

Short notes

Prevalence of cysticercosis in cattle and pigs in the Lublin province in the years 2005–2008

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ABSTRACT. Between 2005 and 2008 cysticercosis caused by *Cysticercus bovis* was detected in 1485 (0.44%) animals out of 335 436 heads of cattle slaughtered in the Lublin province. This particular cysticercosis was observed each year. In the period 2005–2008 cysticercosis caused by *Cysticercus cellulosae* was found only in a few pigs (93 cases – 0.0059% out of 1 577 370 examined pigs).

Key words: cysticercosis, prevalence, cattle, pigs

Introduction

Pathogenic influence of parasites on slaughter animals poses a serious economical problem. Invasions of *Cysticercus bovis* and *Cysticercus cellulosae* contribute to post-slaughter confiscations resulting from partial or complete disqualification of animal carcasses and individual organs. Apart from economic losses, parasitic invasions cause deterioration of organoleptic properties of meat and its products decreasing storage life and nutritional values.

Taeniasis constitute great epidemiological danger [1,2]. Large-scale studies on the epidemiology of taeniasis and related issues have been conducted by many researchers in Poland [3–11].

Considering the abovementioned facts, the research on cysticercosis prevalence in cattle and pigs was undertaken in the Lublin province in the

years 2005–2008 basing on annual reports from the Provincial Veterinary Inspectorate in Lublin.

Results and discussion

Determination of cysticercosis prevalence in animals was based on the results of post-slaughter cattle and pigs examinations in the Lublin province in the years 2005–2008. The prevalence of cysticercosis in cattle caused by *Cysticercus bovis* (Table 1) ranged in the Lublin province from 0.29% to 1.49% (mean 0.44%) during the last 4 years. Out of 335 436 heads of cattle examined after slaughter, *C. bovis* was found in 1 485 cases. An increase in the incidence of cattle infection was detected in 2007 (1.19%) and 2008 (1.49%) in relation to the results of studies conducted in the years 1993-2004 [12].

During 4-year post-slaughter examinations (2005–2008) an increase in *Cysticercus cellulosae*

Table 1. Prevalence of *Cysticercus bovis* in cattle slaughtered in the Lublin province in the years 2005–2008

Year	Number of examined animals	Prevalence (%)/number of infected
2005	141 015	0.29/415
2006	137 645	0.22/305
2007	27 421	1.19/327
2008	29 355	1.49/438
Total	335 436	0.44/1458

Table 2. Prevalence of *Cysticercus cellulosae* in pigs slaughtered in the Lublin province in the years 2005–2008

Year	Number of examined animals	Prevalence (%)/number of infected
2005	83 9886	0.0013/11
2006	29 3197	0.0174/51
2007	26 8225	0.0037/10
2008	17 6062	0.0119/21
Total	1 577 370	0.0059/93

invasion in pigs was observed (Table 2). Out of 1 577370 pigs examined after slaughter, cysticercus was found in the muscles of 93 pigs (mean 0.0059% for the period of 4 years).

In the years 2005–2008 cysticercosis was more frequent in relation to the years 2000–2004, when the prevalence of infection ranged from 0.0006% to 0.0029% [12].

References

- [1] Konopka B. 1993. Występowanie pasożytów chorobotwórczych u zwierząt rzeźnych na terenie woj. kieleckiego w latach 1987–1992. *Medycyna Weterynaryjna* 49: 373-374.
- [2] Uradziński J., Radkowski M. 1992. Występowanie inwazji pasożytniczych u zwierząt rzeźnych na terenie woj. olsztyńskiego w latach 1980–1991. *Medycyna Weterynaryjna* 48: 564-566.
- [3] Pawłowski Z. 1980. Epidemiologia tasiemczycy i wągryczy *Taenia saginata*. *Wiadomości Parazytologiczne* 26: 539-548.
- [4] Pawłowski Z. 1989. Tasiemczycy i wągryczy *Taenia solium*. Problemy kliniczne i epidemiologiczne. *Wiadomości Parazytologiczne* 35: 91.
- [5] Pawłowski Z. 1990. Problemy kliniczne i epidemiologiczne tasiemczycy w Polsce. *Medycyna Weterynaryjna* 46: 221-227.
- [6] Kozakiewicz B. 1973. Badania nad wągryczą bydła w gospodarstwach hodowli wielkostatdnej. Materiały XI Zjazdu Polskiego Towarzystwa Parazytologicznego; 10–12 May, 1973, Poznań: 94 (conference materials).
- [7] Kozakiewicz B. 1973. Z badań nad ekstensywnością inwazji wągryczy *Taenia saginata*. *Wiadomości Parazytologiczne* 26: 539-552.
- [8] Kozakiewicz B. 1974. Badania nad wągryczą bydła w Wielkopolsce. *Medycyna Weterynaryjna* 30: 53-56.
- [9] Kozakiewicz B. 1974. Badania nad wągryczą bydła w gospodarstwach wielkostatdnych. *Ibid.* 30: 430-432.
- [10] Michalski M. 1996. Występowanie *Cysticercus tenuicollis* i *Echinococcus* u świń rzeźnych. *Medycyna Weterynaryjna* 52: 118-119.
- [11] Deryło A., Szilman P. 1995. Występowanie tasiemczyc u ludzi oraz wągryczy u bydła i świń na terenie woj. katowickiego. *Wiadomości Parazytologiczne* 41: 443-454.
- [12] Kozłowska-Łój J., Rzymowska J. 2006. Prevalence of cysticercosis in cattle and pigs in the Lublin province in the years 1993–2004. *Annales Universitatis Mariae Curie-Skłodowska Lublin-Polonia* vol. LXI, 17, section DD: 143-146.

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