

# Results



## Clorexiderm® Oto



(Chlorhexidine 0,05, lactic and salicylic acid)

Efficacy of Clorexiderm® Oto in preventing bacterial otitis and bacterial overgrowth in allergic dogs (predisposed to chronic or recurrent otitis)

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### Composition

- Chlorhexidine digluconate 0,05%
- Lactic acid
- Salicylic acid
- 150 ml bottle

### Characteristics

- Lactic acid acidifies the pH 3,5 solution and enhances its antimicrobial properties.
- Chlorhexidine digluconate has an antimicrobial action (bacteria and yeast) which is not inactivated by pus and organic material.  
Non-irritating at low concentrations.
- Salicylic acid has a keratolytic effect by selectively breaking the keratinous protein chains present in the corneocytes. Thus, it is well tolerated by the underlying cells. Moreover, it penetrates inflammatory lesions where it has an astringent, antibacterial and anti-inflammatory action.
- **Clorexyderm® Oto** has the advantage of being a non-oily liquid product which does not leave any residue in the ear canal.

### Purpose of the study

Chlorhexidine is an antibacterial and antifungal agent of proven efficacy in the form of an ear cleansing solution.

The aim of this study is to assess the efficacy of a chlorhexidine ear solution (Clorexyderm oto) as maintenance therapy in dogs with a predisposition to recurrent otitis (bacterial overgrowth, bacterial infection or Malassezia otitis).

### Experimental design

In this controlled study, we followed an number of dogs suffering with a concomitant allergic dermatitis under control (hypoallergenic diet for food hypersensitivity; flea control for flea bite hypersensitivity; steroids and/or ASIT: allergen-specific immunotherapy for atopic dermatitis).

Group A – 15 control dogs (40 ears)

Group B – 15 (40 ears) dogs treated with **Clorexyderm Oto** once a day for two weeks, then once a week for 3 months.

### Choice of animals

The animals chosen for this study were selected by investigators in their every-day clinical practice.



## Clorexyderm® Oto

### Exclusion criteria:

- Dogs suffering from purulent otitis
- Dogs which, within 10 days prior to the study, or during the study, were treated with systemic products (antibiotics or antifungals), with the exclusion of products for heartworm prevention, allergen-specific immunotherapy, systemic flea control and any other product necessary for the animals' survival (e.g. insulin, treatment for heart disease, treatment with thyroxin, etc.)
- Dogs which, within 10 days prior to the study, or during the study, were treated with any kind of ear products.
- Dogs whose owners did not follow treatment correctly, or did not come to recheck visits or animals that were administered systemic antibiotic or antifungal treatment because of other urgent problems.
- Dogs which showed unwanted adverse reactions to a drug treatment (erythema, itching, side effects)

### Protocol:

Examination at Day 0 (G0), 30 (G30), 60 (G60) and 90 (G90):

- Evaluation of pruritus (Scale 1-10)
- Evaluation through ear examination :
  - presence or absence of exudate
  - erythema, oedema
  - evaluation of the integrity of the ear drum
- evaluation through cytological examination
  - counting of bacteria and yeast (average of 5-oilimmersion fields – 100x)



## Results:

Table n.1 information on study dogs, the type of otitis and underlying allergy (AD: atopic dermatitis,FA: food allergy).

Number	Breed	Age	Sex	Otitis	Diagnosis	Criteria inc	Therapy
case 1	YORKSHIRE	6 Ys	FS	ERYTHEMATOUS	AD	OK	NO
case 2	LABRADOR	8 Ms	FS	ERYTHEMATOUS	FA	OK	NO
case 3	GOLDEN RETR	6 Ys	M	ERYTHEMATOUS	AD	OK	NO
case 4	GOLDEN RETR	4 Ys	FS	ERYTHEMATOUS	AD	OK	NO
case 5	GOLDEN RETR	7 Ys	M	ERYTHEMATOUS	SEASONAL	OK	YES
case 6	AMERICAN S. TERRIER	8 Ys	FS	ERYTHEMATOUS	AD	OK	YES
case 7	SCHNAUZER	4 Ys	FS	ERYTHEMATOUS	FA	OK	YES
case 8	BRACCO ITALIANO	10 Ms	M	ERYTHEMATOUS	FA	OK	YES
case 9	LABRADOR	4 Ys	FS	ERYTHEMATOUS	AD + FA	OK	YES
case 10	BEAGLE	7 Ys	M	ERYTHEMATOUS	AD + FA	OK	NO
case 11	MONGREL	8 Ys	F	ERYTHEMATOUS	FA	OK	YES
case 12	BULLDOG	6 Ys	F	ERYTHEMATOUS	AD	OK	YES
case 13	BOXER	2 Ys	M	ERYTHEMATOUS	FA	OK	YES
case 14	NEWFOUNDLAND DOG	5 Ys	F	ERYTHEMATOUS	AD	OK	NO
case 15	LABRADOR	1 Ys	M	ERYTHEMATOUS	AD	OK	YES
case 16	MONGREL	5 Ys	FS	ERYTHEMATOUS	AD	OK	NO
case 17	BASSETHOUND	0,5 Ys	M	ERYTHEMATOUS	FA	OK	YES
case 18	SHIH TZU	2 Ys	M	ERYTHEMATOUS	AD	OK	NO
case 19	MONGREL	3 Ys	FS	ERYTHEMATOUS	AD	OK	NO
case 20	WHWT	4 Ys	M	ERYTHEMATOUS	AD	OK	NO
case 21	BEAGLE	8 Ys	F	ERYTHEMATOUS	AD	OK	YES
case 22	PITBULL	5 Ys	FS	ERYTHEMATOUS	AD	OK	YES
case 23	MONGREL	3 Ys	F	ERYTHEMATOUS	AD	OK	NO
case 24	WHWT	4 Ys	M	ERYTHEMATOUS	AD	OK	NO
case 25	SHARPEI	5 Ys	FS	ERYTHEMATOUS	AD	OK	NO
case 26	WHWT	10 Ys	M	ERYTHEMATOUS	AD	OK	NO
case 27	BULLDOG	9 Ys	M	ERYTHEMATOUS	AD	OK	NO
case 28	LABRADOR	6 Ys	M	ERYTHEMATOUS	AD	OK	YES
case 29	BEAGLE	4 Ys	F	ERYTHEMATOUS	AD	OK	YES
case 30	WHWT	10 Ys	M	ERYTHEMATOUS	AD	OK	YES

