



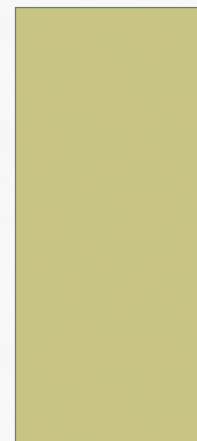
XIV Congresso Brasileiro de
Controle de Infecção e
Epidemiologia Hospitalar
19 A 22 DE NOVENBRO DE 2014 | EXPO UNIVIED CURITIBA | CURITIBA | PR



REVISÃO DO PROTOCOLO DE VANCOCINEMIA EM UMA UNIDADE DIALÍTICA

Serviço de Nefrologia e Serviço de Controle de Infecção

*Paola Hoff Alves - Farmacêutica



VANCOMICINA

Glicopeptídeo

Infecções
Gram-
positivos

MRSA

Farmacocinética

AUC/MIC
Tempo

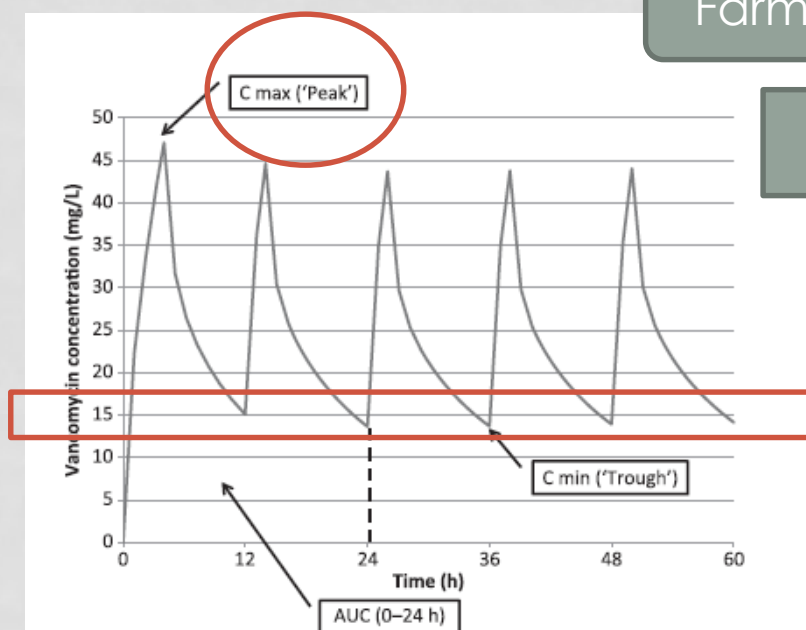


Figure 1 Pharmacokinetic parameters. Simulated vancomycin concentration versus time graph in hypothetical 60-year-old male (bodyweight 70 kg, creatinine 80 μ mol/L) following 2 g intravenous (IV) loading dose and 1 g IV 12-hourly. C_{max} , maximum concentration; C_{min} , minimum concentration; AUC_{0-24} , area under the curve (24-h dosing interval).



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Indicação de Monitoramento de Nível Sérico

Pneumonia
MRSA

- $AUC/MIC > 400$
- ↑ Erradicação Microbiológica
- Parâmetro alcançado quando nível sérico no vale: 15-20mg/L

Guideline
Australiano

- Todos os pacientes com tratamento acima de 48-72h
- Reduzir o risco de subdosagem – pressão seletiva

Nefrotoxicidade

- Decréscimo Clearance e prolongamento tempo $1/2$ vida
- Pacientes com Insuficiência Renal



ASHP REPORT

Therapeutic monitoring of vancomycin in adult patients: A consensus review of the American Society of Health-System Pharmacists, the Infectious Diseases Society of America, and the Society of Infectious Diseases Pharmacists

MICHAEL RYBAK, BEN LOMAESTRO, JOHN C. ROTSCHAFER, ROBERT MOELLERING JR., WILLIAM CRAIG, MARIANNE BILLETER, JOSEPH R. DALOVISIO, AND DONALD P. LEVINE

Am J Health-Syst Pharm. 2009; 66:82-98

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of Infectious Diseases Pharmacists

Table 2 (continued)

