



ORIGINAL ARTICLE

Identification of mature horses infected to salmonella in horse owners, Tabriz -Iran

Mohamadhosein Sadeghizali^{1*}, Hazhir Yahyapour², Tannaz Moslemzadeh³, Amin Hashempour⁴

1. Department of Microbiology, Faculty of Veterinary Medicine, Islamic Azad University of Urmia Branch, Urmia Iran

2. Young Researchers and Elite Club, Sardasht Branch, Islamic Azad University, Sardasht, Iran 3. Faculty of veterinary medicine, Islamic Azad University of Urmia Branch, Urmia Iran

4. Young Researchers and Elite Club, Urmia branch, Islamic Azad University, Urmia, Iran

Email: sadeghi.mohamadhosein@yahoo.com

ABSTRACT

The goal of this research is Inspection of infection to salmonella in mature horses in Tabriz. For this study, 50 head of horse were chosen, after bounding physical and clinical examination, the rectal swab were taken. The collected sample were tested and observed in microbiology laboratory of veterinary administration office East – Azerbaijan. The results of physical examination, history, etiology, microbiological study showed that were, no salmonella infections in horses, in other hand, all the horses were safe with salmonella. Other isolated bacteria from rectal swab contain: E.Coli (32%), Klebsiella (42%), Entrobacter (16%), Citrobacter (2%), Shigella (6%), Proteus (4%), Serratia (2%). Attention this problem, separated these factors to case digestion diseases of horse no, important fulfillment. Total pathogens were opportunity. In this investigation all the observation and test on horses no, digestion diseases were seen.

Keywords: Salmonellosis, Tabriz, horse

Received 01.06.2014

Revised 10.07.2014

Accepted 16.08. 2014

INTRODUCTION

Horses are one of the animals that have long been familiar with humans and have been used for work and play. Horse useful and valuable gift from Allah to mankind, in the transportation of passengers, cargo, and also used in agriculture and animal husbandry are the main vehicles to fighters, especially in the field of Iran, in turn, is one of the countries in the field of maintenance and breeding of horses and riding is a great activity. Maintain health and treat horses suffering from various diseases as humans are at risk, would require vet care. Recent research based on the study and diagnosis of serious illnesses that are available. This disease is one of the most common causes of sudden diarrhea as horses have. Unfortunately, a bacterium that causes the horse is very sensitive to its effects. In horses, a large number of Salmonella serotypes associated with colon inflammation and general over 2,600 serotypes of Salmonella have been described. As in human salmonellosis caused by contaminated foods known to be the most difficult, the most common source of infection in horses is also contaminated foods. Although the bacteria that cause the disease, as the bacteria in the intestine is a large spread in the environment, usually in human sewage farms and the environment have the possibility of contamination bowels. Intestinal disease and diarrhea, the most common form of the disease, but a wide range of symptoms may be followed can be named: acute septicemia, abortion, arthritis, respiratory disease and etc. In addition to various forms of clinical Salmonellosis is a zoonotic disease in humans and animals. So check the carriers of the bacteria and breeding horses, especially in places that are very close contact with humans, epidemiology and public health of the community, especially those related to the animals, including veterinarians, horse trainers and workers is very important.

MATERIALS AND MTHODS

Referring to the nearby city of Tabriz horse owner of 50 horses was sampled after clinical practice for the detection of veterinary bacteriology laboratory of the Department of East Azarbaijan province was

transferred. Based on physical examination, temperature, heart rate, all the horses were in the normal range and numerical abnormalities were observed in the number of heart impulses per minute examination of the physical and environmental stresses and their sensitivity to animals. The horses bound and clinically different body systems, especially the digestive tract were examined using a sterile swab sampling was conducted as Asepsis. Before sampling, the rectum was disinfected with alcohol. The flame of spirit lamp beside the door was closed and transferred to tubes containing Stuart transport medium. Then along the ice to the laboratory for testing Azarbaijan was referred to the Veterinary Directorate. The sampling procedure was performed a total of three times every 15 days. In the laboratory, the samples were transferred to tubes containing selenite F enrichment medium and kept in the incubator at 37°C for 24 hours, the samples were harvested and enriched medium and incubated at 37°C linear cultured Macconkey agar was taken after 24 hours of reading and colonies suspected to be detected in the presence of salmonella. Colony grown and harvested in the differential SIM, TSI, Simmons citrate and urea agar and cultured environment VP_MR act was done . After performing a differential culture medium for 24 to 48 hours incubation at 37 ° C was taken.

