

论著

血吸虫病流行区居民腹部超声显像指标典型相关及冗余度分析

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摘要

目的 探讨日本血吸虫病肝、脾B超指标间以及与感染次数、感染时间和每克粪便平均虫卵数 (EPG) 的相关性。**方法** 采用典型相关方法分析肝、脾B超指标间及其与感染次数、感染时间和EPG的相关性, 用冗余度分析方法分析肝、脾变异中有多少比例互为相关。**结果** 男、女无既往感染组和既往感染组的第 1 典型相关系数分别为 0.7842、0.5483 和 0.5800、0.4220 (P 值均 <0.01); 男、女粪检阴性组和阳性组的第 1 典型相关系数分别为 0.6063、0.5215 和 0.6595、0.3849 (P 值均 <0.01); 男、女无既往感染组肝B超指标变异分别有 43.5% 和 17.5% 与脾B超指标变异有关, 而既往感染组分别为 22.1% 和 11.4%。而在男、女粪检阴性组分别为 26.8% 和 16.8%, 粪检阳性组分别为 27.6% 和 10.7%; 既往感染组, 感染次数、调查时距首次感染时间和粪检阳性者的 EPG 与肝、脾B超指标的典型变量均无相关性 ($P > 0.05$)。**结论** 日本血吸虫病肝、脾B超指标间具有典型相关关系, 且男性的相关性大于女性; 在既往感染者中感染次数、调查时距首次感染时间和粪检阳性者 EPG 与肝、脾B超指标的典型变量间均未发现相关性。

关键词 [日本血吸虫病](#) [腹部超声波检查](#) [典型相关](#) [冗余度分析](#)

分类号

Canonical Correlation and Redundancy Analysis on the Indices of Abdominal Ultrasonography of Schistosomiasis japonica

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Abstract

Objective To explore the correlation of the ultrasound indices of liver and spleen in schistosomiasis japonica and with infection frequency, infection time and EPG. **Methods** The canonical correlation was applied to analyze the correlation of the hepatosplenic ultrasound indices in schistosomiasis japonica, and the correlation of the ultrasound indices with infection frequency, infection time and EPG. The proportions of variation related to each other in liver and spleen were analyzed by the redundancy analysis. **Results** The correlation coefficients of the first pair correlation canonical variable were 0.7842, 0.5483 and 0.5800, 0.4220, respectively, in males and females without infection, males and females with infection history ($P < 0.01$). The correlation coefficients of the first pair correlation canonical variable were 0.6063, 0.5215 and 0.6595, 0.3849, respectively, in male negatives and female negatives, male positives and female positives ($P < 0.01$). In groups of males and females without infection, the variations of liver ultrasound indices related with the variation of spleen ultrasound indices were 43.5% and 17.5% respectively, and in groups infection history, they were 22.1% and 11.4% respectively. In male and female negative groups, the variations of liver ultrasound indices related with the variation of spleen ultrasound indices were 26.8% and 16.8% respectively, and in positive groups, they were 27.6% and 10.7% respectively. The infection frequency, infection time and EPG in the stool-positive groups were not significantly related with the canonical variables of liver and spleen ultrasound indices ($P > 0.05$). **Conclusion** There is a significant canonical correlation between the liver and spleen ultrasound indices in schistosomiasis japonica, especially in males. In groups with infection history, the infection frequency, infection time and EPG of those stool-positives are not relevant to the canonical variables of liver and spleen ultrasound indices.

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