



Hoxton Street Monster Supplies

ESTD 1818

~ Purveyor of Quality Goods for Monsters of Every Kind ~

TINNED FEAR

A VAGUE SENSE OF UNEASE

PREPARED ACCORDING TO
THE MONSTROUS PHARMACOPCEIA

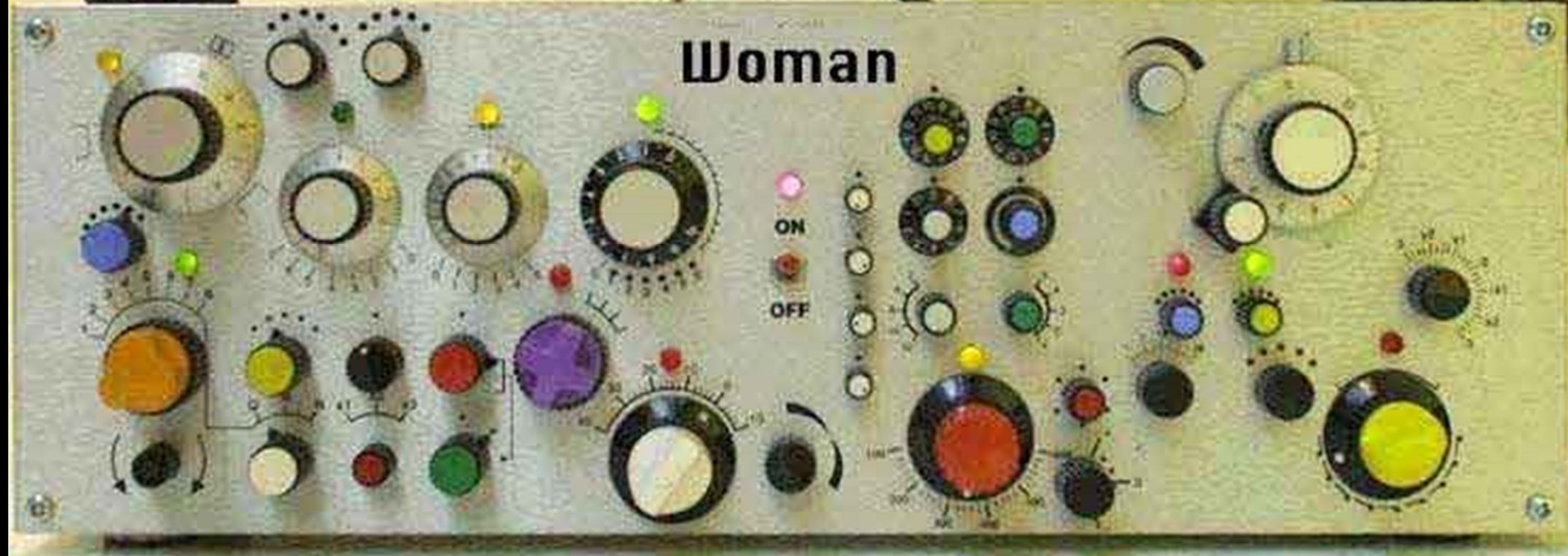
Effectively destroys all feelings of ease, creating a rising yet uncertain sense of disquiet. Invaluable for general uses in the home. Guaranteed perfectly pure and genuine.

