

Retrospective study of poxviruses diagnosed in cattle from Goiás State, Brazil (2010-2018)

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Abstract

A retrospective study of poxvirus infections diagnosed in cattle from Goiás state (GO), Brazil, between 2010 and 2018, was performed. All cases have been investigated by the GO Official Veterinary Service (Agrodefesa), from which technical forms and protocols of veterinary diagnosis laboratories were reviewed. In most cases, samples of oral or cutaneous tissues and/or swabs were submitted for virological diagnosis by polymerase chain reaction (PCR) and/or virus isolation. Thirty seven outbreaks/cases of vesicular disease were notified in cattle of 25 counties; in 33 cases the animals presented lesions clinically compatible with poxviruses. The etiology of 25 out of 33 outbreaks/cases was confirmed as poxviruses by PCR and/or viral isolation: 13 as bovine vaccinia virus (VACV), 6 as pseudocowpox virus (PCPV), 5 as bovine papular stomatitis virus (BPSV) and 1 coinfection (VACV and an Orf virus-like parapoxvirus). The laboratory confirmed cases occurred mainly in dairy cattle (19/25) and during the dry season (22/25). In adult cattle, gross changes were observed mainly in the teats and udder and included vesicles, ulcers, crusts, papules and scars and varied of type, severity and affected region, depending on the poxvirus species. In calves, the main lesions were ulcers in the mouth and muzzle. Human lesions compatible with poxvirus infections were observed for all diagnosed poxviruses, affecting especially the hands of milkers and other farm workers. Our data demonstrate the sanitary and economic relevance of these diseases and the wide circulation of different poxviruses in cattle from GO.

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