

A LONGITUDINAL EVALUATION OF EFFICACY ON CONTROL OF SCHISTOSOMIASIS BY COMPARATIVE STUDY OF DIFFERENT CONTROL MEASURES

Jiang Qingwu¹, Yuan Hongchang¹, Zhong Dumin², Chen min¹

1. Department of Epidemiology, Shanghai Medical University

2. Guici City Anti-schistosomiasis Station, Anhui Province

ABSTRACT

A Comparative study of two different control measures was undertaken in two villages of Anhui. 1981—1984 was the period for conduction and 1984—1989 was the period for monitoring. Shanlian village, where a comprehensive control measure of spraying molluscicide and selective chemotherapy was conducted, the prevalence rate of inhabitants dropped from 21.1%(1981) to 1.7%(1984). Guifan village, where only selective chemotherapy was conducted, the prevalence rate dropped from 19.2%(1981) to 7.2%(1984). the prevalence rate from 1987 to 1989 was 13.6%, 11.9% and 9.3% respectively with Shanlian village and 5.5%, 10.2% and 13.3% with Guifan village, the cost of control in Guifan village was cheaper than that in Shanlian village.

赤桉和贝螺杀对光滑双脐螺作用的研究*

江苏省寄生虫病防治研究所 周晓农

普遍认为,化疗需与螺宿主防制措施相结合才能达到最大程度地使血吸虫病感染率和发病率稳步下降。由于发展中国家不能接受价格昂贵的进口合成杀螺剂,植物杀螺剂已得到了广泛的研究。为探索有效植物杀螺剂,并了解其对螺宿主的作用,本实验比较了赤桉(*Eucalyptus camaldulensis*)水提剂、甲醇提取物及贝螺杀对光滑双脐螺(*Biomphalaria glabrata*)—曼氏血吸虫中间宿主的杀灭效果。并用光学、电子显微镜技术在赤桉甲醇提取物和贝螺杀的 L_{c50} 浓度下,分别对光滑双脐螺的各系统组织损害作了系统的研究。

结果显示,赤桉(桉属,桃金娘科)甲醇提取物具有较理想的杀光滑双脐螺作用($L_{c50} = 71.59\text{mg/L}$, $L_{c90} = 96.73\text{mg/L}$),而水提取物作用则较

弱($L_{c50} = 3049.65\text{mg/L}$)。这结果提示杀螺有效成份存在于桉树油内。螺组织病理学研究显示,赤桉甲醇提取物与贝螺杀对光滑双脐螺作用相似,在 L_{c50} 浓度时,同时对神经、消化及生殖系统具有破坏作用。电镜观察表明大脑神经分泌细胞的线粒体有不同程度水肿、破损,以及出现畸形分泌颗粒。这提示胞浆中三磷酸腺苷(ATP)及神经分泌物质的代谢循环受阻为杀螺剂的作用机制。与其他系统的组织损害比较,发现其他组织受损是由于受神经内分泌系统控制的激素代谢混乱所致。

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