

Introduction

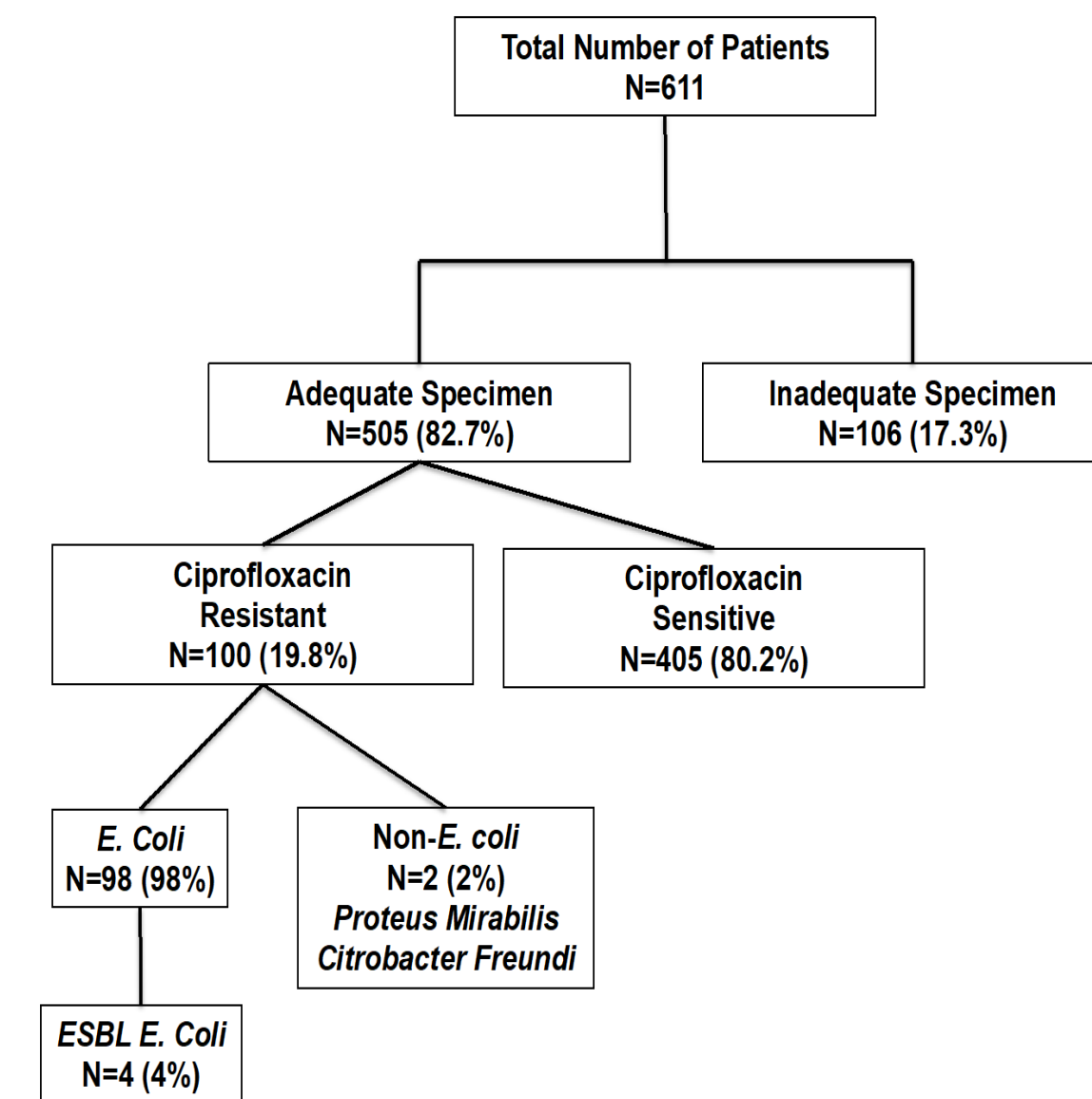
In the recent manuscript “An Update of the AUA White Paper on the More Common Complications of Prostate Biopsy”¹, an emphasis was placed on utilization of the antibiogram to determine the community risk of resistant post biopsy infections. However, if an antibiotic augmentation strategy is utilized, there are no current recommendations regarding which antibiotic is preferred within individual communities.

Herein, we evaluate the susceptibility profiles of ciprofloxacin resistant *E.coli* (CRE) identified from rectal swab cultures compared to our local antibiogram to determine if the antibiogram could accurately be utilized in the selection of antibiotic augmentation prior to transrectal prostate biopsy (TRPB).

Methods

- Cultures obtained via pre-procedure rectal swabs in men undergoing TRPB
- January 2016 and December 2016 at the South Texas Veterans Health Care System (STVHCS)
- 98 isolates CRE were identified
- Culture results and antibiotic sensitivities were recorded
- Fisher Exact tests were performed on categorical variables comparing the 2016 STVHCS antibiogram to the pre-biopsy rectal culture results (Table 1)

Figure 1: Flow diagram of subjects who underwent rectal culture



Results

- 611 patients who underwent pre-TRPB rectal culture 98 were CRE isolates (Figure 1)
- 80% sensitivity to ciprofloxacin as compared to the STVHCS antibiogram sensitivity of 65% (p<0.001)
- Gentamicin demonstrated similar sensitivities between the antibiogram and cohort (90% and 88% respectively)
- No statistically significant differences between the STVHCS antibiogram and the sensitivity profiles of our rectal swab cohort (Figure 2)
- Only ampicillin was statistically significant, showing less sensitivity in the FQR rectal swab when compared to the local antibiogram (32% vs. 56%, p=0.019)
- 4% (4/98) of CRE isolates were considered extended spectrum betalactamase producers (ESBL)

