

Smokeless Tobacco and Current Preoperative Fasting Guidelines, Time to Find the Missing Link

Dear Sir,

Before induction of anesthesia, multiple solid particles were found adhered to the oral mucosa, along with red discoloration of the tongue in a 40-year-old female (American Society of Anesthesiologists physical status 2, body weight 65 kg, height 159 cm, BMI 25.7 kg/m²) scheduled for elective laparoscopic cholecystectomy [Figure 1]. On further evaluation, the patient revealed that she had a pouch of smokeless tobacco (pan masala or gutka) chewed during the advised fasting period before the scheduled surgery. Due to the unavailability of an ultrasonography machine in the operating room, the actual gastric volume of the patient could not be assessed, and therefore, a safer and patient-centric approach was followed. To reduce aspiration possibility, in view of the unconfirmed fasting along with associated risk factors like being overweight and planned laparoscopic surgery, the surgery was rescheduled for the later part of the afternoon (6 hours later) of the same day and completed uneventfully.

Preoperative fasting advice before anesthesia or sedation has been formalized to limit the risk of aspiration of gastric content. The current American Society of Anesthesiologists (ASA) guidelines recommend a fasting period of 8 hours for fatty foods and meat, 6 hours for light meals and non-breast milk, 4 hours for breast milk, and 2 hours for clear fluids.^[1]

Smokeless tobacco (ST) consumption is a common practice throughout the world, especially in the Southeast Asian region. Nearly 356 million people use ST in



Figure 1: Gutka/pan masala (ST) particles adhered to the abraded oral mucosa

140 countries, whereas 82% of this burden lies in Southeast Asia.^[2] More than 4000 chemicals that are carcinogenic, like tobacco-specific nitrosamines (TSNA), areca nut-specific nitrosamines (ASNA), alkaloids, polyphenols, tannins, and lime powder are found in these products.

Chewing of ST in the form of pan masala/gutka (a tobacco, lime, and areca nut mixture) may lead to invariable ingestion of juices along with physical trauma of oral mucosa and adhesion of small nut particles to abraded mucosa, which may lead to inadequate fasting status before anesthesia if consumed before the surgical procedure. Also, the areca nut is capable of generating superoxide anions and hydrogen peroxide with pH >9.5, thereby further increasing the risk of aspiration.^[3] Earlier studies have shown that a pH <2.5 and an aspirate volume >0.3 ml/kg body weight (20–25 ml) are required for developing chemical pneumonitis.^[4] However, the current evidence clearly mentions that the presence of particulate matter is of greater significance in terms of aspiration risk in comparison to the volume of ingested liquid.^[5]

As the use of ST consumption is rising throughout the world, with a larger impact on countries where the availability of perioperative ultrasonography is not readily accessible, future studies are needed to delineate implications so that appropriate policy decisions can be made for preoperative fasting guidelines.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

Tanmay Tiwari, Kriti Nagar

Department of Anaesthesia, King George's Medical University, Lucknow, Uttar Pradesh, India


Address for correspondence: Dr. Tanmay Tiwari, Department of Anaesthesia, King George's Medical University, Lucknow, Uttar Pradesh, India.
E-mail: tanmayanesthesia@gmail.com

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