

Molluscicidal Effects of Aqueous Extracts of Selected Medicinal Plants from Makueni County, Kenya.

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Abstract

Schistosomiasis (also known as Bilharzia) is a disease caused by species of parasitic worms or helminths of the genus *Schistosoma*. It continues to be a serious worldwide public health problem. The pathological changes in schistosome infestations are caused mainly by the deposition of the eggs into various tissues and organs where granulomas or pseudo tubercles are formed around them. Schistosomes and their intermediate snail hosts are integral parts of the freshwater aquatic environments in which they are found. *Biomphalaria* and *Bulinus* are the two primary genera of snails capable of harbouring infections with *Schistosoma mansoni* and *S. haematobium*. Some of the methods of controlling of schistosomiasis include: control of snails, public health education, sanitation, and community-based chemotherapy employing praziquantel. No single method, regardless of location, has been shown to work because of the large number of environmental variables involved in the parasitic transmission. Some of the control programmes have been those that include some method of curbing transmission, including mollusciciding. The objective of this study was to bioscreen aqueous extracts of five medicinal plants identified using ethnobotanical information gathered from traditional healers for molluscicidal activity. Molluscicidal activity was assessed by determining the ability of various concentrations of the aqueous plant extracts to kill adult *Biomphalaria pfeifferi*, the intermediate host of *Schistosoma mansoni*. Of the five plant extracts, only the aqueous extracts of *Aloe secundiflora*, *Aspilia pluriseta*, *Balanites aegyptiaca*, *Azadirachta indica* and *Amaranthus hybridus* showed molluscicidal activity. This study has established that five plants, that is, *Aloe secundiflora*, *Aspilia pluriseta*, *Balanites aegyptiaca*, *Azadirachta indica* and *Amaranthus hybridus* have molluscicidal activity and recommends that toxicity studies be conducted to establish their safety in bilharzia control.

Keywords

Schistosomiasis; *Biomphalaria pfeifferi*; Molluscicidal activity; *Schistosoma mansoni*

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See more at: <https://www.omicsonline.org/open-access/molluscicidal-effects-of-aqueous-extracts-of-selected-medicinal-plants-from-makueni-county-kenya-2153-2435-1000445.pdf>