Variable	Recommendation	Level of Evidence and Grade of Recommendation	Section of Consensus Review
Criteria for monitoring	Data do not support using peak serum vancomycin concentrations to monitor for nephrotoxicity.	IIB	Vancomycin toxicity, Role of therapeutic drug monitoring in preventing nephrotoxicity
	Trough monitoring is recommended for patients receiving aggressive dosing (i.e., to achieve sustained trough levels of 15–20 mg/L) and all patients at high risk of nephrotoxicity (e.g., patients receiving concurrent nephrotoxins). Monitoring is also recommended for patients with unstable (i.e., deteriorating or significantly improving) renal function and those receiving prolonged courses of therapy (more than three to five days).	IIIB IIB	Vancomycin toxicity, Role of therapeutic drug monitoring in preventing nephrotoxicity Vancomycin toxicity, Role of therapeutic drug monitoring in preventing nephrotoxicity
Frequency of monitoring	Frequent monitoring (more than one trough before the fourth dose) for short course or lower intensity dosing (to attain target trough concentrations below 15 mg/L) is not recommended.	IIB	Vancomycin toxicity, Role of therapeutic drug monitoring in preventing nephrotoxicity
	All patients on prolonged courses of vancomycin (exceeding three to five days) should have at least one steady-state trough concentration obtained no earlier than at steady state (just before the fourth dose) and then repeated as deemed clinically appropriate.	IIB	Vancomycin toxicity, Role of therapeutic drug monitoring in preventing nephrotoxicity
	There are limited data supporting the safety of sustained trough concentrations of 15–20 mg/L. Clinical judgment should guide the frequency of trough monitoring when the target trough is in this range. Once-weekly monitoring is recommended or hemodynamically stable patients. More frequent or daily trough monitoring is advisable in patients who are hemodynamically unstable.	IIIB	Vancomycin toxicity, Role of therapeutic drug monitoring in preventing nephrotoxicity
<i>TDM for Vancomycin-Induced Ototoxicity</i>			
Criteria for monitoring	Monitoring for ototoxicity is not recommended for patients receiving vancomycin monotherapy.	IIIB	Vancomycin toxicity, Incidence of ototoxicity and role of therapeutic drug monitoring for prevention of vancomycin-induced hearing loss
	Monitoring should be considered for patients receiving additional ototoxic agents, such as aminoglycosides.	IIIB	Vancomycin toxicity, Incidence of ototoxicity and role of therapeutic drug monitoring for prevention of vancomycin-induced hearing loss

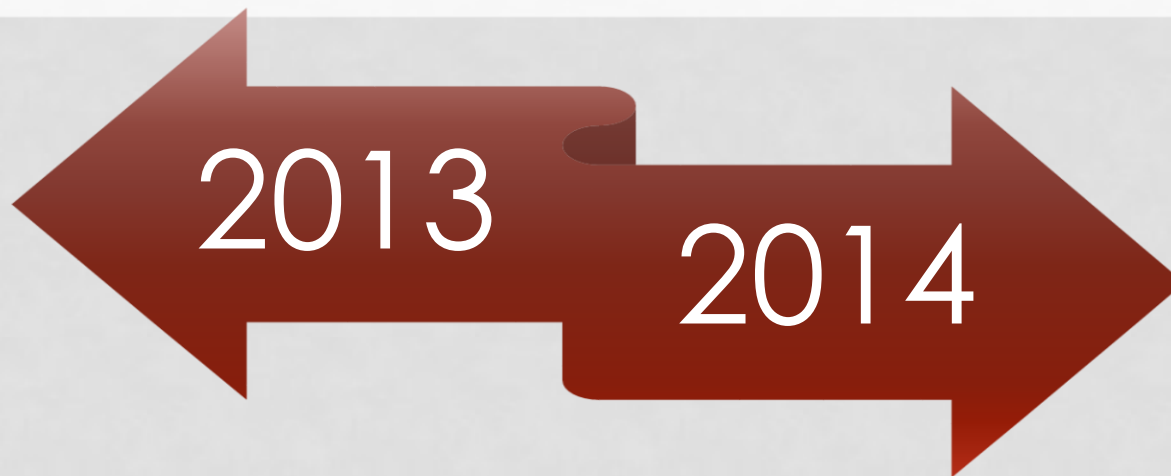


Hospital São Lucas da PUCRS

Porto Alegre

- ❖ Universitário, misto (SUS e Convênio)
- ❖ 648 leitos
- ❖ 4 UTIs Adulto, 1 UTI pediátrica e 1 UTI Neonatal
- ❖ Alta Complexidade
- ❖ Transplante Órgãos Sólidos, Oncologia,
- ❖ Hemodiálise: **Atende 150 pacientes-mês – 6 turnos**
- ❖ **Dialisadores com membranas alta depuração**
- ❖ **100 transplantes renais por ano**
- ❖ **50 Pacientes em Diálise peritoneal**

PROTOCOLO DE VANCOCINEMIA



Objetivo

Avaliar a adequação no nível sérico de pacientes dialíticos em uso de vancomicina antes e depois da alteração do protocolo institucional.

