

SKIN FOLD DERMATITIS (INTERTRIGO, SKIN FOLD PYODERMA)

SKIN FOLD DERMATITIS IS A VERY COMMON problem in dogs with excessive skin folds (Hnilica, 2011).

Many cases have obesity as a main contributing factor, while in others it is a consequence of intentional breeding to a required standard.

Skin rubbing against skin within the fold initiates inflammation. Moisture from any cause (tears, saliva, urine or excess sebum) and poor ventilation favours microbial colonisation with bacteria or yeasts or both. Microbial breakdown products accentuate the inflammatory response.

Skin fold dermatitis is classified according to the site of the defect (Paterson, 2008; Hnilica, K. A. and Patterson, A. P., 2017).

Facial fold dermatitis

■ The fold is often present in the maxillary region in front of the eyes; corneal ulceration may be a



Figure 1. Lip fold dermatitis in a young spaniel. The dog is being prepared for surgery and the inflammation caused by the fold is readily apparent once it is retracted. The presenting complaint was halitosis.



Figure 2. A two-year-old English bulldog with an apparently normal vulva. There had been a history of licking in the area thought initially to be anal sac-related.

consequence of this.

■ The problem is seen predominantly in brachycephalic breeds, especially Pekingese and English bulldogs (Miller, Griffin and Campbell, 2013).

■ In spite of quite considerable inflammation there is usually minimal pruritus.

■ Within the fold there is a moist erythematous dermatitis. This may not be apparent unless the skin fold is retracted.

DAVID GRANT

continues his series looking at dermatological conditions



Lip fold dermatitis

■ The fold occurs on the lower lip (Figure 1) and

may present as halitosis. It is more commonly seen in spaniels and St Bernard dogs, but any breed may be affected. If there is concurrent dental disease, the fold dermatitis may be overlooked, with hypersalivation adding to the problem. The source of the halitosis can be accurately assessed by swabbing both the mouth and the fold.

Tail fold dermatitis (corkscrew tail)

■ This is a problem mainly affecting English bulldogs, Pugs and Boston terriers. The fold can be very deep, allowing severe secondary infection with *Staphylococcus pseudintermedius* and/or *Pseudomonas* (Figure 4).

Vulvar fold dermatitis

■ This is particularly seen in obese individuals with infantile vulvas; English bulldogs are predisposed. There may be a malodorous discharge with excessive licking. This can be confused with anal sac problems, as the fold remains hidden unless retracted (Figures 2 and 3).

■ Additional complications include urinary tract infection, which could be an initiating factor in the dermatitis as a descending infection or a contributing factor as an ascending infection.

Body fold dermatitis

■ Body fold dermatitis is particularly seen in the Chinese Sharpei, in which case the folds could occur anywhere on the body. A variant is neck fold dermatitis also of English bulldogs, Basset hounds and in many overweight dogs.

Differential diagnosis

- Acute moist dermatitis.
- Superficial pyoderma.
- Demodicosis.
- Dermatophytosis.
- Other causes of cystitis in the case of vulvar fold dermatitis.

Diagnosis

- Breed, history, physical examination and rule-out of differentials.
- Cytological examination. Sampling can either be made with a swab rolled on a glass slide or with an impression smear direct to the slide or scotch tape. Bacteria and/or *Malassezia* organisms may be seen. As fold dermatitis is not considered to be a true pyoderma (with invasion of the epidermis), there will usually be a lack of inflammatory cells.
- In vulvar fold dermatitis, urine sampling via cystocentesis may be useful if signs of urinary tract disease exist.

Treatment

- Reduction of obesity.
- Surgical correction of the fold. Where this is possible, surgical treatment is the treatment of choice and will result in a permanent cure. This type of surgery can be quite straightforward (Figure 1), challenging (Figure 4) or may be resisted by the owner on the grounds that the fold fits the breed standard and adds to the attractiveness of their dog.
- In all other cases there is a two-phased approach. This involves anti-bacterial, anti-yeast (where indicated by cytology) and anti-inflammatory therapy (Paterson, 2008).
- Most cases benefit from topical therapy. Shampoos containing chlorhexidine and miconazole, benzoyl peroxide or ethyl lactate may be used initially with severe cases requiring sedation or general anaesthesia.
- Less severe cases are treated with medicated anti-bacterial/yeast wipes or benzoyl peroxide gel.
- Treatment with a glucocorticoid cream is indicated in those cases with persistent inflammation.
- Following resolution of the signs, a life-long cleaning maintenance therapy



Figure 3. The vulvar fold dermatitis is now apparent with traction of the fold. Surgical correction could be considered challenging, but was dismissed by the owner. Topical treatment resulted in control and maintenance therapy kept the dermatitis well controlled.



Figure 4. Tail fold pyoderma in a four-year-old English bulldog. This dog had a severe secondary infection with *Pseudomonas*. Attempts to control the infection were only partially successful and the dog was lost to follow-up. Referral to a specialist surgeon would have been the best option for surgical correction if the infection had been controlled as the fold was very deep and the dog resented treatment.

will be required, which represents a considerable commitment from the owner.

References and further reading

- Hnilica, K. A. and Patterson, A. P. In: *Small Animal Dermatology: A Color Atlas and Therapeutic Guide*, 4th edition, pp65-67. Elsevier, 2017.
- Miller, W. H., Griffin, C. E., Campbell, K. L. In: *Muller and Kirk's Small Animal Dermatology*, 7th edition, pp678-690. Elsevier, 2013.
- Paterson, S. In: *Manual of Skin Disease of the Dog and Cat*, 2nd edition, pp28-31. Blackwell Publishing, 2008.

Change at top for equipment maker

DAVID Newall has joined Technik, a stainless steel veterinary equipment manufacturer based in Shropshire, as head of the veterinary and animal charities division. This follows the decision of the firm's founder and director, Matthew Rees, to step down after 21 years.

Mr Newall has over 20 years' experience in the animal welfare sector, having previously held senior positions at Battersea Dogs & Cats Home, Dogs Trust and Cats Protection.

David Grant, MBE, BVetMed, CertSAD, FRCVS, graduated from the RVC in 1968 and received his FRCVS by examination in 1978. He was hospital director at RSPCA Harmsworth for 25 years until his retirement from the RSPCA and is currently engaged in writing and lecturing internationally, mainly in veterinary dermatology.