## Canine Perianal Fistula:

Harnessing the power of **FLUORESCENT LIGHT ENERGY** to improve clinical resolution

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## INTRODUCTION

Canine perianal fistulas (CPF) are painful, chronic inflammatory sinus tracts and ulcers that develop spontaneously in the perianal skin. CPF is a debilitating condition and is known to have a negative impact on the quality-of-life (QoL) of affected dogs and can result in euthanasia if not managed effectively. Conventional medical treatment involves the use of lifelong immunomodulatory or immunosuppressive drugs; however, the successful resolution of lesions can be limited by poor owner compliance, adverse drug effects and dependence on costly therapies.



## AIM OF THE STUDY

The study aimed to evaluate the effect of Fluorescent Light Energy (FLE) in:

- Improving the extent of perianal lesions
- Reducing clinical signs of vocalization and discomfort on defaecation.

# MATERIAL AND METHODS

A total of 4 dogs with lesions compatible with CPF were included.

#### Clinical signs included:

- Tenesmus
- Haematochezia
- Ulcerated malodorous perianal region with draining fistulous tract
- Pain, discomfort, licking and inability to sit

**FLE was applied as sole management therapy** once a week with two consecutive applications in the same session for each dog until clinical signs had significantly improved.

Dogs were assessed by measuring the size of lesions at the start of the study and then weekly for six weeks, using planimetry software. Owners recorded vocalization and straining frequency scores during their pet's defaecation and perianal licking frequency on a 0–5 point scale to assess therapy's response.



## RESULTS

All dogs achieved a significant reduction in vocalization, straining and licking after two weeks (Figure 1). After five weeks of FLE therapy, lesional areas had significantly decreased (P = 0.04) (Figure 2).

FIGURE 1. Median weekly scores for dyschezia (vocalization, straining) and discomfort (licking). A signicant improvement was seen starting from Week 2 (P=0.002).



FIGURE 2. Median weekly lesional areas.



## **CONCLUSION**

In this study, the use of Fluorescent Light Energy (FLE) produced significant and long-term improvement in all aspects of their disease. All dogs demonstrated a >90% improvement in the extent of their perianal lesions together with a resolution of all signs of tenesmus, dyschezia and vocalization on defaecation. The benefits of the Fluorescent Light Energy (FLE) can be attributed to the ability to enhance collagen production, modulate cutaneous inflammation, encourage angiogenesis in inflammatory skin conditions, and enhance and accelerate the healing process. Results from this small exploratory study suggest that FLE represents a convenient, effective and safe form of therapy, with the potential for long periods of remission post-therapy and the potential to reduce or avoid the need for systemic drugs like immunomodulators and antibiotics.

### REFERENCES

Edge D, Mellegaard M, Dam-Hansen C et al. Fluorescent light energy: the future for treating inflammatory skin conditions? J Clin Aesthet Dermatol 2019; 12: E61–E68.

Marchegiani, A., Spaterna, A., Cerquetella, M., Tambella, A.M., Fruganti, A. and Paterson, S. (2019), Fluorescence biomodulation in the management of canine interdigital pyoderma cases: a prospective, single-blinded, randomized and controlled clinical study. Vet Dermatol, 30: 371-e109.

Marchegiani A. Klox Fluorescence Biomodulation System (KFBS), an alternative approach for the treatment of superficial pyoderma in dogs: preliminary results. In: Proceedings of 61st BSAVA Congress; Birmingham, England: 2018; 442.

Marchegiani A, Cerquetella M, Laus F, Tambella AM, Palumbo Piccionello A, Ribecco C, Spaterna A. The Klox Biophotonic System, an innovative and integrated approach for the treatment of deep pyoderma in dogs: a preliminary report. Veterinary Dermatology 2017; 28: 533–553.

Patterson AP, Campbell KL. Managing Anal Furunculosis in Dogs. Compendium 2005; 27 (5):339-355. Romanelli M, Piaggesi A, Scapagnini G et al. Evaluation of fluorescence biomodulation in the real-life management of chronic wounds: the EUREKA trial. J Wound Care 2018; 27: 744-753.

Salvaggio A, Magi GE, Rossi G, et al. Effect of the topical Klox fluorescence biomodulation system on the healing of canine surgical wounds. Vet Surg 2020; 49: 719–727.

