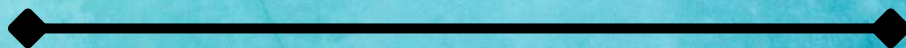


# **ALL INDIA INSTITUTE OF MEDICAL SCIENCES RAJKOT**



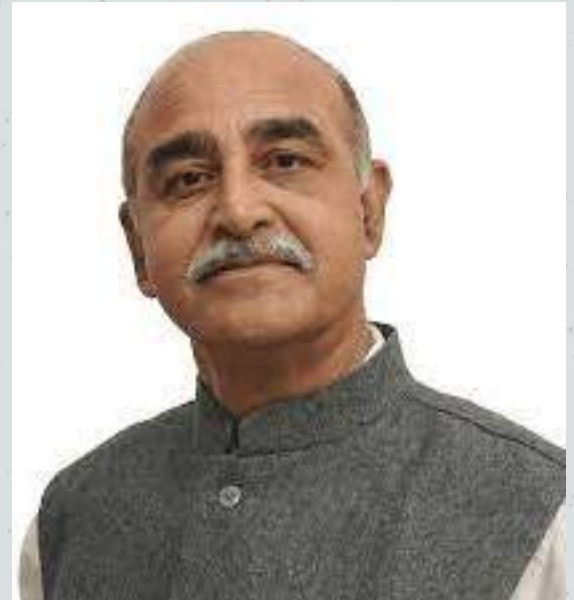
## Department of Anesthesiology and Perioperative care

E-Newsletter 2022  
Volume 1 Issue 1



# MESSAGE FROM THE EXECUTIVE DIRECTOR

I heartily congratulate the department of Anesthesiology and perioperative care for their initiative to release first newsletter of the department.



DR.(COLONEL) C D S KATOCH

# *MESSAGE FROM THE ANESTHESIA DEPARTMENT*

*The department of Anesthesiology and perioperative care is delighted to introduce first newsletter of the department.*

*In this issue we are trying to cover difficult airway due to restricted mouth opening. Tobacco chewing is a common habit seen in this part of Gujrat which leads to oral submucosal fibrosis along with other health hazards of nicotine. If such a patient needs airway management say due to some emergency or being posted for even a minor surgery this adds to airway morbidity. Thus, we wanted to highlight this preventable morbidity and would also like to discuss airway management in brief.*



# WHAT IS IT ABOUT?

## DIFFICULT INTUBATION IN PATIENTS WITH HABIT OF TOBACCO CHEWING.

### STATISTICS

Nearly 267 million adults (15 years and above) in India (29% of all adults) are users of tobacco, according to the global adult tobacco survey India, 2020-2021. The most prevalent forms of tobacco use in India is smokeless tobacco and commonly used products are *gutkha*, betel quid with tobacco. In India, highest incidence of tobacco consumption is in Tripura. This practice is also quite prevalent (4 out of 10) in Gujarat, especially Saurashtra region.



### NICOTINE IN SMOKELESS TOBACCO:

Smokeless tobacco delivers a high dose of nicotine. It is about 40mg/gram for chew tobacco.

**IF YOU KEEP YOUR MOUTH SHUT, YOU WILL STAY OUT OF TROUBLE.**

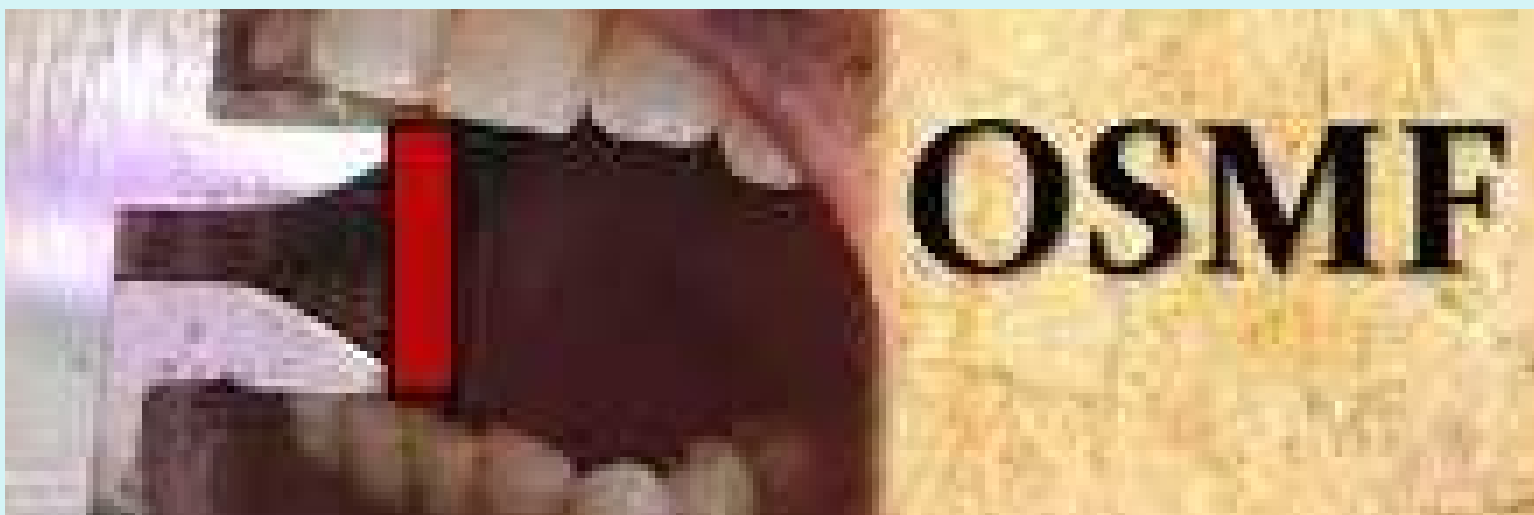
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# TOBACCO AND ORAL SUBMUCOUS FIBROSIS (OSMF)

