**Case 2021.9A: Life Threatening Complications can occur during/after moderate sedation TOO!**

**CASE REPORT**  
A 68 y/o, 5’6”, 245# (BMI 39.5) presents for removal of all remaining teeth and simultaneous placement of two mandibular implants with moderate sedation. Detailed verbal and written history was reviewed twice, first during the consultation exam and again, in detail just prior to surgery. Medications listed on digitized medical history form and on a free hand piece of paper included metformin and atenolol, with no other meds. Significant positive findings included type II DM, A1c 5.5, FBS measured in office 162 mg/dl (metformin was held), HTN (atenolol was taken in AM with sip), 1 ppd x 20 years, Mallampati II, able to function at a 4 MET level by history. The “do you have breathing difficulties box” was checked NO. The “short of breath” box was checked YES – when asked “why are you short of breath”; patient answered “because I am “___“(overweight). All lung fields were clear on auscultation. ASA Physical Status was assigned as 2 (mild diseases only without substantive functional limitations). Curret smoker, obesity (BMI < 40) well controlled DM/HTN, mild lung disease.)  
Moderate sedation was titrated to maintain continuous bidirectional communication. Surgery completed in 45 minutes without complication, all vital signs WNL and airway clear with continuous pre-tracheal auscultation.

Upon completion of case, during light conversation with all monitors, pre-tracheal stethoscope and nasal cannula (4 lpm) still in place, the patient suddenly developed severe breathing difficulty “unable to move air” and agitation. She grabbed her neck, leaned forward, then side to side, looking at me in terror. No wheezing was appreciated. SpO2 dropped to 80%. Events and information passed rapidly. During limited, non-verbal communication, it was revealed that she had COPD and used two inhalers, but did not use that day. Weak coughing attempts produced sticky mucus plugs on the tongue, then to the lips. Differential diagnosis now included bronchospasm (without wheezing), mucus plug obstruction at level of larynx, trachea or bronchi, awake laryngospasm or laryngeal edema. Patient would not tolerate hypopharyngeal suctioning. Feeble attempts with a β2 rescue inhaler did not immediately improve situation. “The next minute seemed like an eternity” waiting for loss of consciousness, planning for full induction and possibly muscle relaxation to take full control of the airway. Repeated use of inhaler and sufficiently calming/prompting the patient to generate a forceful cough brought this close call to resolution.

**What we learned:**
20-20 hindsight case review was and always is enlightening. She revealed a complex history of COPD requiring the use of two different inhalers, but it never occurred to her to list those as medications (as they were not pills) and she admitted the mistake of checking NO on the box asking about breathing difficulties – a 4 MET tolerance was also incorrect, as patient experienced shortness of breath walking into the office for her post-op appointment. She subsequently admitted to barely being able to manage one flight of stairs and required several minutes to catch her breath after the climb.

1. ASA II physical status can rapidly convert to a ASA III.  
2. Medical history self reporting and patient interviews are imperfect, and will not replace careful dialogue. You can never be thorough enough obtaining a medical history. Checking a box NO may be a mistake.  
3. Disciplined, consistent, conservative patient selection will improve patient safety.  
4. Moderate sedation is inherently safe, but serious adverse events can still occur.  
5. You do not have to be sedated for serious complications to occur.  
6. Be on the look out for “red flags”: suspicion of undiagnosed or unrevealed disease should invite concern.  
7. Be prepared with immediately available, dose-ready rescue medications.

**Additional reading:**