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THE PRELIMINARY SURVEY OF HEV PRESENCE IN SAMPLES OF PIGS – PORK PRODUCTS IN SLAUGHTERHOUSES IN SERBIA*

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An investigation was conducted to evaluate possible presence and prevalence of hepatitis E virus (HEV) in pork production chain in Serbia. HEV is recognized as foodborne zoonotic pathogen and is considered as possible significant health risk agent in pork products that are eaten raw or undercooked. Samples of faeces, liver, bile and meat from a total of 145 slaughtered animals (95 fatteners and 50 eight weeks old piglets) were individually sampled in three slaughterhouses to avoid any possible cross contamination, and then tested for the presence of HEV by one step real-time reverse transcription PCR (RT-qPCR). HEV was found much more frequently in piglets (64%; 32/50) than in fatteners (7.37%; 7/95). Animal was considered positive if at least one of the examined samples (faeces/liver/bile/meat) was tested positive on HEV presence. In slaughtered fatteners only faeces samples from 7 (7.37%) examined animals was found HEV positive. None of the tested samples of liver, bile and meat from 95 fatteners were HEV positive. In piglets much higher HEV prevalence was found in all analyzed samples. HEV was detected in 54% (27/50) faeces, 26% (13/50) bile, 16% (8/50) liver and 10% (5/50) meat samples respectively. Piglets with only HEV positive feces sample was found in 34% (17/50) and only HEV positive bile sample in 6% (3/50) cases. Piglets with HEV positive feces, liver and bile samples were found in 2% (1/50); HEV positive feces, bile and meat samples in 2% (1/50) and HEV positive liver, bile and meat samples in 2% (1/50) cases. Piglets with HEV positive feces and liver and feces and bile samples were found in 4% (2/50) cases and piglets with HEV presence in all 4 examined samples (feces, liver, bile and meat) were found in 4% (2/50) cases. The obtained data in our preliminary study provide enough evidence for possible human health risk from foodborne transmission of HEV during pork production. As it was expected, HEV was much more prevalent in samples from young animals (8 week old piglets), including the pork products such as liver and meat. These findings are very interesting regarding possible human health risk because previously published studies mainly analyzed HEV presence in pork products from fatteners. In Serbia, as well as in other Balkan and some Mediterranean countries, meat/pork products from piglets are consumed more often comparing Western European and other countries. As this was just a preliminary study, an investigation with higher number of examined samples and animals will be conducted for more confident results.



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