Man



Little Loop 100-500

Woman



Prolonged infusion without TDM



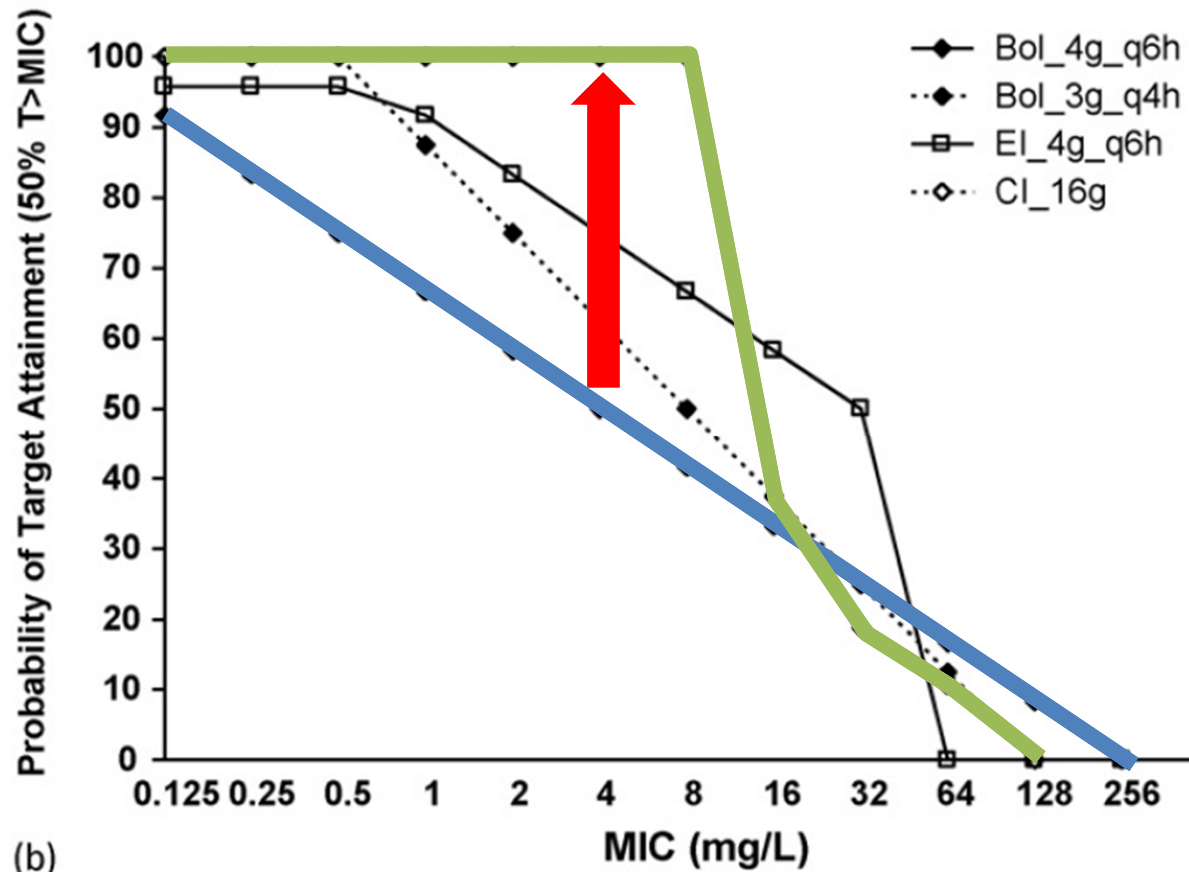
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 @CriticCareDoc

