# VULVARPLASTY - PERIVULVAR DERMATITIS

Howard B. Seim, III, DVM, DACVS
Colorado State University

Definition: Perivulvar dermatitis is a skin fold dermatitis caused by excess perivulvar skin dorsal to the vulva draping and "folding" over the vulvar opening. The skin folds become moist and are predisposed to infection. Skin folds also inhibit normal flow of urine resulting in urine contamination, recurrent UTI and further skin fold irritation.

Signalment: Perivulvar dermatitis occurs most frequently in obese, spayed bitches of any age. Although many dogs are obese, this disorder is occasionally seen in patients with otherwise normal physic.

History: Historical findings are generally associated with vaginitis/cystitis complex (i.e., licking at the vulva, vaginal discharge, hematuria).

Clinical signs: The most frequently reported clinical signs are vaginal discharge (e.g., blood, serum, puss) and licking at the vulva. Occasionally patients present with a history of urinary incontinence secondary to their UTI (i.e., UTI causes a weak sphincter).

Physical examination: General physical examination is often normal. Examination of the vulva reveals a dorsal perineal skin fold obliterating from 50% to 90% of the vulvar cleft. When the skin fold is lifted dorsally off the vulvar cleft, the vulva may look somewhat under developed or infantile (i.e., smaller than normal). When the skin fold is elevated, moderate to severe dermatitis is observed in the skin fold crypts. Manipulation of the vulva may encourage a serosanguinous to purulent exudate from the vestibule and vagina. Digital vaginal palpation is performed to rule out associated genital defects such as vaginal bands, vaginal septa, and vaginal stricture.

Laboratory findings: Results of a complete blood count, serum chemistry profile, and urinalysis are generally normal. Cytologic evaluation of the vaginal discharge often reveals degenerate neutrophils, phagocytized bacteria, and free bacteria.

Radiography: Diagnosis of skin fold dermatitis is based on visual inspection of the vulva and digital palpation of the vaginal vault. If associated vaginal defects are suspected, contrast vaginography should be considered.

Differential diagnosis: Any disorder causing vulvar licking and vaginal discharge should be considered. Diagnostic differentials include: vaginal hyperplasia, vaginal neoplasia, vaginitis/cystitis complex.

Medical management: The affected area may be treated locally with cleansing and drying agents to try and resolve the infection. Occasionally patients will benefit from systemic antibiotics, particularly if a vaginitis and cystitis are present.

Surgical treatment: The objective of surgical treatment is to remove the redundant dorsal skin fold and associated adipose tissue to eliminate skin fold crypts and skin coverage of the vulvar cleft.

Preoperative management: The skin fold dermatitis should be treated medically as described above prior to surgery. This ensures predictable healing postoperatively and helps prevent postoperative wound infection. Patients are continued on antibiotics preoperatively and treated therapeutically for 10 days to 2 weeks postoperatively.

Anesthesia: Routine general anesthesia is performed as this provides a controlled environment for patients placed in a perineal position.

Surgical anatomy: The vulvar lips should be visible dorsally, ventrally, and laterally. The perineal region between the anus and vulva should not have excessive fat or skin covering the vulvar lips.

Positioning: Patients are positioned in ventral recumbancy and placed in a perineal position with the hind end elevated. Hind end elevation is maintained by placing the hind legs over a large rolled up towel. A tampon is placed in the rectum and a purse string suture is placed in the anus.

Surgical technique: A sterile scribe (i.e., sterile marking pen) is used to outline the proposed line of resection. A Brown-Adson forceps is used to grasp the distal margin of the skin fold that is covering the vulva. This skin fold is elevated dorsally until the surgeon can visualize the entire vulvar cleft. A mark is made in the perineum associated with this elevation point. The skin margin is released and two inverted 'U' lines are drawn in the perineum such that when they are connected the skin fold will disappear. Once this determination has been made, two inverted U shape incisions are made exactly on the lines drawn. The island of excised skin is resected along with any underlying adipose tissue. It is important to remove the associated adipose as this is a significant factor in the skin fold pathology. The ventral inverted U incision is sutured to the dorsal inverted U incision.

The wound is closed in two layers; simple interrupted 2-0 or 3-0 synthetic absorbable suture (PDS, Maxon, Biosyn, Vicryl or Dexon) with a swaged on taper needle in the subcutaneous tissue and the skin with simple interrupted monofilament nonabsorbable suture (Nylon, Novafil or Prolene) with a swaged on cutting needle.

Suture material/ special instruments: Urinary catheter, Foley catheter

Postoperative care and assessment: Patients are generally treated with antimicrobials and appropriate pain management immediately postoperatively. An Elizabethan collar may be necessary and if needed should be kept on until suture removal.

Prognosis: The long term prognosis is excellent.  Recurrence of the pyoderma is uncommon.