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A comparative study of *Echinococcus granulosus* from human and animal hosts in Kenya using isoelectric focusing and isoenzyme analysis

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Abstract

MACPHERSON C. N. L. and MCMANUS D. P. 1982). A comparative study of *Echinococcus granulosus* from human and animal hosts in Kenya using isoelectric focusing and isoenzyme analysis. *International Journal for Parasitology* **12**: 515–521. The soluble enzyme extracts from protoscoleces obtained from hydatid cysts of human, camel, cattle, sheep and goat origin were compared on the basis of their isoenzyme patterns for GPI and PGM using isoelectric focusing. Consistent GPI and PGM isoenzyme patterns were obtained for larvae of human, camel and sheep material. Cattle material varied occasionally in having an additional cathodic band in some of the GPI patterns. Two distinct isoenzyme patterns were evident in the goat material for both enzymes. The more common goat patterns were similar to those of human, cattle and sheep (Kenya, U.K. and Argentina) material, which were similar to each other. The rare goat patterns were similar to those obtained for camel material. Cyst location in the various intermediate hosts had no effect on the zymograms obtained. Additionally, no alteration in the major banding patterns was observed between the larvae and homologous adults produced by experimental infections. Of 26 naturally infected dogs, 19 produced adult GPI zymograms resembling human/sheep/goat (common form) experimental infection patterns, three were similar to experimental cattle infections and four had camel/goat (rare form) patterns.

Keywords

Echinococcus granulosus, hydatid cysts, protoscolex, human, camel, cattle, goat, Sheep, Turkana, Masailand, isoelectric focusing, strain differentiation, Kenya