Incidence and Organ Wise Involvement of Hydatidosis In Buffaloes

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ABSTRACT

Hydatidosis is a condition caused by the bladder worm stage of the dog tapeworm, *Echinococcus granulosus* in herbivores such as cattle, buffalo, and sheep. The rural population especially in underdeveloped countries is at a higher risk of acquiring hydatidosis because of close proximity with domestic and wild animals. The condition occurs in herbivorous intermediate hosts as a result of accidental ingestion of the eggs of the parasite with contaminated feed and water apart from grazing on contaminated pasture with the eggs as well. The hydatid cysts in such infected animals are normally observed in lungs, livers and other viscera depending on the number of ingestion of the eggs of the tapeworm. Hydatidosis in animals results in significant economic loss to the meat industry through condemnation of the infected organs, livers, lungs and other organs apart from reduced quality of meat, milk and wool. The incidence of hydatidosis in animals and human beings in Chennai is found to vary from 1% to 13%, with more incidence in herbivorous animals. Considering the economic significance of the disease, a study was undertaken to know the incidence of hydatidosis in buffaloes at slaughter in the corporation slaughter house, Chennai by inspection of the carcass and viscera of the slaughtered buffaloes. The present study indicated that out of 847 buffaloes observed during slaughter, 85 had hydatid cysts giving an incidence of 10 per cent. Lungs accounted for 52 (61.18%), livers 24 (28.23%), spleen 1 (1.18%) and the involvement of both lungs and liver was observed in 8 (9.41%) of the 85 buffaloes with hydatid cysts.

Keywords: buffaloes, hydatidosis, incidence, organ wise distribution

INTRODUCTION

Hydatidosis is caused by the cystic larval stage of *Echinococcus granulosus*, the dog tapeworm and the disease is recognized as one of the world’s major zoonoses affecting human beings and their domestic livestock. It is a disease of both economic and public health significance owing to the condemnation of the affected organs like lungs, livers, spleen, kidneys and other viscera in slaughtered food animals such as cattle, buffaloes, sheep etc., apart from its affection in human beings by accidental ingestion of the eggs of the tapeworm by playing with the infected dog or through contamination of food and water with the eggs of the parasite. Incidence of hydatidosis in this part has been reported earlier by Sundaram and Natarajan (1960) by examination of animals slaughtered at Madras in India. Hydatid disease in the intermediate host like buffaloes is typically a chronic parasitic infection with viable cysts persisting in many instances throughout the life of the affected intermediate hosts. It is a zoonosis found in most pastoral areas of the world (Al Yaman et al., 1985). In most Mediterranean countries, the disease is hyper endemic in sheep, goats, camels and donkeys. New foci of infection and region of endemicity have recently been recognized and there is increasing evidence of the causative agents extending their range into areas previously considered to have been free of infection. Considering the economic importance of the disease in buffaloes which are slaughtered in large numbers for human consumption, the present study was undertaken to know the incidence of hydatidosis in buffaloes in Chennai.

MATERIALS AND METHODS

The incidence of hydatidosis in food animals, meant for human consumption such as buffaloes was observed at the time of slaughter by inspecting the carcasses and viscera of theAccepted April 10, 2013; Online February 24, 2014.
slaughtered buffaloes for the presence of hydatid cysts particularly in organs like lungs, liver, spleen, kidneys etc. The hydatid cysts in various organs were collected from the slaughtered buffaloes and brought to the laboratory. The hydatid cysts were examined microscopically to ascertain whether fertile or sterile cysts based on the presence or absence of protoscolices. The organ wise affection by hydatid cysts was also recorded so as to know the incidence in different organs and viscera of the slaughtered buffaloes

RESULTS AND DISCUSSIONS

A total of 847 buffaloes were observed during slaughter, out of which 85 had hydatid cysts in various organs, giving an incidence of 10%. With regard to organ wise involvement, lungs accounted for 52 (61.18%), livers 24 (28.23%), spleen 1 (1.18%) and the involvement of both lungs and liver was observed in 8 (9.41%) of the 85 buffaloes with hydatid cysts.

The incidence of hydatidosis in buffaloes was reported to vary from 7% to 12% (Deka and Gaur, 1990), 13.5% (Sangaran, 1994), 19.22% (Koshy, 1984), 34.88% (Hussain et al., 1992) and it was reported to be as high as 48% by Singh and Dhar. 1988. The finding in the present study was found to be 10% which is similar to the findings of Deka and Gaur (1990) and Sangaran (2010).

Organ wise involvement in the present study revealed that lungs were found to be more frequent targets (61.18%) in buffaloes, which is in accordance with the findings of Pillai et al., (1986), who had also reported that lungs were more commonly affected with hydatid cysts than liver. Sundaram and Natarajan (1960) had reported that lungs were more frequently involved (58%) as compared to liver, and spleen was affected less frequently (2.7 per cent). The findings in this study correlated well with the reports made by earlier workers.

REFERENCES


