A COMPARATIVE MORPHOLOGICAL STUDY ON THE METACESTODAL AND DEVELOPMENTAL STAGES OF ECHINOCoccus GRANULOSUS OF DIFFERENT HOSTS (HUMANS, CAMELS AND SHEEP)

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ABSTRACT

Local populations of Echinococcus granulosus (E. granulosus) may vary in morphological and biological features that can play an important role in the epidemiology of the disease. In this work, hydatid cysts were collected from humans (liver), camels (lung) and sheep (liver & lung). To distinguish the differences between the different sources of the parasite, rostellar hook characteristics of protoscolecres of different cysts in addition to morphological characters of the developmental intestinal Echinococcus stages of different origins were done. On examination of human and camel cysts, the fertility rate was 100% while the fertility of lung and liver cysts of sheep were 80% and 20% respectively. The number of hooks in humans (48.4 ± 3.4) and camels (42.3 ± 2.5) was more than in sheep (35.4 ± 2.5) in addition to the presence of a third tiny row of hooks in some of them. As regards to the strobilar development, on the 7th day p.i., the parasites obtained from the three different protoscolecres consisted of scolex and neck only. On the 21st day p.i., beginning of banding and segmentation was noticed. On the 35th day p.i., distinct growths were very clear. E. granulosus of humans and camels were similar to parasites of sheep as regards to total worm length (2.3 ± 0.5, 2.2 ± 0.6 and 2.4 ± 0.4 respectively). The percentage of length of the terminal segment to the total worm length was different (52%, 54% for humans & camels respectively and 25% for sheep). The maximal numbers of segments were two or three in humans and camels, while in sheep it was four. On the 56th day p.i., complete development was observed for most of the parasites. From this study it was noticed that the human and camel isolates can be readily be distinguished from that obtained from sheep in some respects. This gives an important aid in the epidemiology and of particular significance in relation to this parasite to hydatidosis in humans.

INTRODUCTION

Hydatidosis (echinococcosis) in humans is a zoonotic infection caused by the larval stages of the genus Echinococ-