



Obstructive sleep apnea during bronchoscopy: Risk factors and the role of NIMV

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Background

The use of drug induced sleep endoscopy (DISE) has been applied to predict obstructive sleep apnea (OSA). Given that moderate sedation for bronchoscopy may induce obstruction in sleep apnea patients and is associated with desaturation, NIMV could be used to prevent respiratory complications and severe hypoxemia in patients undergoing bronchoscopy. Moreover NIMV has not been extensively tested during bronchoscopy in patients with known OSA.

Aim

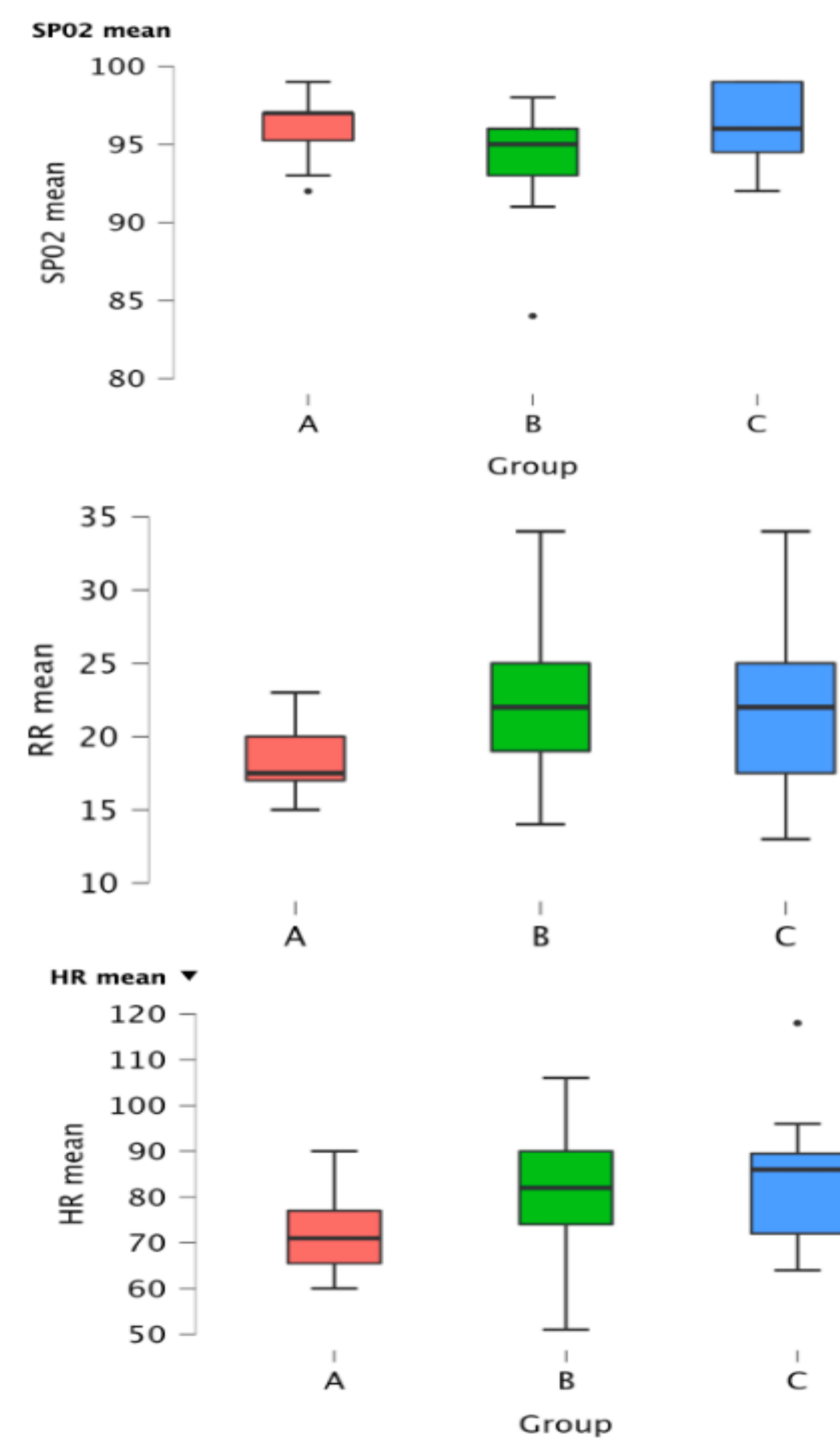
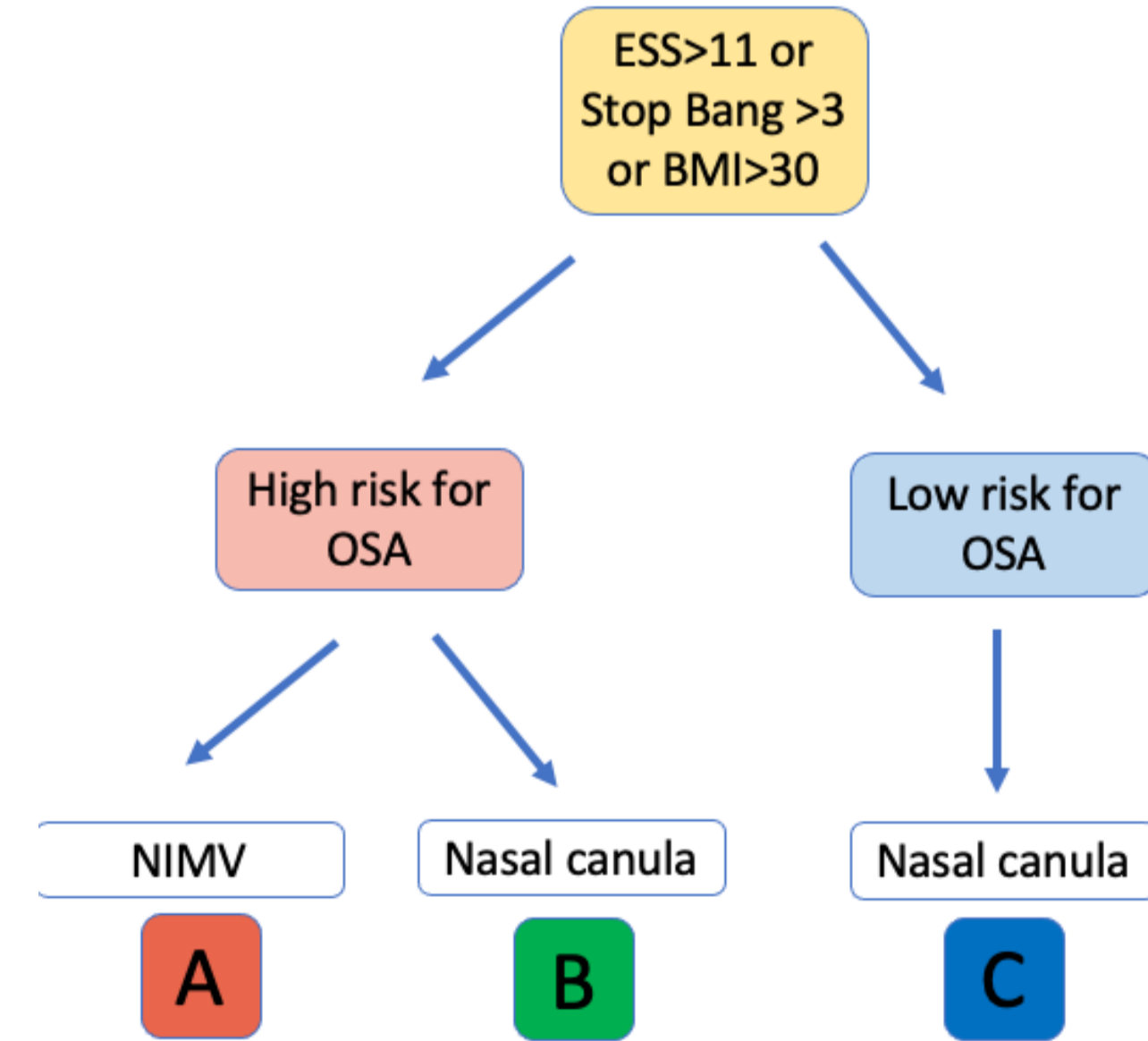
To investigate whether:

- OSA patients are prone to respiratory/ hemodynamic compromise during bronchoscopy
- NIMV use may prevent desaturations

42 patients (57% males) with mean age of 66 years and mean body mass of index (BMI) of 27kg/m² who required bronchoscopy were enrolled in the study.

Risk stratification was based on BMI, Epworth scale (ESS) and Stop Bang questionnaires.

