

Disk diffusion antimicrobial susceptibility testing of *Clostridium difficile*

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Objective

To evaluate disk diffusion for antimicrobial susceptibility testing of *C. difficile* by comparing disk diffusion zone diameters with MICs from gradient tests.

Background

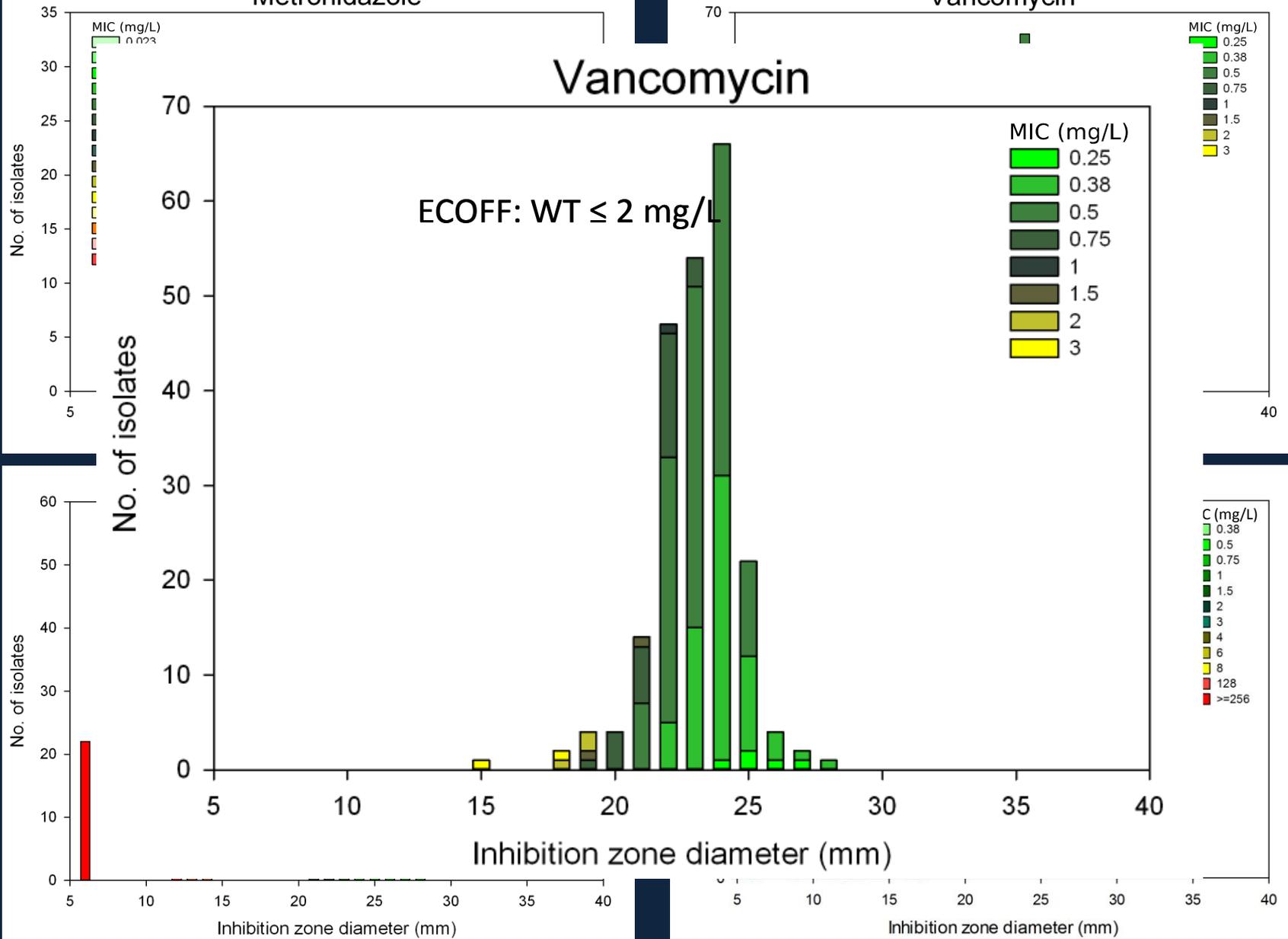
- Clinical significance of *C. difficile*.
- Emergence of decreased susceptibility towards metronidazole and vancomycin
 - Importance of antimicrobial susceptibility testing of *C. difficile*
 - Importance of having a simple testing method for the routine laboratory.

Methods

- 221 isolates of *C. difficile* were collected from patients with diarrhoea hospitalised at
 - Aarhus university hospital, Denmark (n=110)
 - Odense University Hospital, Denmark (n=101)
 - University Hospital of Wales, UK (n=10)
- Welsh isolates: Known reduced susceptibility to either
 - Metronidazole (n=4, MIC 1.5, 2, 2, 3 mg/L, ECOFF \leq 2 mg/L)
 - Vancomycin (n=6, MIC 1.5, 2, 2, 2, 3, 3 mg/L, ECOFF \leq 2 mg/L)
- Disk diffusion and E-test was performed on Brucella Blood Agar Supplemented with Haemin and vitamin K
- Antimicrobials tested
 - Metronidazole, Vancomycin, Moxifloxacin, and Clindamycin

Metronidazole

Vancomycin



Conclusion

- We find an excellent agreement between disk diffusion zone diameter and the MIC as measured by Etest.
- Disk diffusion method is a reliable option for antimicrobial susceptibility testing of *C. difficile*

Results will be published in
Clinical Microbiology and Infection. Article titled:

“Antimicrobial susceptibility testing of
Clostridium difficile using EUCAST
epidemiological cut-off values and disk diffusion
correlates”