

Short notes

Prevalence of *Fasciola hepatica* L. infection in cattle in the Lublin province (Poland) in the years 2005–2008

Jolanta Kozłowska-Łój

Chair and Department of Biology and Parasitology, Medical University, 11 Radziwiłłowska Street, 20-080 Lublin, Poland; E-mail: jolanta.kozlowska@um.lublin.pl

ABSTRACT. Prevalence of *Fasciola hepatica* L. infection among cattle slaughtered in the Lublin province in the years 2005–2008 was evaluated. The study draws its data from annual reports of the Veterinary Inspectorate in Lublin. The results of the study are as follows: the prevalence of *Fasciola hepatica* infection in the cattle of the Lublin province between 2005 and 2008 amounts to 21.24%.

Key words: *Fasciola hepatica*, slaughtered cattle, Poland

Introduction

Fasciolosis that appears in cattle and wild ruminants is caused by the invasion of digenean species, *Fasciola hepatica*. The development of this parasite is connected with water environment, where its intermediate hosts live – *Galba truncatula* snails, and some snails from the Limnaeidae family. The course and symptoms of the disease depend on the animals' age, the state of nutrition and the degree of infection.

Confiscations of livers, reduced milk productivity, and low gain in body weight lead to big economic losses [1]. Research addressed this problem has been carried out in Poland for many years [2–6]. The above mentioned publications concentrated mainly on the prevalence and economic losses caused by fasciolosis in cattle and farm animals. Detailed diagnosis of the character of parasite invasion in the Lublin province forms the basis for prophylactic and therapeutic actions.

The aim of the study was to determine the prevalence of fasciolosis in the Lublin province in the years 2005–2008.

Material and methods

Prevalence of *Fasciola hepatica* in cattle in the Lublin province was determined on the basis of

annual medical reports obtained from the Lublin Veterinary Inspectorate. The study used the sanitary-veterinary evaluation of post-slaughter cattle conducted by the doctors from the Veterinary Sanitary Department of Lublin and Lublin province.

Results

The *F. hepatica* infection causes serious changes in the liver and livers become disqualified. Obtained results demonstrate a successive increase in prevalence of *F. hepatica* infection in the Lublin province cattle in the years 2005–2008 from 11.29% to 64.84%. Out of 335 116 examined heads of cattle, 71 180 (21.24%) were infected with the parasite (Table 1). Analysis of data demonstrates a twofold increase in the incidence of this disease. It

Table 1. Prevalence of *Fasciola hepatica* L. infection in cattle in the Lublin province in the years 2005–2008

Years	Number of examined	Number of infected (%)
2005	141 015	20 286 (14.38)
2006	137 645	15 551 (11.29)
2007	27 421	16 308 (59.47)
2008	29 035	19 035 (64.84)
Total	335 116	71 180 (21.24)

can be presumed that this increase in *F. hepatica* infection in the Lublin province was caused by the favourable ecological conditions (damp and warm summers), which eased the development of snails as the intermediate hosts, and also by cessation of official monitoring of fasciolosis in the 90s. Studies conducted in the last decade indicate the differences in the prevalence of fasciolosis in our country [7–10]. This is likely to be related to diverse character of stock-farming and climatic conditions.

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References

- [1] Michalski M. 2007. Straty ekonomiczne powodowane inwazjami pasożytniczymi u zwierząt i sposoby ich wyceny. *Medycyna Weterynaryjna* 63: 643-647.
- [2] Uradziński J., Radkowski M. 1992. Występowanie inwazji pasożytniczych u zwierząt na terenie woj. olsztyńskiego w latach 1980–1991. *Medycyna Weterynaryjna* 48: 564-566.
- [3] Deryło A., Szilman P. 1996. Choroba motylicza u bydła rzeźnego w Polsce w roku 1995. Materiały (conference abstracts) konferencji „Choroby zakaźne i inwazyjne”. Kazimierz, 24–26 October 1996.
- [4] Lis H. 1998. Ocena wyników badania sanitarno-weterynaryjnego bydła rzeźnego w Polsce. *Medycyna Weterynaryjna* 53: 155-158.
- [5] Michalski M. M., Szelągiewicz M., Gaca-Łagodzińska K. 1993. Występowanie motylicy wątrobowej u zwierzyny płowej i bydła w woj. olsztyńskim w latach 1980–1987. *Medycyna Weterynaryjna* 49: 34-35.
- [6] Romaniuk K., Bah Mamadou 1996. Fascjoloza bydła i owiec w Polsce w latach 1992–1994. *Acta Acad. Agricult. Techn. Olst. Veterinaria* 24: 141-154.
- [7] Deryło A., Szilman P. 1996. Ekstensywność inwazji *Fasciola hepatica* L. w okresie powojennym oraz ocena niektórych strat wywołanych chorobą motyliczą u bydła w Polsce w latach 1995–1997. *Wiadomości Parazytologiczne* 45: 69-179.
- [8] Michalski M., Romaniuk K. 2000. Występowanie motylicy wątrobowej u krów mlecznych w północno-wschodniej Polsce. *Medycyna Weterynaryjna* 56: 182-184.
- [9] Deryło A., Kozłowska-Łój J., Szilman P., Najda N., Seniuk A., Wasilewski K. 2001. Ekstensywność inwazji *Fasciola hepatica* L. u bydła na terenie woj. lubelskiego w latach 1993–2000. *Wiadomości Parazytologiczne* 47: 775-778.
- [10] Kozłowska-Łój J., Rzymowska J. 2006. Extensiveness of invasion of *Fasciola hepatica* L. in cattle in the Lublin province in the period 2001–2004. *Annales UMCS Lublin Poloniae* vol.LXI,18, sec.DD: 147-149.

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