Case L1301421

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History

- 5 year old female Bearded dragon
- Abnormal scale pigmentation for 4 months
- Non-responsive to therapy
  - Iodine baths
  - Topical antifungal (terbinafine)
- Developed bloody cloacal discharge acutely and died within 24 hrs.

- This is 1 of 6 Bearded dragons
  - 2 others have developed abnormal scale pigmentation
Gross Findings
Dorsal

There are multifocal to coalescing, grey to dark brown areas of crusting dermatitis on all four limbs. (Most prominent at the carpi and tarsi)

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Left hind

Right fore
Gross Diagnoses

- Skin (multiple sites): Moderate, multifocal to coalescing, hyperkeratotic, dermatitis
- Liver: Diffuse, severe, hepatic lipidosis.
Histopathologic Findings
Skin. There are multifocal areas of full thickness epidermal necrosis with extensive crust formation. H&E. 20x obj. Inset. Higher magnification of full thickness epidermal necrosis.

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Skin. Throughout the stratum corneum and crusts there are myriad, 2-3 um wide, negatively-staining fungal hyphae. H&E. 40x obj.

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Skin. Predominately within the superficial crusts, there are dense mats of ovoid, 2 x 4 um, basophilic arthroconidia. H&E. 20x.

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Skin. Predominately within the superficial crusts, there are dense mats of ovoid, 2 x 4 um, basophilic arthroconidia. H&E. 40x. Inset: High mag. of arthroconidia.
Morphologic Diagnosis

- Skin: Dermatitis, necrotizing and ulcerative, multifocal, acute, severe with intralesional fungal hyphae and marked hyperkeratosis.
Ancillary Testing

• Fungal culture
  – *Chrysosporium* sp.

• Ribosomal RNA sequencing
  – *Chrysosporium guarroi*.
Discussion

• *Chrysosporium* sp. can be isolated from normal reptiles¹.
  – *Chrysosporium* anamorph of *Nannizziopsis vriesii* (CANV) is strongly implicated as the cause of yellow fungus disease.

• Infection can be spread between animals housed together by cutaneous exposure to CANV conidia².

• Species identification requires ribosomal RNA sequencing due to overlapping phenotypes³.
Discussion

- Chrysosporium guarroi was newly reported in 2010\textsuperscript{4}.
- Distinguished from CANV by:
  - Temperature and rate of growth
    - 15-37°C
    - Slower rate of growth
  - Sexual structures
    - Arthroconidia and aleurioconidia borne on narrow stalks
- Shares 91% and 96% homology with CANV’s 5.8S and 28S ribosomal sequences respectively
References


