Appropiateness of antibiotic prescription in COVID intensive care unit (ICU): empiric treatment vs. FilmArray pneumonia panel guided treatment

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Methods

Cohort

2 ICUS in Colombia

2020-2021

207 critically ill adults with severe COVID

62 years — *Median age (SD14.6)*

108 — *Ratio PaO2/FiO2 (IQR 64-130)*

Antibiotic prescription

Empiric group

n=123

FilmArray Panel Guided Treatment. — *Guided group*

n=84

Results

Empiric group

n=29 (24%)

Confirmed bacterial infection

15 days

Length of stay in ICU in both groups

Most frequent bacteria

Klebsiella pneumoniae

Pseudomonas aeruginosa

Mortality

n=79 (64%)

p 0.088 — **vs.**

Guided group

(RR 0.54(IC 95% 0.3-0.95) p 0.02)

Hospital Acquired infection (HAI)

Mortality

n=44 (52%)

Antibiotic DDD

Empiric group

Meropenem	Cefepime
38.5	11

Guided group

Meropenem	Cefepime
22.4	1.53

Costs

Empiric group

Antibiotic therapy

$530 usd

($30 usd - $1579 usd)

Guided group

Antibiotic therapy	Antibiotic therapy + panel cost
$292 usd ($16 usd - $8767 usd)	$429 usd (153 usd -$8904 usd)

Conclusions

The implementation of a guided antimicrobial therapy using FAP panel could be useful and cost effective in COVID-19 ICU to reduce antimicrobial consumption and adverse outcomes related to the inappropriate use of antibiotics.

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