

# Superficial pyoderma: Harnessing the power of *fluorescent light energy* to help accelerate time to clinical resolution



## Oral presentation at the BSAVA CONGRESS 2018

[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.]

## INTRODUCTION

Canine pyoderma is one of the most common diseases presented to veterinarians in small animal practice.

In light of emerging multidrug resistance and the associated potential restriction of veterinary anti-microbial drug use, it is critical to explore alternative treatments that can increase treatment efficacy and reduce reliance on antibiotics.

## AIM OF THE STUDY

The aim of the study was to evaluate the effectiveness of Fluorescent Light Energy (FLE) in managing **superficial pyoderma** in comparison with systemic antimicrobial treatment.

## MATERIAL AND METHODS

A total of **18 dogs with superficial pyoderma** lesions were randomly assigned to three groups:

- **Group A:** systemic antibiotics (cefadroxil) alone (control)
- **Group B:** FLE only, twice a week
- **Group C:** FLE only, once a week



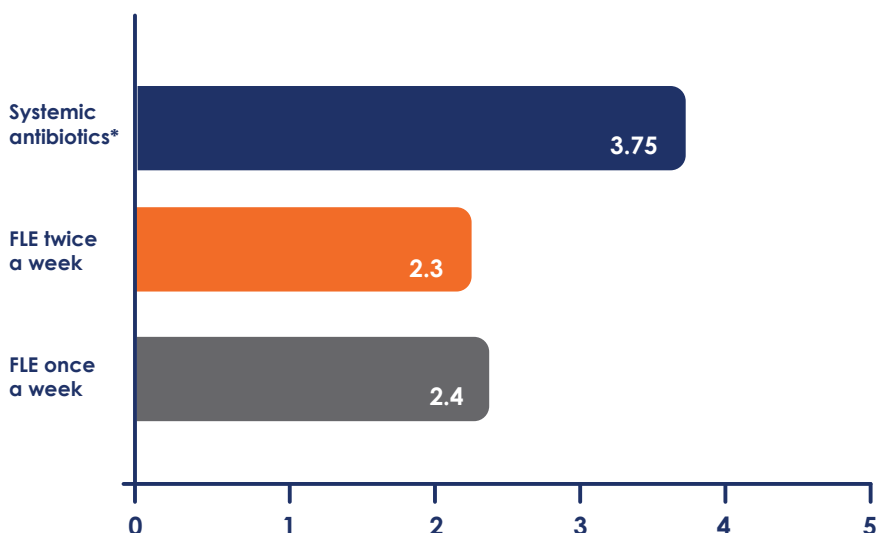
## RESULTS

At enrollment, **no significant difference** was present between the clinical scores for the three groups.

**Dogs treated with systemic antibiotics** (control) achieved clinical resolution in **3.75 ± 1.0 weeks**.

**Dogs treated with FLE once a week or twice a week** achieved clinical resolution in **2.4 ± 1.1 (p=0.05) weeks** and **2.3 ± 0.7 (p<0.05) weeks**, respectively.

**Figure 1** Time (in weeks) to clinical resolution.



\* Antibiotics determined by culture and sensitivity testing performed at the time of enrollment.

## CONCLUSION

The rapid emergence of antimicrobial resistance makes the prolonged use of antibiotics difficult to justify in certain situations. The choice of agents should be based on bacterial culture and antimicrobial sensitivity testing and be prescribed for the appropriate duration only when there are no other options. Although topical antimicrobial treatment may be effective as sole treatment for superficial pyoderma, many cases still necessitate or are currently treated with systemic antibiotics.

The preliminary results of this study indicate that the use of Fluorescent Light Energy (FLE) alone may help in the management of canine superficial pyoderma, and could help reduce the need for systemic antibiotic use with the potential to accelerate time to clinical resolution compared with systemic antibiotic treatment. Similar results were obtained in previous studies in dogs with deep and interdigital pyoderma. The ability of FLE to help accelerate skin regeneration in both infectious and non-infectious inflammatory skin conditions has also been described in human patients, as well as its ability to down-regulate inflammatory mediators and to promote growth factors involved in the healing process.

## references

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