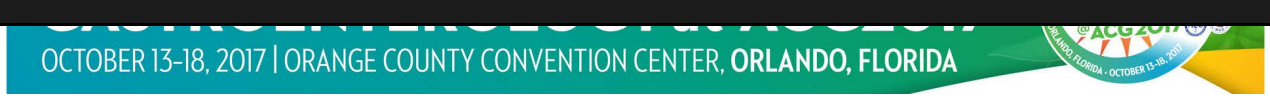

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World Congress at ACG2017

Simultaneous Plenary Session 1C: Endoscopy

17 - Use of Diphenhydramine as an Adjunctive Sedative for Colonoscopy in Patients on Chronic Opioids: A Randomized Controlled Trial

Monday, October 16 4:30 PM - 4:40 PM Location: Valencia Ballroom D (Level 4)

Presenting Author(s)

SN

Salman Nusrat, MD
Assistant Professor
University of Oklahoma Health Sciences Center
Oklahoma City, Oklahoma

Award: 2017 Category Award (General Endoscopy)

Category: General Endoscopy

Salman Nusrat, MD, Mohammad F. Madhoun, MD, MSCI, Muhammad H. Bashir, MD, William M. Tierney, MD

University of Oklahoma Health Sciences Center, Oklahoma City, OK

Introduction: Chronic opioid use results in increased tolerance to routinely used sedatives thus making sedation challenging in this patient population. Diphenhydramine because of its hypnotic and sedative properties is often used in difficult to sedate patients but the data supporting its use is conflicting. We hypothesized that in patients on chronic opioids addition of diphenhydramine to midazolam and fentanyl will improve objective and subjective measures of procedural sedation.

Methods: A randomized double-blind placebo controlled study was performed on patients using chronic opioids (defined as use of at least 5 mg of morphine or its equivalent at least 3 days per week for >3 months) scheduled to undergo colonoscopy. Patients were randomized to receive 50 mg of diphenhydramine (N=61) or placebo (N=58) at the start of the procedure. IV Fentanyl and midazolam was administered with the goal of achieving moderate sedation. The baseline characteristics, amount of fentanyl and midazolam, procedure related time points, and adverse events were recorded. The effectiveness of sedation was assessed qualitatively (inadequate, adequate, over-sedated) and quantitatively (1=no sedation; 7=optimal sedation) by the physician and the nurse. Pain (1=no pain; 10=severe pain) and amnesia (1=complete memory; 10=no memory) were rated by the patients on a 10-point scale. Two- sided t-test and Chi-square test was used to compare the means of continuous and categorical variables respectively. A P value < 0.05 was considered statistically significant.

Results: There were no differences between the study arms with regards to baseline characteristics (Table 1). There was no difference in amount of fentanyl (p=0.88) and midazolam (p=0.79) used. The mean sedation scores as judged by the physician (p=0.0002), and the nurses (p=0.04) were statistically significant in favor of the diphenhydramine group. Patient scores for pain (p=0.047) and amnesia (p=0.047) favored the group that received diphenhydramine. Qualitative assessment didn’t show a significant difference between groups. There was no statistical difference in induction time (p=0.86), procedure duration (p=0.98) or recovery times (p=0.16). Hypotensive episodes were more common in patients in the placebo arm (p=0.027) (Table 2).

Discussion: In patients on chronic opioids administration of diphenhydramine at the start of colonoscopy as an adjunct to conventional sedatives improves the quality of sedation without increasing the number of adverse events.

Supported by Industry Grant: No

Baseline Characteristics

	Diphenhydramine (n=61)	Placebo (n=58)	p Value
Age, Y	60.7±9.3	60.1±9.7	0.71
Male sex, n (%)	57 (93.4)	56 (96.6)	0.43
White race, n (%)	45 (73.8)	46 (77.6)	0.34
BMI, mean± SD	30.4±5.5	30.6±6.8	0.83
Indication (surveillance), n (%)	24 (39.3)	21 (36.2)	0.45
Smoking, n (%)	31 (50.8)	24 (41.4)	0.30
Alcohol, n (%)	20 (32.8)	11 (18.9)	0.17

Drug abuse, n (%)	11 (18)	5 (8.6)	0.26
Anxiety, n (%)	15 (24.6)	17 (29.3)	0.56
Depression, n (%)	38 (62.3)	30 (51.7)	0.24
Morphine equivalent, mean ± SD	37.9±48.5	42.0±40.1	0.62

Y = Year, n= Number

Primary and Secondary Outcomes

	Diphenhydramine (n=61)	Placebo (n=59)	P Value
Fentanyl, mcg	125.4±56.2	126.9±53.5	0.88
Midazolam, mg	4.9±2.1	5.0±1.9	0.79
Procedures Times			
- Induction time, mins	6.4±3.2	6.3±2.8	0.86
- Duration, mins	34.8±19.5	34.7±17.8	0.98
- Recovery time, mins	34.4±9.2	32.4±5.9	0.16
Quality of sedation	6.2±1.1	5.3±1.2	0.0002
- Physician score	5.6±1.5	5.1±1.4	0.04
- Nurse score	2.05±2.2	3.09±4	0.047
- Patient pain score	7.8±3.4	6.5±3.8	0.047
- Patient Amnesia score			
Adverse events	12 (19.7)	22 (37.9)	0.027
- Hypotension, n (%)	5 (8.2)	3 (5.2)	0.51
- Hypertension, n (%)			

mcg= Microgram, mg= Milligram, mins= Minutes, n= Number

Citation: . USE OF DIPHENHYDRAMINE AS AN ADJUNCTIVE SEDATIVE FOR COLONOSCOPY IN PATIENTS ON CHRONIC OPIOIDS: A RANDOMIZED CONTROLLED TRIAL. Program No. 17. *World Congress of Gastroenterology at ACG2017 Meeting Abstracts.* Orlando, FL: American College of Gastroenterology.