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Contaminated Rate Comparison in the Sheep with *Hydatid Cyst* (Turkey and Iran's Races)

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Abstract: Hydatid cyst is prevalence in animal rearing regions and it is often seen in the sheep as endemic form. Turkey and Iran are contaminated regions in hydatid cyst with considerable losses economically and hygienic problems. In this study, the lung of the sheeps to be inspected in Ardabil abattior. From 1430 slaughtered sheep, 335 heads of them are contaminated to Hydatid cyst. After 5 months studies on it, 22.7% of them to be contaminated to hydatid cyst. Then, this event to be compared with North-west of Iran and the East regions of Turkey. It is found that there was high rate of Hydatid cyst infection in both of them, while this was in serious difference on central regions of both countries. So, hydatid infection to be expressed as an important factor in regional dangerous.

Key words: Sheep, hydatid cyst, lung, infection, Iran, Turkey

INTRODUCTION

Disorder parasite of Hydatid cyst is *Echinococcus granulosus* that is found in 1965 firstly by Hartman. Hydatid cyst is common in animal regions as Andemic Parasite. Iran and Turkey are contaminated regions geographically at the world particularly in climate conditional and population nature. The disorder always begins with cystic formation with contain of the liquid in damaged tissues. That will have different forms base on biological variations (Angulo and Escribano, 1998; Bartos, 1988; Gicik *et al*., 2004). Also, Hydatid cyst is seen in lung and liver of the Sheep. It may be no clinical Signs for them (Kauffmann, 2003). Studies show that contamination with *Echinococcus granulosus* make to decrease 0.5% of the meat, 20 lit of annual milk production and 0.5% in wool (Coskuner, 1971). Humankind is also as an intermediate host for Hydatid Cyst but Hydatosis is in identical Signs with destroyed mode for contaminated action (Kaufmann, 2003). Due to *E.granulosus* parasite proliferation in both of countries, most of sheep industry is followed as tradition and complete dependence to the pastures (Ansari and Lari, 2005; Gicik *et al*., 2004). There are many similar forms in infected sheep with Hydatid cyst. We have studied on small regions or slaughterhouse compare with another one. It is seen few studies by large scale at this case. Moreover, statistics and resources weren't new in prevalence of it. Thus, it must be more attention to review and compare of contaminated rates in these countries. Aim of this study is related to contamination rate definition for North-west of Iran and the East of Turkey (With Similar and different aspects).

MATERIALS AND METHODS

During of the spring and summer, the lungs to be settled as inspiration part of Ardabil's slaughterhouse and then *Cystic echinococcosis* to be studied exactly. We examine the related member in hand and push it with our hands when there wasn't any cystic sign. In following stage, we cut some parts of it for cystic review. We didn't obtain any information about of animal's age. But, the most of observed parasites were related to old sheep. Since there was Hydatid in the lung of the sheep, We only studied on the lung exactly. Then, we compared the results with north-west region findings well. At the other hand, contaminated rate of animals to be compared between north-west of Iran and the East of Turkey.

RESULTS

During of 5 months study, 1430 slaughtered lung of the sheep to be studied well. 325 lungs were contaminated with Hydatid cyst (22 /7%) and we condemned all of them carefully.

In spring time examination (three months study in first), It is examined 977 lungs while 218 lungs were Contaminated with Hydatid cyst (22/ 3%). In last of study in 2 months, 455 lungs to be examined so that 107 lungs were contaminated with the cyst (23/5%) (Table 1).

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Table 1: Distribution of Hydatid cyst infection in slaughtered sheep in East of Turkey (Dajani, 1978; Deger *et al*., 2001)

Infection rate (%)	Number inspected	Number positive	Infection rate (%)
April	377	83	22%
May	325	73	22%
june	275	62	22.5%
july	267	66	24.7%
August	186	41	22%
total	1430	325	22.7%

Table 2: Distribution of Hydatid cyst infection in slaughtered sheep in North-West of Iran (Dalimi *et al*., 2002; Gogani, 1997)

City or Region	Number inspected	Number positive	Infection rate (%)
Kars	1472	940	63.83
Hakkari	-	-	59.5
Van	-	-	77.3

Table 3: Distribution of Hydatid cyst infection in slaughtered sheep in center of Iran (Ansari, 2005; Arbabi and Hooshyar, 2006)

City or Region	Number inspected	Number positive	Infection rate (%)
Kashan	170510	3833	2.25
Shiraz	84318	14357	59.5

Table 4: Distribution of Hydatid cyst infection in slaughtered sheep in Ardabil Abattior

City or region	Number inspected	Number positive	Infection rate (%)
Ardabil	14330	325	22.7
sanandaj	1242	645	51.9
tabriz	200	23	11.5

DISCUSSION

Middle-East Cattle, sheep, Goat and Camels Contaminated with hydatidosis under E.graunlosus factor (Abo-Shehada, 1993; Dajani, 1978; Dalimi *et al*., 2002; Molan, 1993). Hydatid cyst contamination is similar between Iran and Turkey and it has less prevalence in central regions (Ansari and Lari, 2005; Arbabi and Hooshyar, 2006; Dajani, 1978; Gicik *et al*., 2004; Molam, 1993; Yildiz and Tuncer, 2005). During of current 4 years, Hydatid rate has been deceased in central regions (Ansari and Lari, 2005). Contaminated rate to be reported in high level at the west of Iran and near of Iraq's frontier. For example, in Kurdistan province, about of half number of the sheep are contaminated with Hydatid (Akhlaghi *et al*., 2005) (Table 2).