RESULTS

Mucosa showed moderate hyperemia at the four vertices and two cows were diagnosed as anemic. Status of other mucous membranes was normal in horses. CRT in 13 horses' normal and in 37 horses was abnormal. 15 horses also secrete serous, mucous or Seromucous observed. 9 horses were positive for the cough reflex. Gastrointestinal sounds except two vertices in the other animals were normal and abnormal stools were only three cases. Animals had a normal appetite and only three had abnormal appetite. Abnormal respiration in most animals, but in general, all animals was detected in healthy condition. Possible contamination of salmonellosis in 50 horse's sampled vertex of each culture was zero. Based on the results obtained in this study was isolated from samples of species : Proteus (4%) , Serratia (2%) , Shigella (6 %) , Citrobacter (2 %) , Enterobacter (16 %) , Klebsiella (42 %) , E. Coli (32%) .

R	BACTERIA	PERCENTAGE
1	E.coli	32%
2	Proteus	4%
3	Serratia	2%
4	Shigella	6 %
5	Citrobacter	2 %
6	Entrobacter	16 %
7	Kelebsiella	42 %
8	Salmonella	0 %

Table 1-1: results obtained was isolated from samples of species

DISCUSSION

Being a member of salmonellosis among humans and animals worldwide, and various forms of clinical importance to justify the story better .history has shown symptoms of diarrhea or gastrointestinal involvement, said. Clinical and clinical studies of patients at any one of the symptoms of salmonella were found in horses. However, there are reports that every year around the world in a variety of clinical salmonellosis outbreak has been confirmed. Salmonellosis is a stress condition in horses caused by different serotypes. While the horses were in good natural condition and are kept under proper breeding management. According to the status and breeding equestrian units, the history and physical examination, the general condition of the animals were in relatively good. It should be noted that one of the symptoms of salmonellosis anemia mucous However, the results of clinical microbiology and recent illness in livestock declines. Given the epidemiology of Salmonella recommended that all sanitation , control transfers to the horse owner units to identify and isolate the sick, washing and disinfection of livestock and equipment on time, place , control and removal of stagnant water , drinking water and feed available for livestock and preventing self- prescribing antibiotics and non steroidal anti-inflammatory drugs , to be implemented.

REFERENCES

1. Johnston, A. M., 1997. Translated Ardabil Branch, B, Moradi, A., Diseases of Horses, publishing institution of Jihad, pp. 52-58
2. Jang, S. S. and Breshtayn, A. L. B & Hires, D. C., 1993. Translated Jamshidian, M., A Guide to Clinical Bacteriology, Veterinary Diagnostics, shahid Chamran University Press

3. Haghghati KhyabanyanAsl, A. 1998. Evaluation of Salmonella carriers and their role in the epidemiology of bovine salmonellosis in a number of industrial farms in Tabriz , Thesis for obtaining the degree of Doctor of Veterinary Medicine, Faculty of Veterinary Medicine, Islamic Azad University, Tabriz , No. 324
4. Shimi, A. and Tabatabai , A. &Nazari Aria, A. , 1982.Animal infectious diseases (diseases caused by bacteria), (Chapter VII), Tehran University Press, 1821 Issue
5. Shimi, A., 1997.Veterinary bacteriology and bacterial diseases, publishing institution of Jihad, p : 243_20
6. Malekzadeh, F.1992.Microbiology, Tehran University Press.
7. Blood, D.C, Handerson, J.A, &Radostis , O.M., 1989. Veterinary medicine, BailliereTindall , PP: (183-240) , (730-747)
8. Collee, J.G., Duguid, J.P., Fraser, A.G., &Marmion, B.P., 1989. Practical medical microbiology, 13th .ed .vol . , 2 medical division of longman group UK limited, PP: 456-481
9. Quin, P.J., Carter, M.E., &Markey, B.K, 1994. Clinical veterinary microbiology, Mosby, PP: 209-236

CITATION OF THIS ARTICLE

Mohamadhosein S, Hazhir Y, Tannaz M., Amin H. Identification of mature horses infected to salmonella in horse owners, Tabriz –Iran. Bull. Env. Pharmacol. Life Sci., Vol 3 [Spl Issue V] 2014: 149-151