BOVINE PAPILLOMAVIRUS TYPE 2 IS HARBOURDED IN CATTLE CUTANEOUS WARTS

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Abstract

Papillomaviruses (PV) are epitheliotropic double-stranded DNA viruses, known to infect animals. Up to date, more than 280 different papillomavirus types have been described in human and animals. In cattle, up to 29 genotypes of bovine papillomaviruses have been described and classified based on the nucleotide sequence identity of L1 open reading frame. The aim of this study was to detect de bovine papillomavirus type 2 in cutaneous warts. Twenty six (n=26) cutaneous lesions were collected from a cattle slaughterhouse, located in Iasi County, North-Eastern Romania. The viral DNA was extracted using PureLink™ Genomic DNA Mini Kit, following the manufacture's instruction. Detection of papillomavirus DNA was confirmed by PCR, using degenerated primers - FAP59/64 and type specific primers for BPV-2 L2 gene. PCR products were electrophoresed on 1.5% agarose gel stained with SybrSafe and each band was visualized with UV transillumination. When FAP 59/64 primers were used, PV DNA was detected in 11 (42.3%) out of 26 samples, while in 15 (57.69%) samples no PV DNA was identified. The fragment length was consisting in 478 base pairs from L1 gene. A fragment of 164 base pairs corresponding to BPV-2 L2 gene was amplified in 24 (92.2%) samples, while 2 samples were negative (7.69%). Two samples were proved to be negative when tested with both primers pairs. These results are in accordance with previous reported results. The use of type specific primers represent a useful tool in bovine papillomavirus detection.

Key words: BPV, warts, PCR