

Thomas M. Donnelly, DVM, Column Editor

## Cutaneous lesions in a pig

David Bentzel, VMD, MPH, DACLAM<sup>1</sup>, Lucy Betterton, RLAT<sup>1</sup> & Erica Eggers Carroll, DVM, PhD, DACVP<sup>2</sup>

Our AAALAC-accredited vivarium received a 14-week-old, male, castrated, Yorkshire-Chester White cross pig from a local swine vendor. During a physical examination upon arrival, veterinary technicians noted skin lesions on the animal's abdomen and medial aspect of the right thigh. The Attending Veterinarian was notified and carried out a physical examination, during which he noted circular, crusty lesions 1–2 cm in diameter on the distal ventral abdomen and in the right inguinal region. The lesions appeared to be non-pruritic. Overall, the animal's body condition and behavior were normal.

In order to obtain a more thorough examination, the animal was anesthetized the following day with a combination of tiletamine and zolazepam (6 mg per kg body weight) and xylazine (2.2 mg per kg body weight), preceded by atropine (0.1 mg per kg body weight) intramuscularly. During this examination, the veterinarian observed multiple, coalescing lesions as well as the singular lesions on the ventral abdomen and in the right inguinal region. The lesions were papular, with a ring of erythema surrounding the base of a brown-black crust located centrally. The diameters for the singular

lesions were 1–2 cm and for coalescing lesions and linear plaques were up to 5 cm (Fig. 1). No exudate was associated with the lesions and no other clinical abnormalities were detected on physical examination. The veterinarian reflected crusts from two different lesions and used sterile swabs to obtain samples for microbiological culture. The results of these cultures were negative.

After a 7-day acclimatization period, the pig was used on an IACUC-approved surgical protocol assessing vascular shunt patency in the presence of hemorrhagic shock. The animal became severely hypotensive during the procedure and was euthanized humanely with a pentobarbital overdose. After euthanasia, two excisional biopsies of the cutaneous lesions were taken and preserved in 10% neutral-buffered formalin for histopathologic analysis. The samples were sent to the Naval Medical Research Center, where they were routinely processed for light microscopic analysis and embedded in paraffin. Sections of 5 µm were cut and stained with hematoxylin and eosin. Slides were also stained using the Brown and Brenn Method and the Brown and Hopps Method for Gram-positive and Gram-negative bacteria.



**FIGURE 1** | Right inguinal area of a 14-week-old castrated pig that shows coalescing, annular, non-pruritic skin lesions with centrally located bran-like scabs.

What are your differential diagnoses? What other diagnostic tests would you carry out? Are you concerned that this condition is zoonotic? What treatment would you recommend, and what would be the prognosis for an animal with this condition?

**What's your diagnosis?**

<sup>1</sup>Naval Medical Center San Diego, San Diego, CA. <sup>2</sup>Naval Medical Research Center, Silver Spring, MD. Correspondence should be addressed to D.B. (david.bentzel@med.navy.mil).