- OSMF was first described by Schwartz in 1952, where it was classified as an idiopathic disorder by the term atrophica idiopathica (tropica) mucosae oris.
- Since then, many hypotheses are being suggested that OSMF is multifactorial in origin with etiological factors are areca nut, capsaicin in chilies, micronutrient deficiencies of iron, zinc, and essential vitamins.
- Smokeless tobacco consumption, which is widespread throughout the world, leads to oral submucous fibrosis (OSMF), which is a long-lasting and devastating condition of the oral cavity with the potential for malignancy.
- In this review, we mainly focus on the consumption of smokeless tobacco, such as *paan* and *gutkha*, and the role of these substances in the induction of OSMF and ultimately oral cancer.
- The continuous chewing of *paan* and swallowing of *gutkha* trigger progressive fibrosis in submucosal tissue.



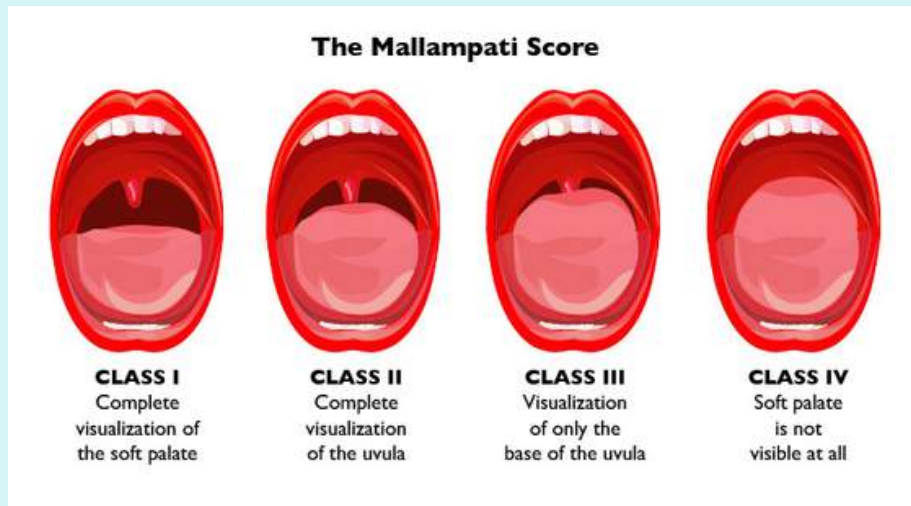
# OSMF AND DIFFICULT INTUBATION:

- Securing the airway for oral submucous fibrosis is a challenging task and is the major component of intra-operative management.
- Nasotracheal intubation is not always possible , if done sometimes bleeding is a potential complication.
- If we consider tracheostomy, it is invasive and unnecessary for patients who are not the candidates for elective postoperative ventilation.
- Other problem is that many patients hesitate to give consent for tracheostomy due to the fear of complications such as hemorrhage, tracheal stenosis, loss of speech, etc.