PROTOCOLO DE VANCOCINEMIA

ANTES

Dose inicial 15mg/kg –
30min finais da diálise



Coleta de
Vancocinemia antes da
próxima sessão (48h)



Dose de manutenção
10mg/kg

DEPOIS

Dose inicial 25mg –
Após término da diálise



Coleta de
Vancocinemia antes da
próxima sessão (48h)



Dose de manutenção
15-20mg/kg

METODOLOGIA

➤ Relatórios laboratoriais do nível Sérico de Vancomicina,

Teste: Quimioluminescencia

➤ Comparação entre as variáveis através do teste estatístico

Quiquadrado χ^2

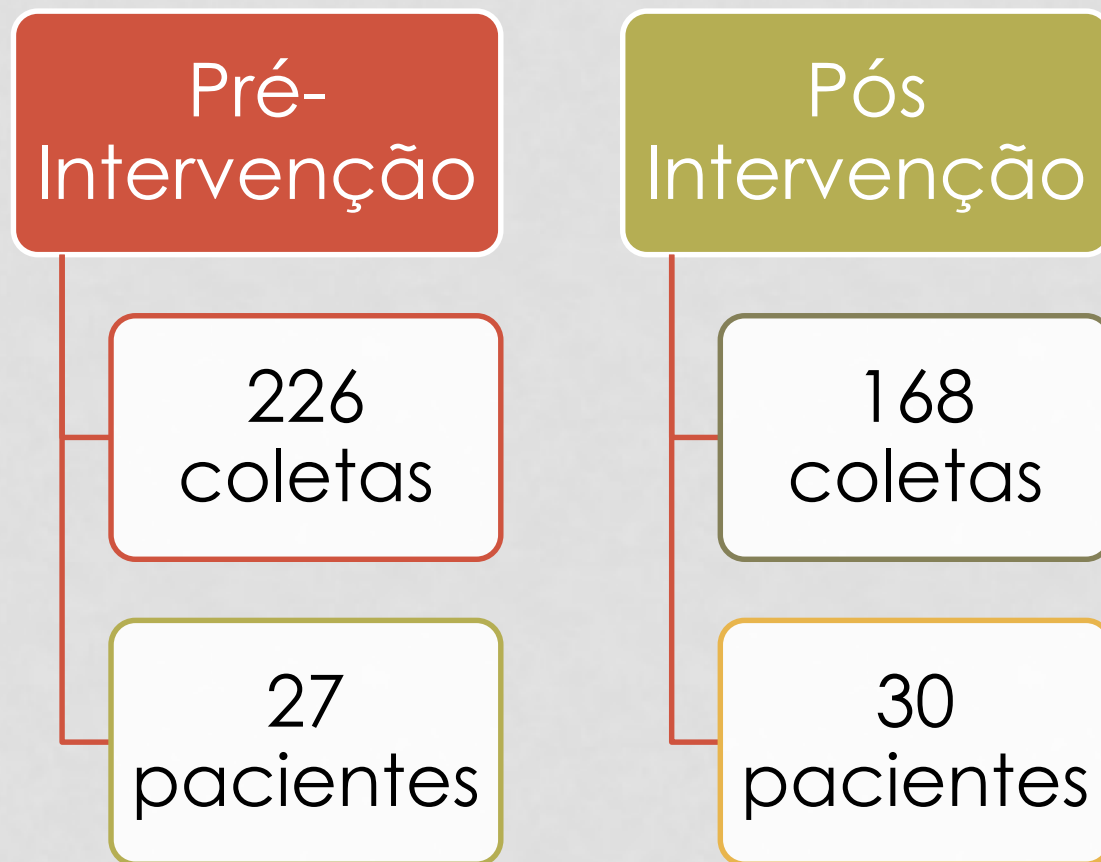
Pré-
Intervenção

- Janeiro a Dezembro de 2013

Pós-
Intervenção

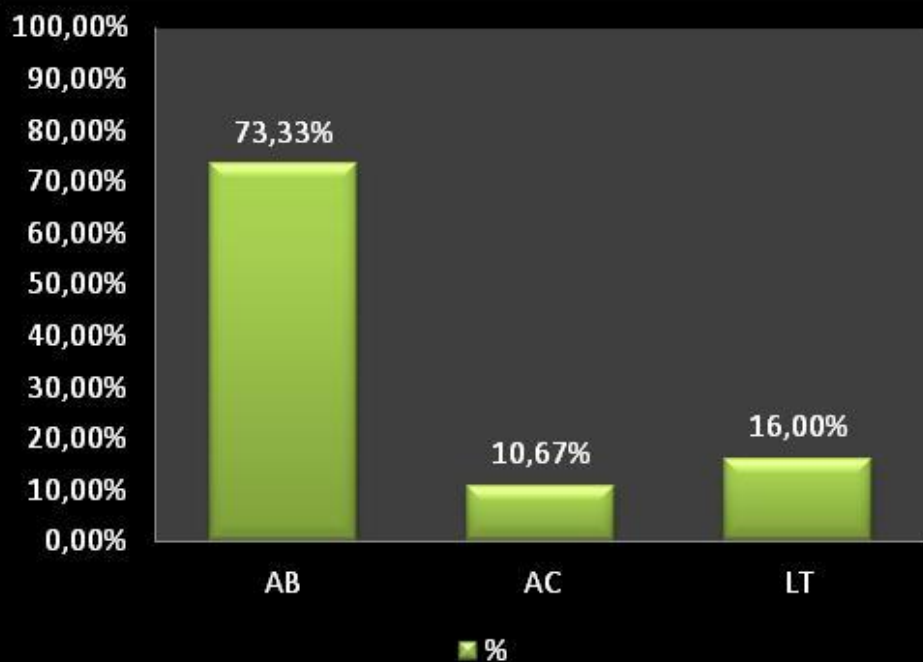
- Janeiro a Julho de 2014

RESULTADOS

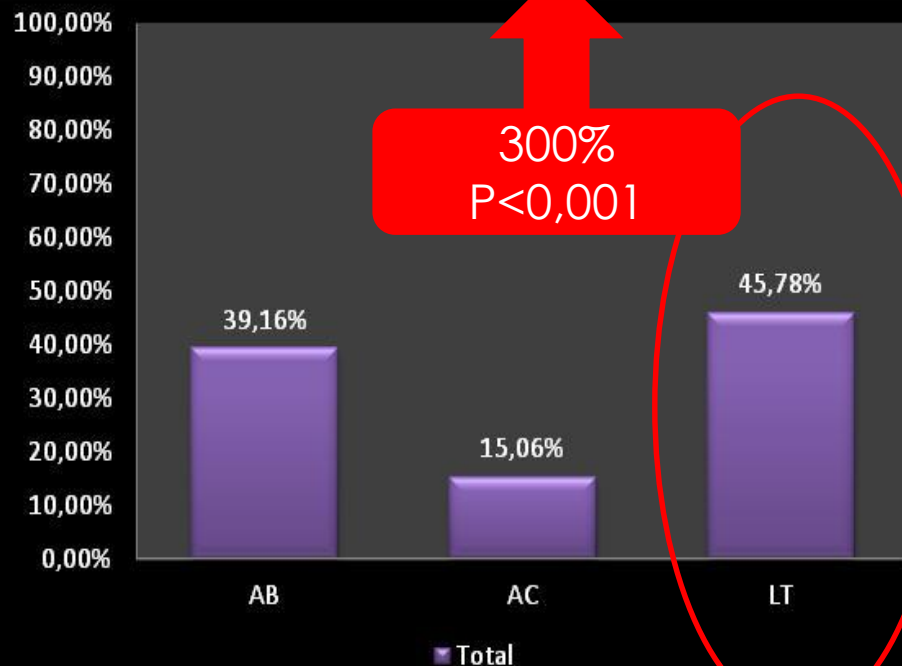


ADEQUAÇÃO DO NÍVEL SÉRICO TOTAL

Pré-Intervenção

