

CARTA AO EDITOR

INTRADERMIC SURVEY WITH HISTOPLASMIN AND PARACOCIDIROIDIN

Sir,

The specificity of skin tests using the Fava-Netto histoplasmin and paracoccidioidin antigens has been questioned before¹. In a recent survey in Rio Grande do Sul (RS)² an apparent excess of double-positive results was again taken to suggest cross-reaction. If these antigens were to be shown to be unspecific they would be useless for epidemiological surveys, and the credibility of the many surveys in which they have been used would be seriously undermined.

Fortunately, the correlation of positive tests can be explained by other factors, including experimental design. If HO is the number of individuals positive only to histoplasmin, PO only to paracoccidioidin, HP to both and OO to neither, then the RS data³ can be summarized as follows:

HO	PO	HP	OO	
49	19	199	85	observed
93	65	155	39	expected
-44	-46	+44	+46	difference

However, this is not permissible, because two samples with different characteristics, Cachoeira do Sul (CS) and Santo Angelo (SA) were pooled. The expected number of HP results if H and P are independent is in fact 170.5, which is closer to the observed value:

	HO	PO	IIP	OO
CS N= 191	30	17	140	4
SA N= 161	47.5	32.5	30.5	50.5
Total	77.5	49.5	170.5	54.5
Observed	49	19	199	85
Difference	-28.5	-30.5	+28.5	+30.5

In a survey² using these antigens in the Tocantins basin, the frequency distribution of induration diameter suggested that reactions over 3.0mm were positive, and that adopting a threshold of 5.0mm resulted in about 6% false negative results for histoplasmin and 7% false negative results for paracoccidioidin. Increasing the sensitivity of the test by scoring smaller indurations as positive would probably alter the correlations (5.0mm was used in RS).

If these antigens are not specific, how does one explain the 68 subjects who reacted to only one antigen? Correlation of reactivity to specific antigens may indicate a common or correlated risk-factor for exposure to the fungus, or be due to false double-negative reactions caused by the presence of anergic individuals. The latter possibility can be tested for by including a third, unrelated, antigen in the survey, as was done in the Tocantins study².

Available results indicate that the Fava-Netto skin-test antigens are sensitive and specific indicators of exposure to the respective fungi, and that risk factors for exposure are poorly correlated, at least in the Amazon region². If further evidence of specificity in asymptomatic individuals is required, a survey with these antigens could be conducted in an area where *Histoplasma capsulatum* is present and *Paracoccidioides brasiliensis* absent (eg North America), or a universal antigen could be used as a positive control, in a future study.

REFERENCES

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