



Indicate the format in which you wish to present your work: Poster Oral Presentation

TITLE

AURAMINE STAINING AND ADHERENCE OF SCHISTOSOMA MANSONI EGGS ONTO MICROSCOPE SLIDES FOR DETECTION STEP OF HELMINTEX METHOD

AUTHORS

Candal, M.S.¹; Pereira, H.P.¹; Silva, G.C.F.¹; Oliveira, L.O.V.¹; Pereira, D.S.C.A.¹; Hancheid, T².; Graeff-Teixeira, C.*¹

AFFILIATIONS

¹ Núcleo de Doenças Infecciosas, CCS, Universidade Federal do Espírito Santo, Brasil
² Microbiologia, Universidade de Lisboa, Portugal

ABSTRACT

Diagnostic tools are essential for controlling schistosomiasis. Helminex (HTX) method isolate eggs based on their magnetic behavior when attached to paramagnetic beads sediments are submitted to a magnetic field. It is 100% sensitive for egg burdens higher than 1.3 eggs per gram of feces (EPG). But it still is a very labor-intensive set of concentration and cleaning procedures, including the final stage of detecting eggs at the microscope. Batch staining with auramine and observation at a fluorescence microscope greatly facilitates the screening of dried sediments. The objective was to test the persistence of auramine stain over time and the adherence of eggs to the microscope slides. Each of 3 slides were prepared as follows: 12 eggs were introduced into 30 μ L of HTX sediment and stained with auramine. The HTX sediment was then diluted with 90 μ L 0.9% NaCl, 5% Tween 20 solution, evenly spread on each glass slide, and left to dry at room temperature. Slides were totally screened at a fluorescence microscope (Nikon, Japan) at times zero, 2, 4, 7, 30, 60, 90 days. All eggs had charriot coordinates registered for follow up. After 90 days, 68.7% of the eggs were found and all of them kept the auramine fluorescence. These results indicate that auramine staining and dry spreading of HTX sediments are suitable for the detection of eggs at the microscope, even after long term storage of slides, what guarantees the appropriate examination and identification of *S.mansoni* eggs. Reducing work load and complexity of HTX is important to consolidate it as a very sensitive reference method, for accuracy studies of molecular methods.

KEYWORDS

Egg detection; Helminex; Auramine

FINANCIAL SUPPORT

FAPES (PROFIX 2022-1DNS6) and CNPq (grants 302675/2019 and CNPq/MS-SCTIE-Decit No 22/2019, sob o processo CNPq #442994/2019-2). IC PIIC-UFES 2023/2024 and 2024/2025.