

THE BACTERIOLOGIC STUDY OF HEPATIC ABSCESS IN SLAUGHTERED CATTLE IN SHAHREKORD ABATTOIR (IRAN)

S.Lotfollahzadeh¹, A.R.Abdoli², A.Sharifzadeh³, M.R.Mokhbere Dezfoli⁴, P.Tajik⁴

1-Department of clinical sciences, Faculty of veterinary medicine, Azad university of Garmsar, Garmsar, Iran, 2-Graduated from Faculty of veterinary medicine, Azad university of Shahrekord, Shahrekord, Iran, 3--Department of pathobiology, Faculty of veterinary medicine, Azad university of Shahrekord, Shahrekord, Iran, 4- Department of clinical sciences, Faculty of veterinary medicine, Tehran university, Tehran, Iran

Introduction

Local suppurative infections of the liver (hepatic abscess) do not cause clinical signs of hepatic dysfunction, unless they are particularly massive or extensive metastatic. Many bacterial causes have been isolated from bovine liver abscesses. Liver abscesses occur at all ages and in any species, but the abscesses of significant economic impact occur in feedlot cattle (1, 2, 3, 7, 9). This study was carried out to find the occurrence and bacterial causes of hepatic abscesses in sacrificed cattle in Shahrekord abattoir.

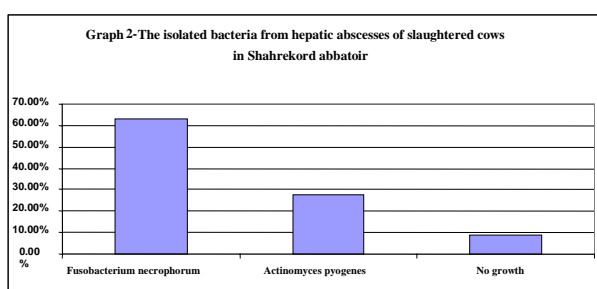
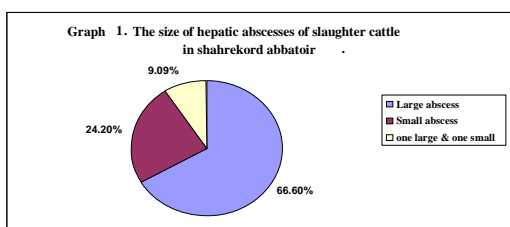
Material and Methods

During June to September 2003 five hundred sacrificed cattle in shahrekord abattoir were inspected for hepatic abscess. In the case of hepatic abscess after recording of animals' sex, age, production and abscess characterizations (number, size, location), whole abscess with some normal liver tissues which adhered to it, was dissected from the liver and transferred to the bacteriology lab. Aerobic, anaerobic and microaerophilic bacterial cultures from hepatic abscesses were carried out with standard methods.

In this study 500 sacrificed cattle for hepatic abscess were examined and bacterial culture of 33 abscesses was done.

Results

Thirty three cattle (6.6%) from 500 inspected sacrificed cattle were involved with hepatic abscess, from which 18 abscesses were found in females (54.5%) and 15 were in male animals (45.5%). Twenty three livers from 33 infected livers had only one abscess (69.69%) and 10 livers had two abscess (30.30%). *Fusobacterium necrophorum* was isolated as unique bacterial cause of 21 abscess and *Actinomyces pyogenes* was isolated from only 9 abscesses and from 3 abscesses no bacteria grew.



Discussion

Different studies on the occurrence of bovine hepatic abscess showed different results (3, 6, 7, 8).

In the present study occurrence of bovine hepatic abscess was 6.6% which is in accordance with other studies.

It has been reported that *F. necrophorum* is the primary etiologic cause of 80 to 97% of bovine hepatic abscess (1, 2, 5). Other bacterial agents such as *Actinomyces pyogenes*, *Streptococcus sp*, *Staphylococcus sp* and *Bacterioides* were also isolated from liver abscess (1, 2, 6, 7, 8).

In the present research *F. necrophorum* was isolated from 63.63% of hepatic abscesses of slaughtered cattle and *A. pyogenes* was isolated from 27.27%.

Conclusion

The results of the present study showed that *F. necrophorum* is the most important bacterial cause of hepatic abscesses in slaughtered cattle in Sharekord abattoir and *A. pyogenes* is the second important bacterial cause of hepatic abscesses.

References

- 1) Berg, E.; Scanlan, C. M. (1982): Studies of fusobacterium necrophorum from bovine hepatic abscess: biotypes, quantitation, virulence and antibiotic susceptibility. American Journal of Veterinary Research. 43(9): 1580- 1585.
- 2)Blood, D. C.; Gay, C. C.; Hinchcliff, K. W.; Radostitis, O. M. (2000): Veterinary Medicine. W. B. Saunders (39) Ninth Edition. pub., pp: 913-914.
- 3)Brent, B. E. (1976): Relationship of acidosis to other feedlot ailments. Journal of Animal Science. 43(4): 930- 935.
- 4)Fievez, L. (1963): Etude Comparcedes souches de sphaerophorus necrophorus isolees chelz , Homeet l'Animal. Bruzelles presses Academiques Europeeres cited in Scanlan, C. M and Hathcock, T. L 1983 Cornell Veterinury.
- 5)Garcia, G.; Yoshitaka and Shingo; Toshihara. (2000): Endotoxin-triggered hematological interactions in Fusobacterium necrophorum infections. Microbios. 102: 39- 44.
- 6)Johnson, G.; Libery, P. (1974): Liver abscess in intensively fed cattle. Acta Veterinaria Scandinavia. 15: 264- 273.
- 7)Letchenber, K. F.; Nagaranja, T. G.; Leipod, H. W.; Chengapa, M. M> (1988): Bacteriologic and histologic studies of hepatic abscess in cattle. American Journal of Veterinary Research. 49 (1): 58- 62.
- 8)O'Sullivan. (1991): Two- year study of bovine hepatic abscessation in 10 abattoirs in Cuntly Cork, Ireland. Veterinary Record. 145: 389- 393.
- 9)Smith, B.P. (1996) Large Animal Internal Medicine. Second ed. Mosby