PARASITOLOGÍA Y PATOLOGÍA

PAPILLOMATOSIS IN THE ALPINE NEWT, *Triturus alpestris* (CAUDATA: SALAMANDRIDAE)

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Spontaneous neoplasms have been reported in all major organ systems in both anuran and urodele amphibians, but with less frequency in the urodeles (BALLS, 1962, 1965; BALLS & RUBÉN, 1968; SLEEMAN *et al.*, 1999). Papillomatosis is a neoplastic disease characterized by small to large multiple areas of epidermal hyperplasia (SUNDBERG, 1991) that has been identified in amphibians (ROE, 1977; OKA *et al.*, 1992).

In this short note is reported the presence of papillomatosis in an adult male alpine newt, *Triturus alpestris* (snout-vent length: 45 mm, tail length: 34 mm, body mass: 3.2 g) captured during spring (6 April) in 2002, in the Natural Park of Saja-Besaya (Cantabria, northern Spain; 43° 14' 8" N, 4° 9' 59" W) at an elevation of 464 m. The alpine newt presented an expanding mass on the extreme of its tail, having a verrucous and blackness-pigmented surface (Figure 1). The animal was photographed and subsequently released.

It is not possible to determine the etiologic agent of the disease in this newt. Papillomas can be caused by a variety of factors including reaction to chronic chemical exposure, exposure to the presence of copper, parasites, viruses, and genetic modifications from past chemical exposure (BALLS, 1965; ROE, 1977; SUNDBERG, 1991; OKA *et al.*, 1992; SLEEMAN *et al.*, 1999).

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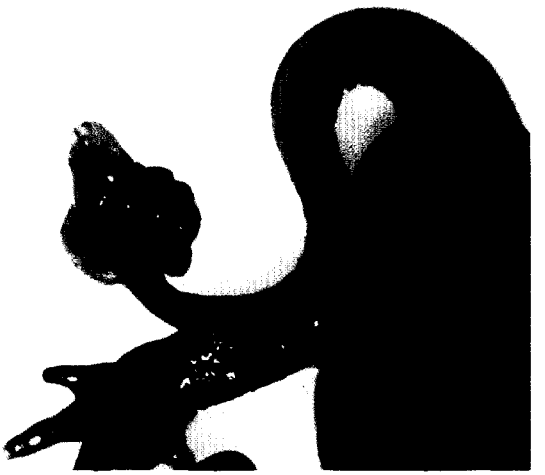

Figure 1. Appearance of papillomas in the extreme of the tail. Photo: F. J. Diego-Rasilla.

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DETECCIÓN INMUNOHISTOLÓGICA DE MICROFILARIAS EN UN EJEMPLAR DE *Heloderma horridum*

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Key words: Filariasis, *Heloderma*, inmunohistochemical, microfilariae, reptile.

Dentro de las enfermedades parasitarias que pueden presentarse en reptiles destacan las filariosis; los reptiles pueden actuar como hospedadores definitivos de cinco subfamilias y una gran variedad de géneros de nematodos filáridos (LANE & MADER, 1996). Los ejemplares susceptibles son infestados cuando son picados por artrópodos hematófagos, fundamentalmente mosquitos conteniendo larvas terciarias infestantes, transmitiéndose así las microfilarias (THOMAS *et al.*, 1996). Las microfilarias pueden provocar fenómenos de trombosis en diferentes localizaciones anatómicas si se trata de una infestación masiva. Los parásitos adultos pueden encontrase en reptiles en los grandes vasos sanguíneos, y también en los tejidos muscular y conectivo, cavidades corporales y senos linfáticos (THOMAS *et al.*, 1996). El diagnóstico *in vivo* se basa en la detección de microfilarias circulantes en