## AIRWAY EXAMINATION METHODS


| Patient instructions  | Airway exam components  |
|---|---|
| <i>"Please look at me and open your mouth as wide as you can. Stick your tongue out as much as possible. Don't say 'ahh'."</i>    | Mallampati score<br>Inspect tongue for size, abnormalities, mobility<br>Look for tonsillar hypertrophy<br>Look for 'small mouth'<br>Look for high-arched palate |
| <i>"Please open your mouth again as much as possible and place two or three finger breadth between your teeth."</i>               | Inter-incisor gap   |
| <i>"Please close your mouth, gently bite down and show me your teeth"</i>   | Assess overbite<br>Dental status  |
| <i>"Can you bite your top lip with your bottom teeth?" <u>or</u><br/>"Open your mouth please and push your lower jaw forward"</i> | TMJ mobility<br>Upper lip bite test <u>or</u><br>Jaw protrusion   |
| <i>"Can you bring your chin down to your chest? Can you now extend your head back as much as possible?"</i>                       | Neck/ head mobility; neck extension   |
| <i>"Keep your head tilted all the way back please. I am going to feel the front of your neck."</i>                                | Temporo-mandibular distance<br>Larynx surface anatomy/ landmarks  |

# MALLAMPATTI SCORE




## AWAKE INTUBATION-An option for patients with difficult intubation





### DAS ATI technique



#### OXYGENATE

- Apply HFNO early
- Titrate HFNO from 30–70 L.min<sup>-1</sup>
- Continue HFNO throughout procedure

#### TOPICALISE

- Lidocaine 10% spray to oropharynx, tonsillar pillars, base of tongue
- 20 – 30 sprays (during inspiration, over 5 min)
- If nasal route: co-phenylcaine spray
- Test topicalisation atraumatically
- If inadequate, re-apply LA up to maximum dose:
  - Further 5 sprays of lidocaine 10% to tongue base
  - 2 ml lidocaine 2% (x 3) spray above, at and below vocal cords via epidural catheter/working channel of FB or using MAD

**Lidocaine**

- 1 spray (0.1 ml) of 10% = 10 mg
- 1 ml of 2% = 20 mg

**Co-phenylcaine**

- 2.5 ml = 125 mg lidocaine + 12.5 mg phenylephrine

#### PERFORM

- Select appropriate tracheal tube
- Patient sitting up
- Ensure operator can readily see patient monitor, infusion pumps and video screen
- Clear secretions
- For ATI:FB
  - Operator positioned facing patient
  - Consider bronchoscope airway if oral route
  - Bevel facing posteriorly
- For ATI:VL
  - Operator positioned behind patient
  - Consider bougie
- Before induction of anaesthesia: two-point check

#### SEDATE

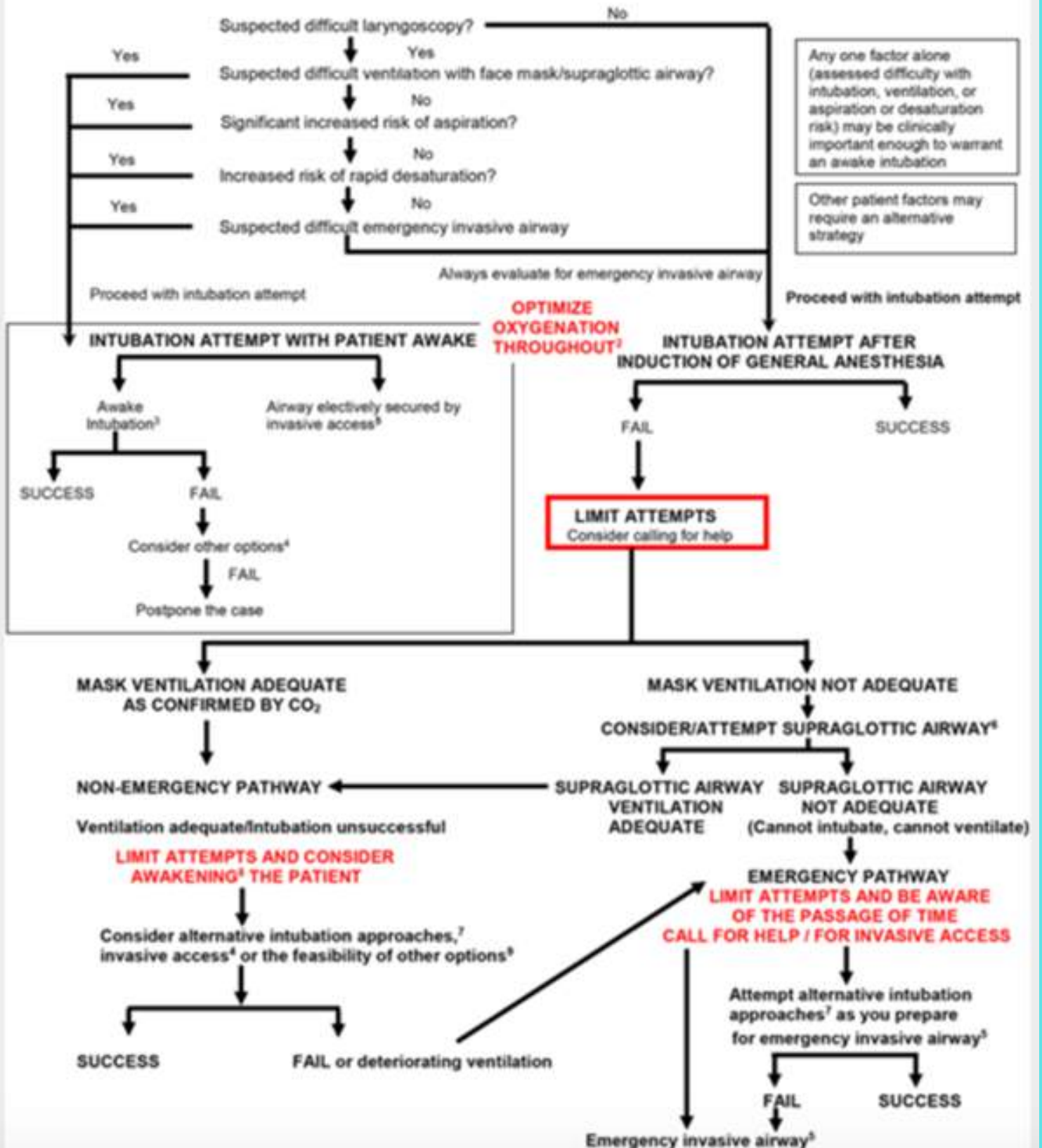
- Sedate if required
- Remifentanil TCI (Minto) Ce 1.0–3.0 ng.ml<sup>-1</sup>
- If second anaesthetist present, consider adding midazolam 0.5–1 mg



