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DETECTION OF HEPATITIS E VIRUS ANTIBODIES IN BLOOD AND MEAT JUICE SAMPLES IN SLAUGHTERED PIGS IN SERBIA

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Hepatitis E virus (HEV) is considered the main causative agent responsible for many outbreaks of acute hepatitis in humans in endemic regions of Asia and Africa. The disease is spread mainly through contaminated water and water supply in developing countries. On the other hand, there is an increasing evidence of the presence of HEV infection in industrialized countries in Europe, USA and Japan. After the discovering swine HEV in 1997, many reports proved that hepatitis E infection is widespread in pigs worldwide. HEV infection is also a zoonotic disease, as has been proven that people were infected by consumption contaminated meat and livers from wild boars and deer.

The objective of our study was to test the presence of IgG antibodies against hepatitis E virus in slaughtered pigs in Vojvodina region, Serbia. For the investigation we used commercial ELISA test *PrioCHECK[®] HEV Ab porcine (Prionics, Switzerland)*, based on genotype 1 and 3 antigens. To perform the test we followed the manufacturer instructions. In total, 55 blood serum and 55 meat juice samples from weaners and fatteners were collected in three slaughterhouses during January-May in 2012. The mean seroprevalence in meat juice was 20% (11/55) and in blood serum 54.54% (30/55). The much higher proportion of IgG positive serum samples were detected in fatteners (28/40, 70%) than in weaners (2/15, 13.33%). Also, anti-HEV IgG antibodies were detected most frequently in meat juice samples in fatteners (9/35, 25.71%) comparing to weaners (2/20, 10%). Regarding these results, we can conclude that this test is useful diagnostic tool, but it must be considered that is more sensitive to detect anti-HEV antibodies in blood samples from pigs than in meat juice. The preliminary results of our study confirm the presence of IgG anti-HEV antibodies in meat juice and blood serum samples in pork meat production. According to our previous findings, where HEV genotype 3 infection was detected in backyard and farming pigs in Serbia, additional testing should be done to detect presence of hepatitis E virus in pork products. These analyses are important to prevent food chain contamination and to protect public health.

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