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Surgery

#### Title

Postoperative Oral Antibiotics in Foot and Ankle Surgery: Are we affecting postoperative infections or wound healing?

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## **Postoperative Oral Antibiotics in Foot and Ankle Surgery:** Are we affecting postoperative infections or wound healing? UCDAVIS Jacob Carl MD<sup>1</sup>, Kevin Nguyen BS<sup>1</sup>, Trevor Shelton MD<sup>1</sup>, Isabella Leon BS<sup>1</sup>, Jeannie Park BS<sup>1</sup>, HEALTH

## DISCLOSURES

EG & CK report consulting fees & research support from Arthrex Inc. For all other authors non are declared

## **OBJECTIVES**

- Identify differences in postoperative infection rates and wound healing complications in patients who received postoperative oral antibiotics(PAB) vs no postop antibiotics (NAB).
- Identify factors associated with post operative infections and wound healing complications

## BACKGROUND

- Controversy on use of perioperative antibiotics in the prevention of postoperative infection in elective surgery<sup>1-3</sup>
- Hypothesis: no difference in postoperative infection rate and wound healing complications between PAB vs NAB

## METHODS

- Retrospective study 649 patients undergoing routine elective foot & ankle surgery; 631 included in final analysis
- 2 fellowship trained foot and ankle surgeons at a tertiary academic care center/ambulatory surgery

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# RESULTS

- Mean age
  - PAB =  $45 \pm 16$  years
  - NAB =  $45 \pm 17$  years
- Number of infections (Table 1)
- PAB = 6 (3%) vs. NAB = 10 (2%); p = 0.599• No statistically significant difference in number of deep versus superficial infections, & delays in wound healing between the groups
- Those with infections (superficial or deep) were (Table 2):
- Older (55 vs 45, p = 0.001)
- Higher prevalence of hypertension (44% vs to 17%, p = 0.013) or history of neoplasm (19% vs 2%, p = 0.005
- Higher American Society of Anesthesiologists (ASA) Classification of Physical Health (2.1 vs 1.8, p = 0.041)

No significant difference between groups based on BMI, diabetes, or smoking Table 1: Comparisons of infections & delayed wound healing in PAB & NAB.

	Postoperative Antibiotic (PAB) (N = 201)	No Postoperative Antibiotic (NAB) (N = 427)	P-Value
Postoperative Infection	6 (3%)	10 (2%)	0.590
Location of Infection			
Superficial Deep	5 (83%) 1 (17%)	6 (60%) 4 (40%)	0.562
Delay in Wound Healing	12 (6%)	23 (5%)	0.852

Numbers presented as raw number and percentage (%) \* P-Values reported using student t-test for continuous variables and Fisher's exact test for categorical variables.

# Table 2: Characteristics of patients with PAB & NAB

	Postoperative Infection (N = 16)	No Postoperative Infection (N = 615)	P-Value
Age (years)	55 ± 9	45 ± 17	0.001
Gender			
Male	9 (56%)	249 40%)	0.211
Female	7 (44%)	366 (60%)	
BMI (kg/m²)	30 ± 8	28 ± 5	0.256
Preoperative	16 (100%)	608 (99%)	1.000
Antibiotics			
Postoperative	6 (38%)	195 (32%)	0.599
Antibiotics			
Hemoglobin A1c	5.6 ± 0.1 (N = 2)	5.9 ± 0.9 (N = 139)	0.141
Smoking Status			0.439
Current	0 (0%)	40 (7%)	
Former	2 (13%)	143 (23%)	
Never	14 (87%)	429 (70%)	
Hypertension	7 (44%)	105 (17%)	0.013
Hyperlipidemia	3 (19%)	74 (12%)	0.429
History of Neoplasm	3 (19%)	12 (2%)	0.005
ASA	2.1 ± 0.5	1.8 ± 0.6	0.041

Numbers presented as mean ± standard deviation. \* P-Values reported using student t-test for continuous variables and Fisher's exact test for categorical variables.

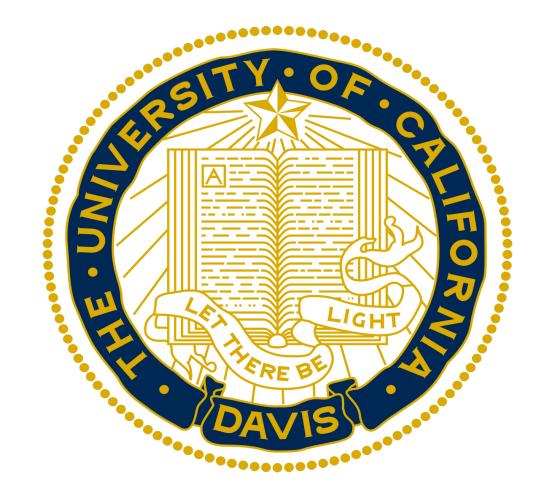
## CONCLUSION

Routine use of antibiotics in ambulatory foot & ankle surgery does not affect wound complication or infection rates Older patients, hypertension, history of neoplasm, and patients with more medical problems made up a larger percentage of those who developed postoperative infections

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