

CAVALCANTE RS¹, PEREIRA BS¹, MAÇON C¹, MENDES RP¹.

¹Universidade Estadual Paulista (UNESP), Faculdade de Medicina de Botucatu, Botucatu, São Paulo – Brazil;
E-mail: mip.ricardo@gmail.com

I. INTRODUCTION

Paracoccidioidomycosis (PCM) is one of the major systemic mycoses in Brazil, caused by fungi of the genus *Paracoccidioides*.

Trimethoprim-sulfamethoxazole, also called cotrimoxazole (CMX), one of the drugs most used in the PCM treatment, can be monitored by the serum dosage of the sulfamethoxazole (SMX).

II. OBJECTIVES

The objective of this study was to evaluate the impact of serum levels of SMX during treatment in PCM patients treated with CMX on clinical and serological response.

III. PATIENTS AND METHODS

- Thirty-six patients with a confirmed PCM diagnosis
- Patients underwent monthly SMX dosing until clinical cure and every three months until serologic cure
- SMX adequate serum levels: 80% or more of the measurements reached desired therapeutic values (70 mg/mL until clinical cure and 50 mg/mL until serological cure).
- Statistical analysis: to evaluate the variables as a function of time was performed Kaplan-Meier curves and Cox regression. The significance level was established as $p < 0.05$.

IV. RESULTS

Table 1. Multivariate analysis performed to identify predictors of the time to clinical and serologic cure in 36 paracoccidioidomycosis patients.

	Hazard ratio (95% CI)	p value
Clinical cure		
Clinical form		
Moderate chronic (reference)	...	
Severe chronic	0,46 (0,09 – 2,24)	0,33
Severe acute	0,74 (0,23 – 2,36)	0,61
Initial DID	0,89 (0,70 – 1,15)	0,40
Sulfa serum levels ≥ 70 mg/mL	3,70 (1,37 – 9,96)	0,01
Serological cure		
Clinical form		
Moderate chronic (reference)	...	
Severe chronic	1,61 (0,32 – 8,08)	0,55
Severe acute	1,03 (0,35 – 3,02)	0,95
Initial DID	0,74 (0,56 – 0,97)	0,03
Time to clinical cure	0,99 (0,99 – 1,00)	0,30
Sulfa serum levels ≥ 50 mg/mL	2,37 (1,04 – 5,40)	0,04

IC 95% = confidence interval; DID = immunodiffusion in agar gel specific for *Paracoccidioides brasiliensis*

