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Papillomavirus detection in the canine transmissible venereal tumor (CTVT)

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The canine transmissible venereal tumor (CTVT) or Sticker's sarcoma is a neoplastic disease affecting mainly dogs. The disease is presented as a tumoral mass in the genital organs of both male and female dogs. Up to date, there is no evidence indicating a viral agent as the causative agent for CTVT development. The present work was aimed to analyze 21 samples from canines with TVT for clinical, cytologic, histopathologic and molecular evaluation to identify papilloma virus DNA sequences. Clinical diagnostic and biochemical features confirmed the CTVT. Molecular analysis demonstrated the viral DNA presence in the samples using different primer sets, the MY primers amplified a 450 bp band in seven out of 21 samples (33%). The PVF and Fap64 primer set, targeting the L1 sequence of canine papillomavirus (CPV), showed positivity in 16 out of 21 samples (76%). These results support the possible causative association between CPV and CTVT, nevertheless, confirmatory studies are required to confirm such as statement. This work presents evidence indicating that a viral agent might be involved in the pathogenesis of CTVT with high impact in the understanding of the CTVT pathogenesis.