgery. However, if surgery was urgent or if the patient and surgeon chose to proceed despite these risks, continued monitoring and management in the hospital for alcohol withdrawal and internal medicine and addiction medicine consultations were recommended. The patient proceeded with surgery the following day without complications.

Discussion

The preoperative evaluation is often focused on assessment of cardiac and pulmonary risk factors. However, it is imperative to obtain a thorough history, including a social history, to ensure that the patient is medically optimized and safe to proceed with surgery. For example, patients who actively smoke cigarettes at the time of surgery are at increased postoperative complications such as impaired wound healing, infections, reduced bone fusion and pulmonary complications.[1] Similarly, patients with alcohol use disorder are at increased risk during the intraoperative and postoperative courses including risks of surgical site infection, impaired wound healing, bleeding, and increased cardiac risk.[2,3] Consuming a larger amount of alcohol correlates with increased incidence and severity of perioperative complications.[3] Patients with increased alcohol use also require more anesthesia for induction and analgesia.[4]

For patients in which surgery is not urgent, abstinence prior to surgery is recommended and is associated with fewer complications. Tonnesen et al reported forty-two patients with alcohol use disorder admitted for elective colorectal surgery. Those who were treated with disulfiram and abstained from alcohol for one month had reduced perioperative morbidity compared to those who continued to drink.[5] Treatment includes medically supervised withdrawal with assistance from addiction medicine and/or psychiatry, and use of benzodiazepines as needed. Disulfiram and acamprosate have been used preoperatively and naltrexone is not recommended as this can interfere with perioperative opioids use.[6]

Conclusion

It is crucial to obtain a thorough history, including social history, during the preoperative evaluation as substance use can increase risk of perioperative complications and morbidity and interfere with anesthesia. If surgery is not urgent, abstinence from alcohol in patients with alcohol use disorder is recommended to help reduce these risks.

REFERENCES

1. **Theadom A, Cropley M**. Effects of preoperative smoking cessation on the incidence and risk of intraoperative and postoperative complications in adult smokers: a systematic review. *Tob Control*. 2006 Oct;15(5):352-8. doi: 10.1136/tc.2005.015263. PMID: 16998168; PMCID: PMC2563647.
2. **Tønnesen H, Petersen KR, Højgaard L, Stokholm KH, Nielsen HJ, Knigge U, Kehlet H**. Postoperative morbidity among symptom-free alcohol misusers. *Lancet*. 1992 Aug 8;340(8815):334-7. doi: 10.1016/0140-6736(92)91405-w. PMID: 1353805.
3. **Tonnesen H, Kehlet H**. Preoperative alcoholism and postoperative morbidity. *Br J Surg*. 1999 Jul;86(7):869-74. doi: 10.1046/j.1365-2168.1999.01181.x. PMID: 10417555.
4. **Fassoulaki A, Farinotti R, Servin F, Desmonts JM**. Chronic alcoholism increases the induction dose of

propofol in humans. *Anesth Analg*. 1993 Sep;77(3):553-6. doi: 10.1213/00000539-199309000-00021. PMID: 8368555.

5. **Tonnesen H, Rosenberg J, Nielsen HJ, Rasmussen V, Hauge C, Pedersen IK, Kehlet H**. Effect of preoperative abstinence on poor postoperative outcome in alcohol misusers: randomised controlled trial. *BMJ*. 1999 May 15;318(7194):1311-6. doi: 10.1136/bmj.318.7194.1311. PMID: 10323814; PMCID: PMC27867.
6. **Mayo-Smith MF**. Pharmacological management of alcohol withdrawal. A meta-analysis and evidence-based practice guideline. American Society of Addiction Medicine Working Group on Pharmacological Management of Alcohol Withdrawal. *JAMA*. 1997 Jul 9;278(2):144-51. doi: 10.1001/jama.278.2.144. PMID: 9214531.