This case is also true for Turkey country: So that, contamination rate is estimated in high levels for East Regions of the Turkey (Van, karts …) rather than central cities (Deger *et al*., 2001; Deger and Bicek, 2005; Gicik *et al*., 2004; Yildiz and Tuncer, 2005).

Most of the Hydatid cysts observed in the lung of the sheep in Turkey, too Ansari and Lari (2005), Yildiz and Tuncer (2005). Nevertheless, in recent years, Average percent of Infaction to be decreased in Turkey (Gicik *et al*., 2004) but this rate to be observed with high levels in Iran and Turkey frontier (Akhlaghi *et al*., 2005; Deger and Bicek, 2005) (As dangerous factor for both Countries).

In the kars region, contamination rate of the sheep with Hydatid cyst is in double average contaminated rate in Turkey. In this region, contaminated rate of the cattles is in high scale (0.5%) (Gicik *et al*., 2004).

This problem is also true for Iran where there is considerable difference between Kurdistan Province and Azerbaijan Regions sheep with central part of Iran (Such as kashan and Shiraz) (Akhlaghi *et al*., 2005; Ansari and Lari, 2005; Arbabi and Hooshyar, 2006; Dalmi *et al*., 2002) (Table 2 and 3).

There are Some Causes at this case as follows: no Suitable hygienic basic in annual fostering, traditional ways using in animal industry and closing relation of the dogs beside of animals as especially as economical fall in the East of Turkey and the west of Iran. According to the given tables (Table 2and 4), Infection rate to be defined as clearly but in Common problem for them. Thus, Animal Health and following it the social Health will be faced in threat.

RECOMMENDATION

Lastly, it is recommended that Hygiene ministry and Veterinary organization must be attempted to reach in no Hydatid cyst with cooperative aims together.

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REFERENCES

Abo-Shehada, M.N., 1993. Some observation on hydatidosis in Jordan. J. Helminthol., 67: 248-252.

Akhlaghi, L., J. Massoud and A. Housaini, 2005. Observation on Hydatid Cyst Infection in Kordestan Province (West of Iran) using Epidemiological and SeroepidemiologicalCriteria. Iranian J. Pub. Hlth., 34: 73-77.

Angulo, C. and A. Escribano, 1998: Hydatid Disease, Biology, Pathology, Imaging and Classification. Clin. Radiol., 53: 863-874.

Ansari, M., Lari, 2005. A retrospective survey of hydatidosis in livestock in Shiraz,Iran, based on abattoir data during 1999-2004. Vet. Parasitol., 133: 119-123.

Arbabi, M. and H. Hooshyar, 2006. Survey of Echinococcosis and Hydatidosis in Kashan Region,Central Iran. Iranian J. Pub. Hlth., 35: 75-81.

Bartos, J.L., 1988. Hydatid Disease of the Liver. Am. J. Surg., 135: 597.

Coskuner, R., 1971. Paraziter hastalýklardan kaybýmýz.. Turk. Vet. Hek. Dern. Derg., 41: 51-56.

Dajani, Y.F., 1978. Prevalence of hydatid disease in Syria and Jordan: Preliminary results. Trans. Res. Soc. Trop. Med. Hyg., 72: 320-321.

Dalimi, A., G.H. Motamedi, M. Hosseini, B. Mohammadian, H. Malaki, Z. Ghamari, F. Ghaffari Far, 2002. Echinococcosis/hydatidosis in western Iran. Vet. Parasitol., 105: 161-171.

Deger, S., E. Ayaz, A. Gul, K. Biçek and E. Eraslan, 2001. Vanyoresinde kesilen syoyr, koyun ve keçilerde hidatidozun yayilisi. Y.Y.U Sag. Bil. Derg., 7: 37-40.

Deger, S., K. Biçek, 2005. Tatvan Belediye Mezbahasýnda Kesilen Koyun, Keçi ve Sýðýrlarda Larval Cestodiosis. YYU Vet. Fak. Derg., 16: 45-47.

Gicik, Y., M.O. Arslan, M. Kara and M. Kose, 2004. Kars Ilinde Kesilen Sigir ve Koyunlarda Kistik Ekinokokkozisin Yayginligi. T. Parazitol. Derg., 28: 136-139.

Gogani, F., 1997. Observation on Hydatid Cyst Infection in Tabriz. Veterinary Department of Tabriz University, Iran.

Kaufmann, J., 2003. Parasitic Infactions of Domestic Animals. Tehran University Press, pp: 179.

Molan, A.L., 1993. Epidemiology of hydatidosis and echinococcosisin Theqar province, southern Iraq. Jpn. J. Med. Sci. Biol., 46: 29-35.

Yildiz, K. and C. Tunçer, 2005. Kirikkale'de Sigirlarda Kist Hidatik'in Yayilisi. T. Parazitol. Derg., 29: 247-250.