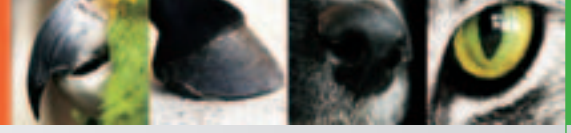

BPV in equine sarcoids: new data

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Using optimised PCR, we demonstrated bovine papillomavirus 1 (BPV1) E5 DNA in 100% of tumour tissues, perilesional skin and distant intact skin from 40 sarcoid-affected equines, whereas skin biopsies from healthy individuals tested negative. L1 DNA was demonstrated in only 50% of E5-positive specimens, suggesting partial viral integration.

We then screened DNAs extracted from PBMCs of healthy and affected donors and detected E5 DNA in PBMCs of the latter. To validate this finding, a blinded screening of enciphered PBMC DNAs obtained from 66 show horses was performed, revealing E5 DNA in blood of the three individuals with histologically confirmed sarcoids.

For immunecapture PCR (IC/PCR), sarcoid tissue from E5/L1-positive patients and E5/L1-negative skin biopsies were minced and centrifuged. Supernatants were incubated in reaction tubes coated with BPV1 capsid-specific antibody. After washing thoroughly, PCR was carried out using L1-specific primers. In case of fibroblastic sarcoids, IC/PCR yielded L1-specific amplicons, whereas other sarcoid types and healthy controls tested negative. We then coated tubes with BPV1 capsid-specific antibodies or isotype control and performed the assay from serial sarcoid extract dilutions. IC/PCR yielded L1 amplicons for all target concentrations when using specific capture antibodies, but only for the highest, when coating with isotype (Fig.1).

Our findings demonstrate virus latency in intact skin far away from the tumour site. Moreover, we are the first to describe latent BPV1 DNA in PBMCs of affected horses and to demonstrate particle-like structures in a subset of fibroblastic sarcoids.