# UPDATED DIFFICULT AIRWAY ALGORITHM

## ASA DIFFICULT AIRWAY ALGORITHM: ADULT PATIENTS

**Pre-Intubation:** Before attempting intubation, choose between either an awake or post-induction airway strategy. Choice of strategy and technique should be made by the clinician managing the airway.<sup>1</sup>





## *Key points for airway handlers*

Be aware of  
the passage of time, the number of attempts and oxygen saturation



### **References :**

- 1. Jeffrey L. Apfelbaum, M.D.; Carin A. Hagberg, M.D.; Richard T. Connis, Ph.D.; Basem B. Abdelmalak et al. 2022 American Society of Anesthesiologists Practice Guidelines for Management of the Difficult Airway. Anesthesiology January 2022, Vol. 136, 31-81.**
- 2. Urvi Joshi, Bhavesh Modi, Sudha Yadav. A study on prevalence of chewing form of tobacco and existing quitting patterns in urban population of Jamnagar, Gujrat. Indian J Community Med. 2010 Jan; 35(1): 105-8**
- 3. Deepak Passi, Prateek Bhanot, Dhruv Kacker, Deepak Chahal et al. Oral Submucosal Fibrosis: NEw proposed classification with critical updates in pathogenesis and management strategies. National Journal of Maxillofacial surgery .2017 Jul-Dec; 8(2):89-94**

### **Abbreviations :**

**ATI - awake tracheal intubation; FB - fiberoptic bronchoscope; VL - videolaryngoscope  
HFNO - high flow nasal canula**

# CHEWING TOBACCO HAS ITS OWN COSTS, QUITTING IS THE ONLY WAY OUT

## TIPS TO QUIT :

1. *Pick a Quit Date. Every day is a good day to stop chewing tobacco or dipping. .*
2. *Understand Nicotine Withdrawal. ...*
3. *Learn How to Handle Triggers and Cravings. ...*
4. *Use Nicotine Replacement Therapy. ...*
5. *Try Other Medications. ...*
6. *Get Support. ...*
7. *Celebrate Successes.*



### TRYING TO HIDE SOMETHING?

TOOTH STAIN?  
YELLOW TEETH?  
BROWN TONGUE?

FACE IT: THOSE ARE **NOT** THE  
ONLY CONS OF TOBACCO USE  
TOBACCO USE CAN CAUSE MOUTH CANCER,  
GUM DISEASE, DRY MOUTH, AND BAD BREATH\*

1-800-  
**QUIT  
NOW!**

Ask your Dental Hygienist why  
you should quit Cigs, Chew, or Cigars!

\* See www.who.int/tobacco for more information

# Make every day World No Tobacco Day.

[www.who.int/tobacco](http://www.who.int/tobacco)



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