Gross, histologic and immunohistochemical characteristics of keratoacanthomas in lizards

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The present study describes keratoacanthoma (KA), a not previously recognized neoplastic entity in lizards. While KAs presented as two dermal lesions in a bearded dragon (*Pogona vitticeps*), multicentric KAs were observed in three panther chameleons (*Furcifer pardalis*) and a veiled chameleon (*Chamaeleo calyptratus*). In all lizards, KAs were predominantly located at the dorsolateral body wall and KA of the eyelid was additionally observed in three out of four chameleons. KAs presented as crateriform skin tumors containing a central keratinous pearl and a diameter ranging from 0.1-1.5 cm with minimally infiltrating borders. A consistent immunohistochemical pattern was observed with the expression of cyclooxygenase-2, E-cadherin, and pan-cytokeratin. We describe KA as a low-grade, non-invasive but rapidly growing skin tumor that may show a multicentric appearance, especially in chameleons. Although dermal squamous cell carcinomas (SCC) in lizards show similar predilection sites and gross pathologic features, our results suggest that KA should be considered a histologic variant of SCC that represents a rather benign squamous proliferation in comparison to conventional SCCs. As previously postulated for dermal SCCs, artificial ultraviolet lighting may play an important role in the oncogenesis of KAs in lizards. Early diagnosis of KA and reliable discrimination from SCC are essential towards the prognosis of this neoplastic entity in lizards.