DAI – PK/PD target attainment

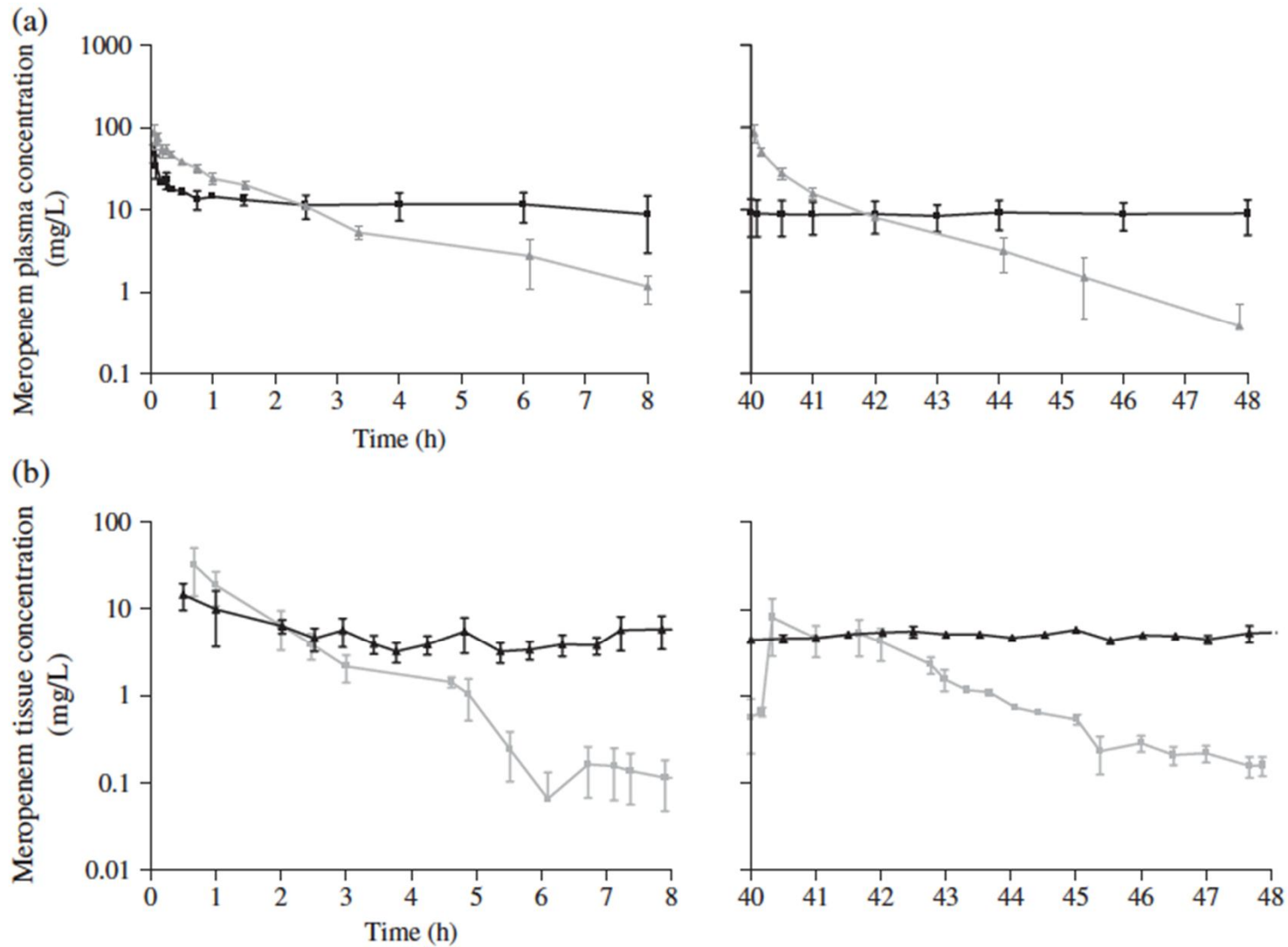
	p-value	Odds ratio	95% CI	
			Lower	Upper
Age (per year)	.656	1.005	.984	1.025
Interval start AB -sampling (/day)	.101	1.073	.986	1.168
APACHE II score (/point)	.425	.985	.949	1.022
SOFA score (/point)	.733	1.014	.935	1.100
Cockcroft-Gault CL_{CR} (/mL/min)	.000	.988	.982	.994
Ratio antibiotic dose to DD_{ICU}	.338	1.003	.997	1.009
Trauma as an admission diagnosis	.056	.385	.145	1.024
Surgery in the previous 24h	.068	.475	.214	1.057
Extended/continuous infusion used (vs. intermittent infusion)	.000	3.964	1.859	8.453
Prophylaxis indication	.834	1.079	.527	2.212

Prolonged infusion



(b)

Tissue concentrations and CI



Obstacles to TDM-based dosing

- MIC – availability and duration
- TDM availability
- Knowledge gaps
 - Lack of clear targets for beta-lactam antibiotics
 - Uncertainties about tissue concentrations

We don't have a clue...

Table 4. List of PK/PD targets for dose adjustment adopted by selected ICUs

NO CONSENSUS



Assays for TDM



Contents lists available at [ScienceDirect](#)



International Journal of Antimicrobial Agents

journal homepage: <http://www.elsevier.com/locate/ijantimicag>



Review

Assays for therapeutic drug monitoring of β -lactam antibiotics: A structured review

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ABSTRACT

In some patient groups, including critically ill patients, the pharmacokinetics of β -lactam antibiotics may be profoundly disturbed due to pathophysiological changes in distribution and elimination. Therapeutic drug monitoring (TDM) is a strategy that may help to optimise dosing. The aim of this review was to identify and analyse the published literature on the methods used for β -lactam quantification in TDM programmes. Sixteen reports described methods for the simultaneous determination of three or more

Assays for TDM - wishlist

- Limited sample preparation
- Stable in pre-analytic phase
- Broad range of concentrations
- Validated methods
- Fast

Mostly in-house methods (meropenem and piperacillin)

Many published methods fail

Other matrices – beware!



Prolonged infusion without TDM

- Optimized therapy necessary
- Factors associated with low concentrations known
- Increased dose for selected patients
- TDM sounds attractive but hasn't proved anything
- Many issues with assays
- Targets unclear – no consensus
- MIC not available in critical moment



Thank you for your attention

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