Use of Natural Products as Therapeutic Agents for the Treatment of Schistosomiasis

Asia Karim
Asian Network for Scientific Information, Faisalabad, Pakistan

Schistosomiasis is a clinical term applied to infection with one of a series of related trematode parasites that are endemic to at least 76 tropical and sub-tropical countries. Four species routinely infect the human host and several others rarely do so. Many have reservoir hosts, making eradication efforts nearly impossible in some cases. Taken together, these organisms infect some 220 million people throughout the world, while 600 million others remain at risk (Despommier et al., 2004).

Schistosomiasis is the second most prevalent tropical disease in Africa after malaria and is of great public health and socio-economic importance in the developing world (Engles et al., 2002).

A recent study published in Research Journal of Medicinal Plant (January 2011 issue) proposed that natural product extracts with non-toxic medicinal properties should be explored for possible intervention in schistosomiasis as a disease involving impairment of metabolism of infected subjects. These inspire more hope for reducing the intensity of schistosomal infection by reduction in worm burden, ova count, granuloma size and number leading to improvement in histopathological picture of liver, spleen and kidney by reducing inflammatory and fibrotic reactions of schistosoma.

In this study, Ali (2011) also illustrates the species, intermediate host; form of the disease; endemic area of each species and total life cycle of schistosomiasis.

Regarding the control of schistosomiasis, Sanaa describes two methods to control schistosomiasis; (1) through the intermediate host (snail control, environmental control, control by molluscsicides and biological control) and (2) through the main host (health education). According to Despommier et al. (2004) no single method can control schistosomiasis because of large number of environmental variables involved in its transmission. Nevertheless, at least four approaches to control infection have been proven effective at the community level: (1) Control of snails, (2) public health education, (3) sanitation and (4) community-based chemotherapy employing praziquantel.

Ali (2011) also highlights the different method of treatments and prophylaxis of schistosomiasis in this paper. The recent approach on the development of new drugs from natural products for treatment of human diseases especially in developing countries still rely on traditional medicine for their primary health care (WHO, 2002). In this study, Ali (2011) also provides the list of medicinal plants which may use for the treatment of schistosomiasis in different parts of the world with their characteristics. Finally author suggested that an intensive research is still required for the development of drugs with minimal side effects.

REFERENCES