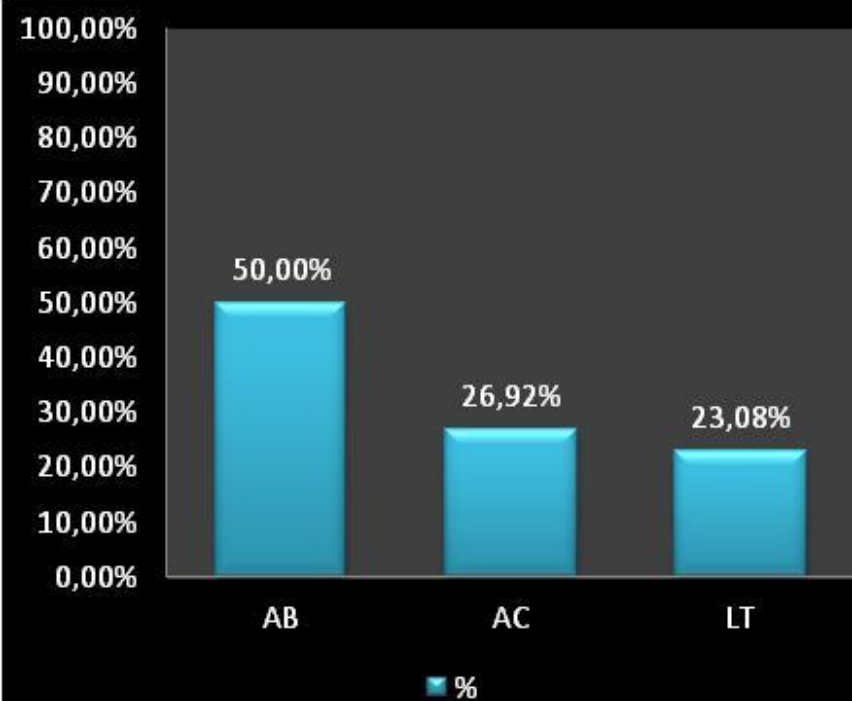


Pós-Intervenção

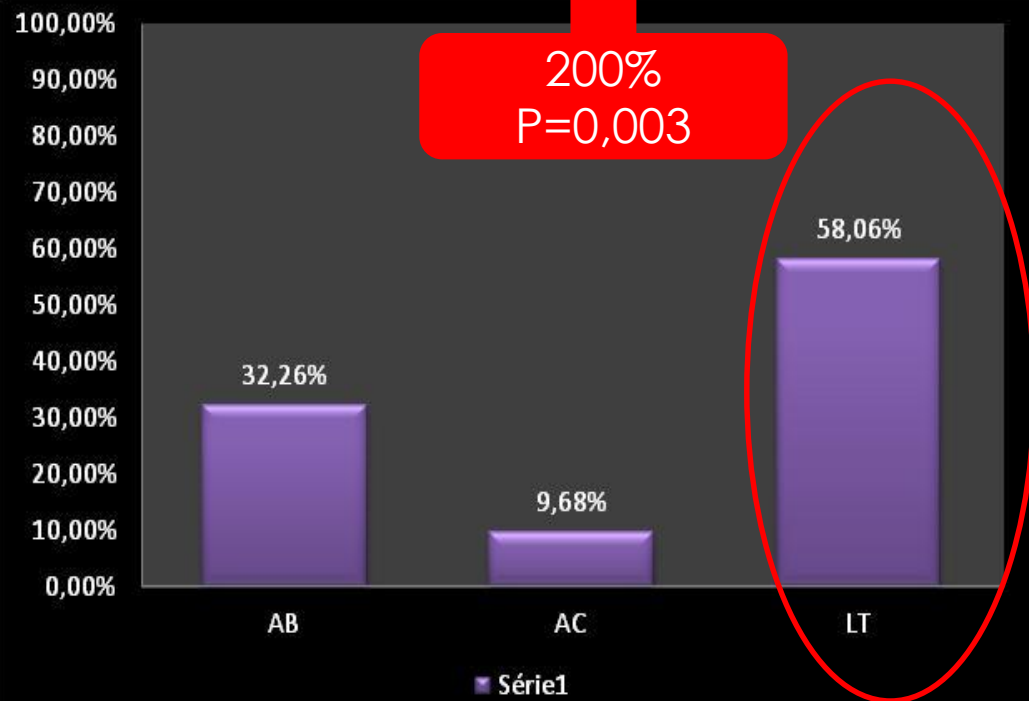


NÍVEL SÉRICO: 1ª DOSE (ATAQUE)

Pré-Intervenção



Pós-Intervenção



CONCLUSÃO

Importância da Revisão periódica dos protocolos institucionais, e do farmacêutico

Otimização dos parâmetros farmacocinéticos e farmacodinâmicos:
Dose de Ataque

Limitações: Correlação microbiológica e desfecho clínico