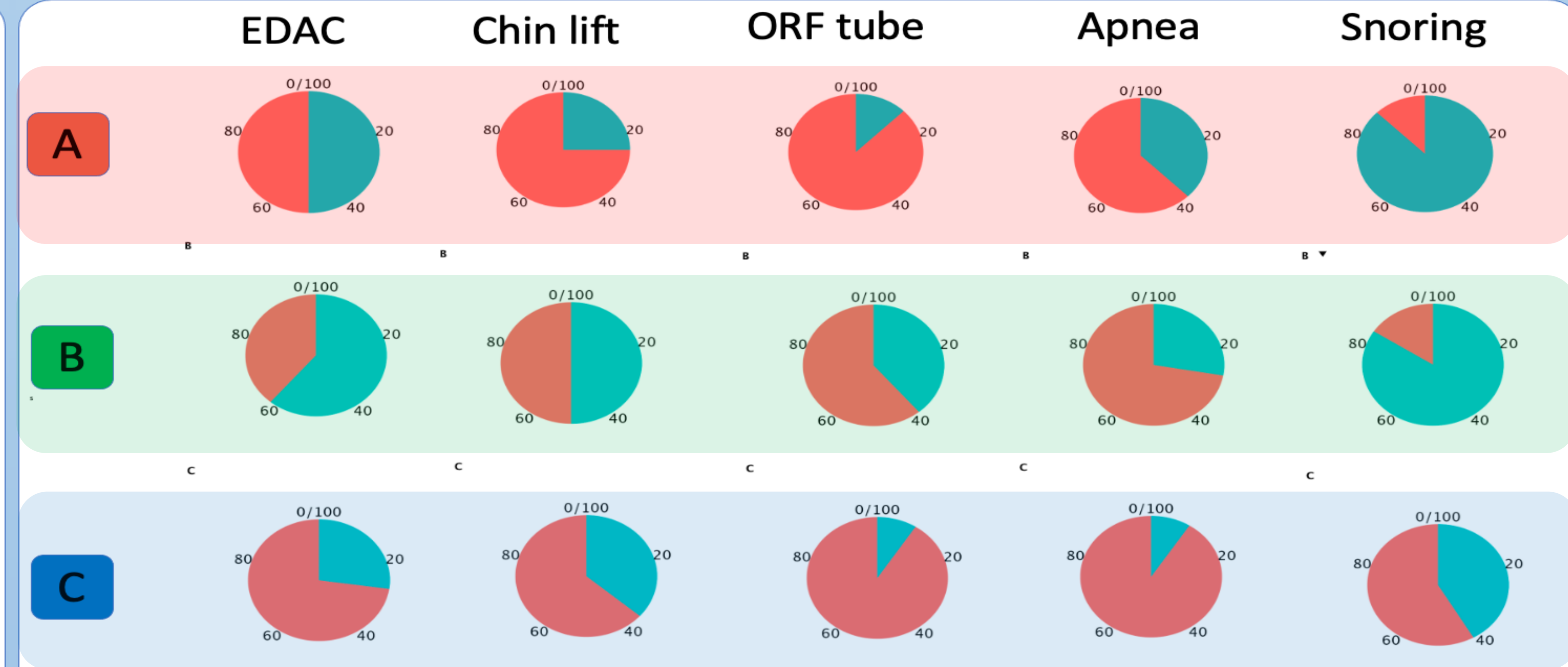
After randomization, some patients with high suspicion for OSA will receive NIMV, while others conventional oxygen supplementation with nasal cannula. Patients with low suspicion/risk for OSA will be under conventional oxygen supply.



Group B had the lowest value for SpO₂, compared to Group A and C. (p<0.05)

Group A had lower mean RR 18(15,23), compared to Group B and C. (p<0.05)

Group A had lower mean HR 72(60,90), compared to Group B and C. (p<0.05)



Conclusions

During bronchoscopy:

- 1) Snoring was common among high risk patients for OSA
- 2) High risk patients for OSA treated with nasal cannula had higher tendency to lower oxygen and need for chin lifts and ORF tubes
- 3) EDAC was lower for high risk patients for OSA treated with NIMV
- 4) High risk patients treated with NIMV had lower need for chin lifts and use of oropharyngeal tubes

- ✓ OSA patients are prone to desaturations, snoring and apneas during bronchoscopy
- ✓ NIMV may have a role for OSA patients during bronchoscopy