

RAISED EPIDERMAL RIDGE DISEASE

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Symptoms:

Raised epidermal ridge 1mm high x 1mm wide with length 5mm to length of animal, colored white or grey, may branch and may start on more than one part of body. Histologically, the area showed a large number of skin glands and some dead cells, but was otherwise a fairly normal epidermis. It usually occurs on animals of 2 - 3 months of age and disappears by 6 months. Growth and feeding slows. White animals are most susceptible (no Albinos have been exposed). Death rate is not high unless secondary infection takes place.

Treatment:

No successful treatment has been found although salt treatment gives some relief. The salt causes skin to slough but ridge remains.

Causative Agent: Possibly viral.

After finding nothing ourselves in smear sections, and cultures, we had a group of California Fish and Game pathologists inspect the animals, sections and smears. They could find no causative parasite. They felt it was most likely a viral infection and felt an environmental cause was unlikely.

Secondary Infection:

Although the effects of the ridge are not too serious, the ridge seems to be a good place for bacteria and fungi to attack. Cultures at various times have indicated Mimea, Alcaligenes, Aeromonas, Vibro, and Pseudomonas, (fungal culture not done). Sensitivity test showed these bacteria resistant to the common axolotl treatments that are administered in the water (including Nitrofurazone, Tetracycline, and Penicillin). Due to the small size and large number of larvae infected, injection of antibiotics was not feasible. The best treatment seems to be 500 mg. Gentamicin sulfate (Sigma G3632) and Rifampicin (Sigma R3501) to 20 liters of 50% Holtfreter's solution, but this treatment is rather expensive. Rifampicin is not very water soluble, necessitating putting it in approximately 1 liter of water on a magnetic stirrer for 30 minutes. The solution is only stable for 24 hours or less and should be used for 3 - 5 days. We have also had some luck treating with Chloramphenicol at the rate of 500 mg./20 liters, dissolved as for Rifampicin, and used for same number of days. Either antibiotic treatment must be followed by axolotl dye treatment or salt treatment due to fungal bloom after bacteria are killed.

Occurrences:

This disease has apparently been noted by Dr. D. Stocum at University of Illinois and Dr. N. Holder at King College, England.

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