

Bacteriological resolve of pyoderma associated with canine demodicosis without antibiotic/antiseptic therapy

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Generalized canine demodicosis is a disease caused by *Demodex* spp. commonly associated with infection by *Staphylococcus* spp., normal inhabitants of dogs skin. Both microorganisms proliferate within the hair follicles causing folliculitis and furunculosis. In the past, systemic antibiotic therapy was supported for all dogs with secondary bacterial infection. Nowadays, as the incidence of skin infections with multi-resistant bacteria is increasing, a judicious use of systemic antibiotics is recommended. Thus, the Clinical Practice Guidelines on Demodicosis Treatment (2020) recommends topical antibiotic therapy in dogs with generalized demodicosis up to 1-2 weeks after clinical and

cytologic resolution of the skin infection. The main objective of this study was to evaluate the clinical and bacteriological cure of dogs with generalized demodicosis treated exclusively with miticidal, without antibiotic or antiseptic therapy. For this purpose, 4 patients with pustular demodicosis diagnosed by skin scraping and cytology were admitted for their attention at the Teaching Hospital of Small Animals (HEPA). On day 0, the animals were evaluated by a clinical score and skin bacteria samples were obtained by swabs from lesions. Then, patients initiated a non-antibiotic treatment as follows: 2 dogs were treated with afoxolaner 2.7-6.9 mg/kg on day 0 and day 28, and 2 dogs were treated with oral ivermectin at a dose of 0.5 mg/kg/24 h for 63 days. On days 14, 35 and 56 post-treatment, clinical scores were recorded and cytology samples and swabs from skin lesions were obtained. Sample swabs were stored in Stuart medium up to overnight growth on Tryptic Soy Agar medium supplemented with 10 % sterile bovine blood. Bacterial strain phenotypic identification was performed by conventional biochemical techniques. Clinical score decreased considerably throughout the treatment as shown in [TABLE 1](#). *Staphylococcus* spp. was isolated from skin samples in all dogs on days 0 and 14 post treatment. However, the cultures became negative in three of four dogs at day 35, and the same in all dogs at day 56 post-treatment. In conclusion, these preliminary results propose that pyoderma associated with canine demodicosis could be clinically, cytologically and bacteriologically resolved by a single miticidal therapy, avoiding systemic antibiotics.

<i>Pacient</i>	<i>Miticial treatment</i>	<i>Treatment day</i>	<i>Clinical score</i>
HC 347	IVM	0	40
		14	37
		35	16
		56	4
HC 347	AFX	0	35
		14	33
		35	15
		56	3
HC 412	IVM	0	38
		14	31
		35	16
		56	14
HC 421	AFX	0	40
		14	39
		35	10
		56	3

Table 1. Clinical score throughout the miticial treatment. IVM: ivermectin. AFX: afoxolaner.

Keywords: dogs, demodicosis, *Staphylococcus* spp., antibiotic therapy.