

HEPATIC CYSTIC ECHINOCOCCOSIS IN CAMELS OF SAUDI ARABIA: PREVALENCE, RISK FACTORS AND ECONOMIC LOSS

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ABSTRACT

The study was conducted to determine the prevalence, risk factors and economic loss of hepatic cystic echinococcosis (CE) in the dromedary camel in Eastern Region, Saudi Arabia. A total number of 810 animals were selected randomly out of 3400 (23.8%) dromedary camels and subjected to careful ante-mortem inspection. The examined animals were 330, 270 and 210 from Al Omran, Al Ahsa and Al Dammam abattoirs, respectively. Out of 810 slaughtered dromedary camels, 216 were found infected with hydatid cyst (26.7%) with an occurrence rate 27.6%, 29.6% and 21.4% from Al Omran, Al Ahsa and Al Dammam abattoirs, respectively. Statistically, the rate of infection was not significantly different among the three examined abattoirs (Chi-square 4.29, $P > 0.05$). Majaheem breed was more liable to be infected and had higher infection prevalence (29.6%) in comparison with Magateer (22.8%) and Wadha (10.3%) breed (OR 0.65; $P < 0.01$). Female camel had higher infection rate (33.4%) than male (16.3%) (OR 2.58; $P < 0.001$). The probability of infection with CE linearly increased with the camel age and the probability increased by 2.09 fold for each further year of age (OR 2.09; $P < 0.001$). Camel with poor body condition was significantly more likely to be infected (29.7%) in comparison with camel with medium (26.1%) and well body condition (9.3%) (OR 0.69; $P < 0.01$). The recorded cysts were also examined for fertility and viability. The percentages of fertile and viable cysts found to be higher in Al Omran region 4/91 (4.4%), followed by Al Ahsa, 2/80 (2.5%) and Al Dammam, 1/45 (2.2%), respectively. The overall direct financial loss in three abattoirs per year was 304,092 \$. Hepatic cystic echinococcosis is highly prevalent in one humped camel causing considerable economic loss. Further studies are needed to estimate indirect economic loss and determine the genotypes of such disease in KSA.

Key words: Cystic echinococcosis, economic loss, prevalence, risk factors