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Blistering dermatosis in a Yucatan minipig

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The sudden appearance of unusual blistering skin lesions in a 1.5-yr-old, castrated male Yucatan minipig initiated an immediate veterinary clinical evaluation. The affected minipig belonged to a colony of six animals, all of which had arrived at our animal facility 8 months earlier and were in good health. The supplier had surgically implanted jugular vein vascular access ports in all the minipigs. The colony was used for pharmacokinetic studies but had not been actively involved in any studies for at least 12 weeks before the skin lesions developed.

The animals were fed daily with a standard commercial mature minipig diet, regularly supplemented with various food enrichments. We housed all animals in raised pens that were cleaned at least once daily. The entire room and all pens were completely sanitized every 2 weeks with a broad-spectrum virucidal and bactericidal disinfectant. The animals had been maintained indoors with no exposure to direct sunlight, and the same husbandry and management procedures had been used for the entire colony throughout their time in the facility.

The affected minipig had no health problems before detection of the skin lesions. At the time of the clinical evaluation,

it had a normal appetite and activity level and was bright, alert and responsive. The animal readily interacted with the examiner and accepted food enrichments by hand.

Multiple small vesicles to large blisters varying in size from 1 mm to 1.5 cm in diameter were observed on the skin (Fig. 1). The lesions were confined to an area approximately 7–9 cm long, directly along the dorsal midline and cranial to the hind legs. The vesicles and blisters were tense, and a serous discharge exuded from several of the larger blisters. No signs of pain or pruritus were apparent upon palpation of the affected skin. Surrounding the lesions, mild to moderate erythema was apparent. We examined the minipig's oral mucosa, coronary bands of the hoof and interdigital spaces of all four feet for similar lesions, but none were apparent. No lameness was observed. The remainder of the physical examination was unremarkable.

We took 6-mm dermal punch biopsies of the lesions for histopathology analysis and applied a topical triple antibiotic ointment to the lesions while awaiting the biopsy results. As the minipig did not appear to be in pain and was behaving normally, we did not administer any analgesics but continued to monitor the minipig daily.



FIGURE 1 | Mid-dorsal skin lesions on a 1.5-yr-old, castrated male Yucatan minipig. The arrow identifies a vesicle approximately 6 mm in length. The arrowhead indicates a ruptured vesicle with serous exudate.

After considering this animal's history and the nature of the lesions, what do you think this disease is? Why did we pay special attention to the mouth and hooves? How common is this disease? How would you treat it?

What's your diagnosis?

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