Figure 2: Rectal culture antibiotic sensitivity profile compared to local antibiogram

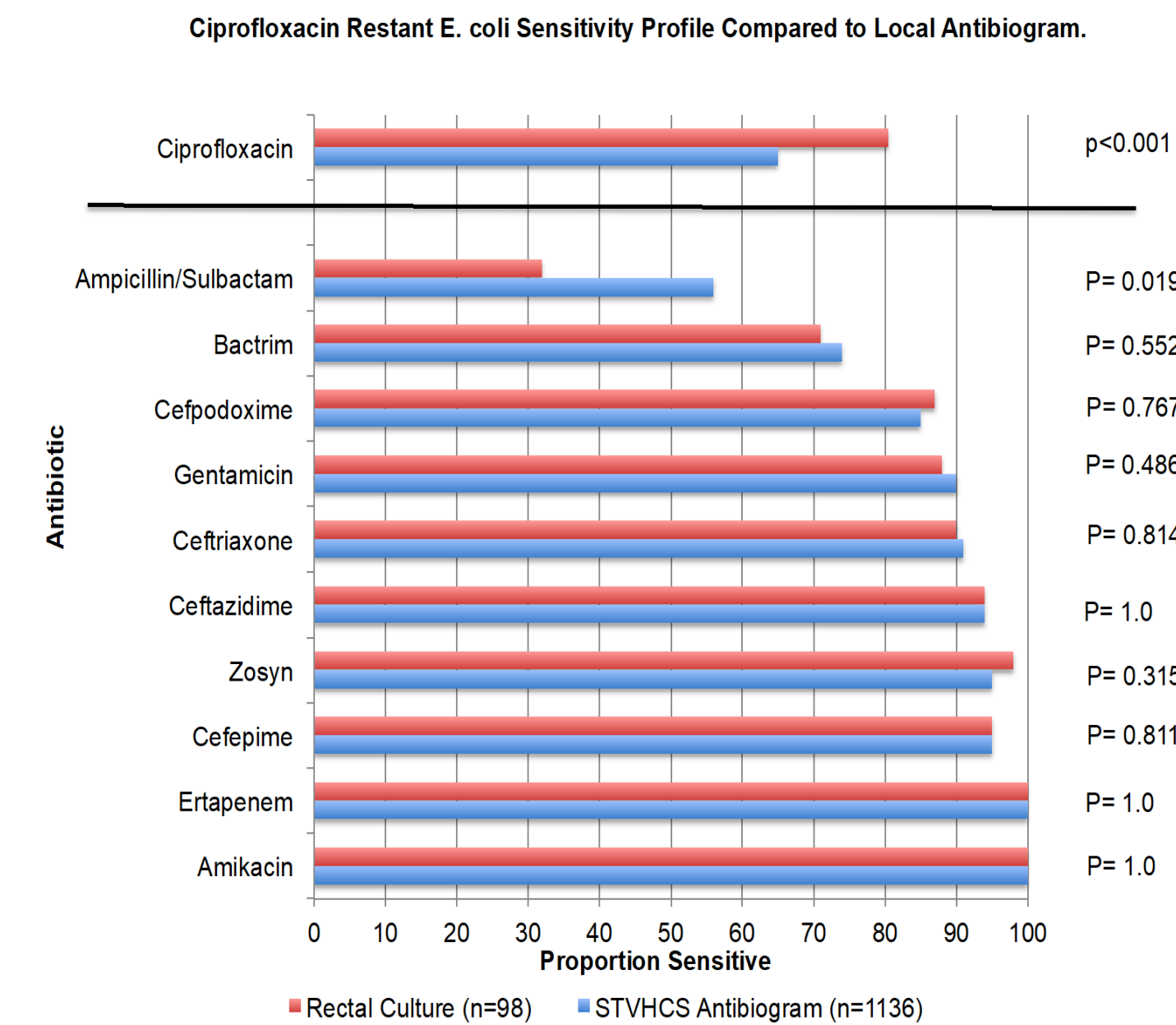


Table 1: Rectal Culture Study Subject Demographics

Demographic	N (%)
Age (years)	
45-54	4 (4)
55-64	32 (33)
65-74	50 (51)
>75	12 (12)
Mean Age (SD)	66 (6.4)
Race	
White, Non-Hispanic	39 (40)
African American	19 (19)
Hispanic	32 (33)
Other	1 (1)
Unknown	7 (7)
Diabetes	
Yes	27 (28)
No	69 (70)
Unknown	2 (2)
Mean BMI (SD)	29.8 (5.1)

Conclusion

- Resistance patterns in CRE isolates in the study population are consistent with STVHCS antibiogram
- A local antibiogram may be utilized in an implementation strategy for targeted antibiotics or augmentation of fluoroquinolone prophylaxis for TRPB
- MDR isolates may result in infectious complications and emphasizes the overall importance of the pre-biopsy rectal culture as the ideal means of antibiotic selection

References

1. Liss, MA, Ehdaie, B, Loeb, S, et al. An Update of the American Urological Association White Paper on the Prevention and Treatment of the More Common Complications Related to Prostate Biopsy. *J Urol.* 2017.