2016

# Diphenhydramine as an adjunct to conscious sedation in bronchoscopy

Rodeo Abrencillo
*Henry Ford Health*

Michael Simoff
*Henry Ford Health*, msimoff1@hfhs.org

Tom Smoot
*Henry Ford Health*

Cyndi Ray
*Henry Ford Health*

Mohammed Aljasmi
*Henry Ford Health*

*See next page for additional authors*



## Recommended Citation

Abrencillo R, Simoff M, Smoot T, Ray C, Aljasmi M, Jeffery J, and Yessayan L. Diphenhydramine as an adjunct to conscious sedation in bronchoscopy. Chest 2016; 150(4):980A.

## Authors

Rodeo Abrencillo, Michael Simoff, Tom Smoot, Cyndi Ray, Mohammed Aljasmi, James J. Jeffries, and Lenar Yessayan

CHEST Annual Meeting 2016
LOS ANGELES
OCTOBER 22 - 26

# Procedures

**SESSION TITLE:** Advancements in Lung Cancer Diagnostics and Treatment
**SESSION TYPE:** Original Investigation Slide
**PRESENTED ON:** Wednesday, October 26, 2016 at 08:45 AM - 10:00 AM

## Diphenhydramine as an Adjunct to Conscious Sedation in Bronchoscopy

Rodeo Abrencillo MD* Michael Simoff Tom Smoot PharmD Cyndi Ray MD Mohammed Aljasmi MD Jennings Jeffery MD; and Lenar Yessayan MD Henry Ford Hospital, Detroit, MI

**PURPOSE:** Intravenous benzodiazepines are commonly used to achieve conscious sedation in outpatient bronchoscopy. Though effective, dose-dependent-adverse events may be encountered with the use of these sedatives. Diphenhydramine, a hypnotic, is sometimes used as an adjunctive agent in bronchoscopy to decrease sedative usage. However, data to support this practice is lacking. Our goal was to determine if adjunctive diphenhydramine significantly decreases doses of benzodiazepine in outpatient bronchoscopy.

**METHODS:** We conducted a single-center retrospective analysis of all outpatient bronchoscopies from November 2013 to February 2016. Subjects included were those who each had two bronchoscopies: no diphenhydramine used (control) versus diphenhydramine used (intervention). The procedure time, total doses of midazolam and opiates (in morphine equivalence) for each procedure were collected. A multiple regression analysis was used to compare differences between bronchoscopy groups in midazolam and opiate use.

**RESULTS:** Of 1164 patients with greater than 1 outpatient bronchoscopies, 61 unique subjects (female 56%) fulfilled the primary inclusion criteria thus resulting to 122 procedures. Mean body mass index was 32 $kg/m^2$. Procedure time was 22.9 $\pm$ 16 mins in diphenhydramine group and 23.2 $\pm$ 17.8 mins in control group. Mean morphine equivalents administered was 5.6 $\pm$ 2.6 mg in diphenhydramine group and 6.2 $\pm$ 2.4 mg in control group. Mean midazolam use was 8.4 $\pm$ 3.2 mg in diphenhydramine group and 10.2 $\pm$ 3.8 mg in control group (difference: -1.795, p-value = 0.005). The mean dose of diphenhydramine used was 38.32 $\pm$ 15.12 mg. In a multivariate model, mean midazolam use remained less in the diphenhydramine group after adjusting for procedure time and morphine equivalents, (difference -1.28 mg, p-value = 0.005).

**CONCLUSIONS:** Intravenous administration of diphenhydramine during outpatient bronchoscopy reduces midazolam usage, however, the absolute amount of dose reduction may not be clinically significant.

**CLINICAL IMPLICATIONS:** Our study suggests diphenhyramine use in bronchoscopy decreases the need for midazolam dosing.

**DISCLOSURE:** The following authors have nothing to disclose: Rodeo Abrencillo, Michael Simoff, Tom Smoot, Cyndi Ray, Mohammed Aljasmi, Jennings Jeffery, Lenar Yessayan

No Product/Research Disclosure Information

**DOI:** http://dx.doi.org/10.1016/j.chest.2016.08.1086


PROCEDURES