Pemphigus vulgaris in a dog

Case 1: #C12-2206

Jason Struthers, DVM, MVetSc
Miniature schnauzer
6 year-old
Male neutered
- Six week progression of:
  - Oral lesions
  - Ptyalism
  - Anorexia
  - Lethargy
  - Weight loss
- Erosive to ulcerated to crusted skin lesions:
  - Lip margins
  - Mucocutaneous junctions
  - Nail beds
  - Nikolsky sign

- Erosive to ulcerated mucosal lesions:
  - Rectal mucosa
  - Oral mucosa
Photo courtesy of Dr. Laura Kelley
Sections (7) of haired skin/mucocutaneous junction
Suprabasilar clefts
Tombstoning
Acantholytic keratinocytes
Pigmentary incontinence
Suprabasilar acantholytic vesicular dermatosis associated with erosive and ulcerative mixed dermatitis, epidermal and infundibular, multifocal, severe, chronic-active with pigmentary incontinence
Immune-Mediated Dermatooeses

1° Vesicles or Bullae

Acantholysis
Desmosomes

Basement membrane (BM) vesicles or bullae
BM zone

Comeal or intraepidermal clefts
PF & subtypes

Suprabasilar clefts
PV & PNP

Subbasilar clefts

Bullous dermatoses (5)

Type 2 hypersensitivity rxn
Pemphigus

PF: Common

PV: Rare

PNP: Rare

Desmosome structure
Keratin intermediate filaments
Core
Proteins in core;
Desmoglein 1 (PF antigen)
Desmoglein 3 (PV antigen)
Desmocollins 1 and 3
Plaque
Proteins in plaque;
Desmoplakin 1
Desmoplakin 2
Plakoglobin
Plakophilin
Envoplakin
Periplakin

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- **Mucosal-dominant PV** – Desmoglein 3

- **Mucocutaneous PV** – Desmoglein 1 & 3

- Pathogenesis more than just **autoantibodies**
Pemphigus vulgaris

- Febrile
- Anorexic
- Depressed
- Leukocytosis

#1 ORAL CAVITY

www.minischnauzer.net

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If PV is suspected favor:
- Intact vesicles
- Wedge biopsies
- Lips or other cutaneous sites
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References