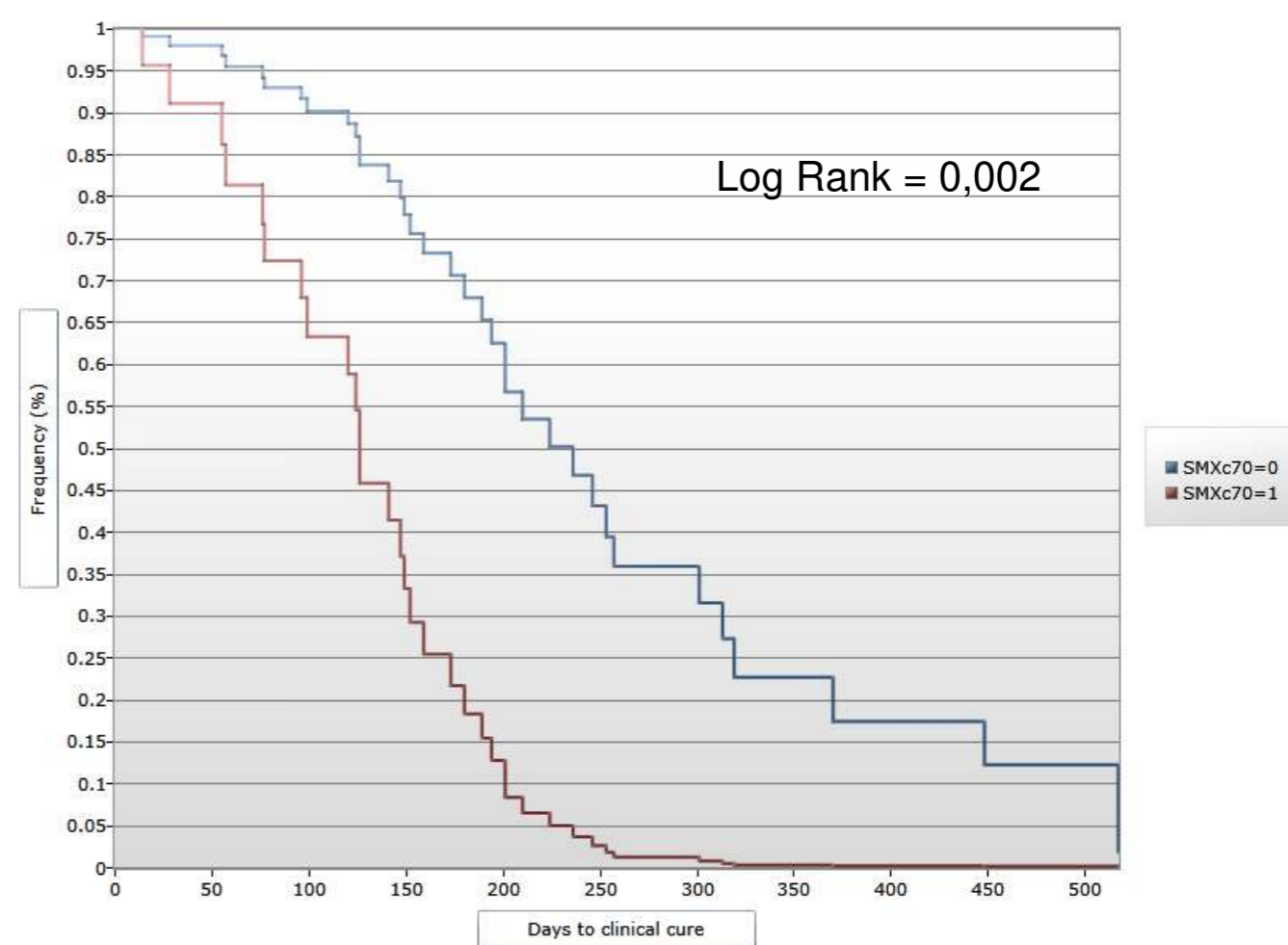


Figure 1. Kaplan-Meier curve to evaluate the time to clinical cure in 36 paracoccidioidomycosis patients as to sulfamethoxazole serum levels. SMXc70=0 indicates individuals with less than 80% of the measurements above 70 mg/mL and SMXc70=1 indicates individuals with more than 80% of the measurements above 70 mg/mL.

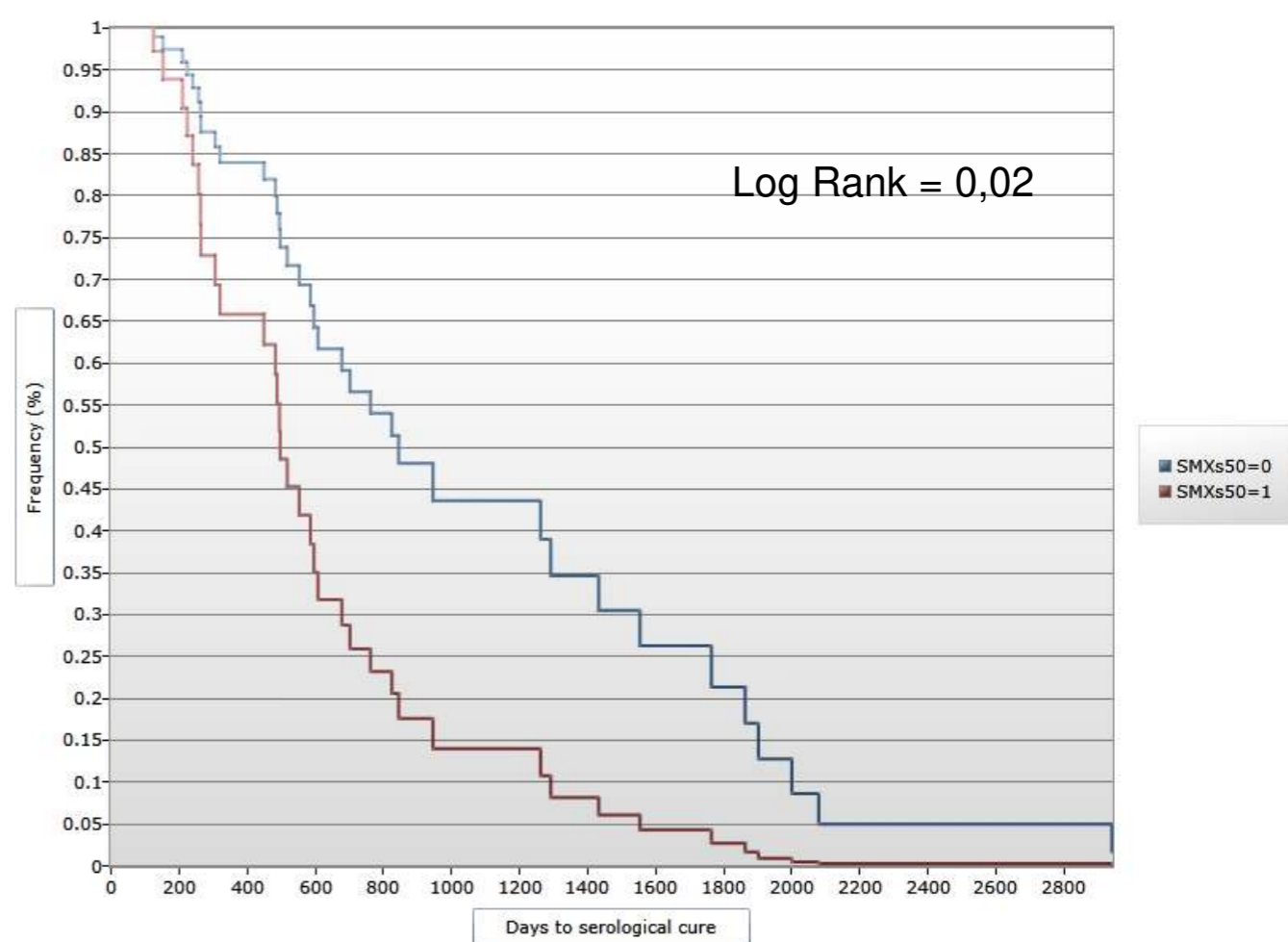


Figure 2. Kaplan-Meier curve to evaluate the time to serological cure in 36 paracoccidioidomycosis patients as to sulfamethoxazole serum levels. SMXs50=0 indicates individuals with less than 80% of the measurements above 50 mg/mL and SMXs50=1 indicates individuals with more than 80% of the measurements above 50 mg/mL.

V. CONCLUSION

These findings demonstrate the great importance of serum monitoring of SMX levels during the PCM treatment with CMX for earlier clinical and serologic cure.