This case report described a 7-year-old dwarf lop rabbit (Oryctolagus cuniculus) with a condition resembling canine mucocutaneous pyoderma, a syndrome of unknown cause, and a variable response to antibiotics, previously not described in rabbits. The rabbit presented with a 6-month history of relapsing severe swelling and erythema of the lips, nares, and vulva and bilateral severe periocular dermatitis. Initial diagnostics had indicated a Staphylococcus aureus infection with broad antibacterial sensitivity. The patient responded to enrofloxacin at 20 mg/kg PO q12h, penicillin G at 20 mg/kg SC q48h, and fusidic acid eye drops for 4 weeks. At each treatment discontinuation, signs quickly returned.

Repeat skin biopsies showed changes similar to those described for the canine syndrome: hyperplastic and spongiotic epidermis with mild lymphocytic and heterophilic transmigration. There was heavy growth of S intermedius with wide resistance on repeat cultures. Other potential causes of signs were ruled out: dermatosis secondary to hypersalivation from dental disease, Treponema paralutiscuniculi, spirochetes, dermatophytes, immune-mediated disease, and myxomatosis. As some of these conditions may have worse prognoses, accurate diagnosis is important.

Treatment was initiated with marbofloxacin at 5 mg/kg PO q24h, ofloxacin eye drops q12h, meloxicam at 0.6 mg/kg PO q12h, ranitidine at 4 mg/kg PO q12h, and chamber nebulization with F10 (a broad spectrum antimicrobial agent) q12h. Improvement was noted after 2 weeks with complete resolution in 4 weeks. Treatments were discontinued, and there was no relapse after 2 months. In dogs, later relapses may require maintenance therapy.

**Commentary**

This case illustrated the need for relentless diagnostic pursuit, even in cases that may appear routine. The authors should be commended on not settling for a presumptive diagnosis with response to therapy being the sole indicator of cause. With exotic pets, and possibly all species, a definitive diagnosis is always ideal and can sometimes only be obtained through exhaustive technical investigation; sometimes, what is ultimately found is unique. Economic concerns will always be a factor, but knowing is always better than guessing.—Don J. Harris, DVM

**Source**


**Hair Follicles: Critical for Skin Regeneration**

Skin plays a major role in wound healing, and reepithelialization is a crucial step. Hair-covered areas recover from skin injury sooner than do hairless areas. Studies have shown that reepithelialization spreads from the hair-follicle infundibulum, suggesting that hair follicles are important for regenerating interfollicular skin. The hair follicle bulge area is part of the outer root sheath, and recent studies have found that these cells contain keratin 15-positive keratinocytes with characteristics of epithelial stem cells. In this study, bulge-enriched keratinocytes were isolated from hair follicles, and this population of cells in vitro formed interfollicular epidermis within 2 weeks.

**Commentary**

This is valuable translational research. Repair of major epithelial defects is limited by what is possible using skin grafts and other similar techniques. That cells harvested from the bulge area of the hair follicle can be grown in the laboratory and that they differentiate into interfollicular epidermis follicles may make surgery possible on areas where skin closure is problematic. This is a promising study for canine skin regeneration.—Karen Moriello, DVM, DACVD

**Source**


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