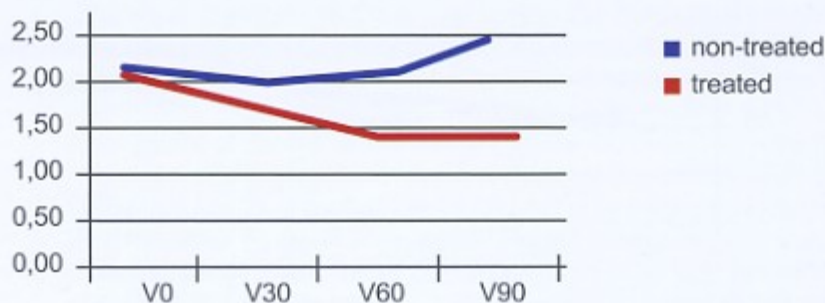


## Clorexiderm® Oto

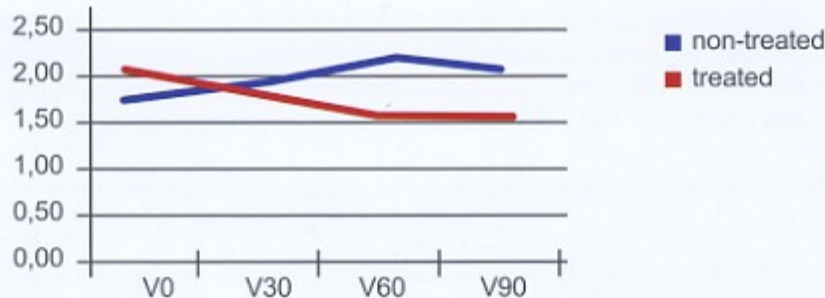
### Comparison of mean score values:

Pruritus and erythema in treated group showed a decrease compared to non-treated group:

#### Pruritus:

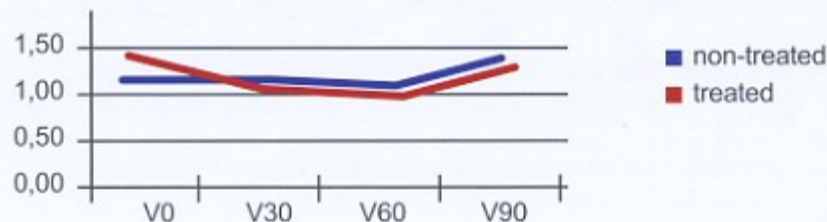


#### Erythema:



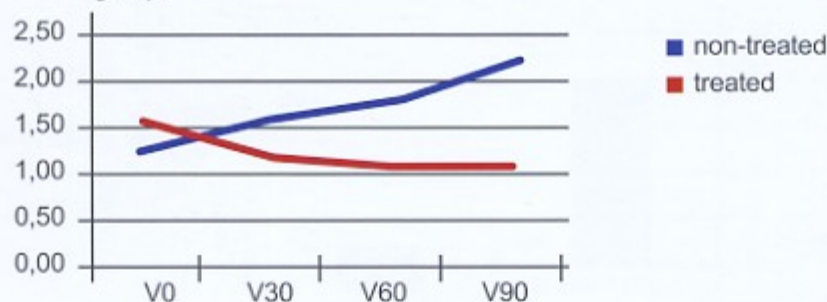
#### Oedema:

Oedema diminished in treated group and slightly increased in non-treated group :



#### Bacteria:

The number of bacteria decreased in treated group and increased in non-treated group:

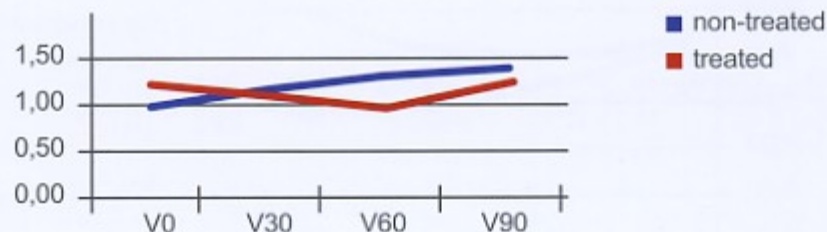




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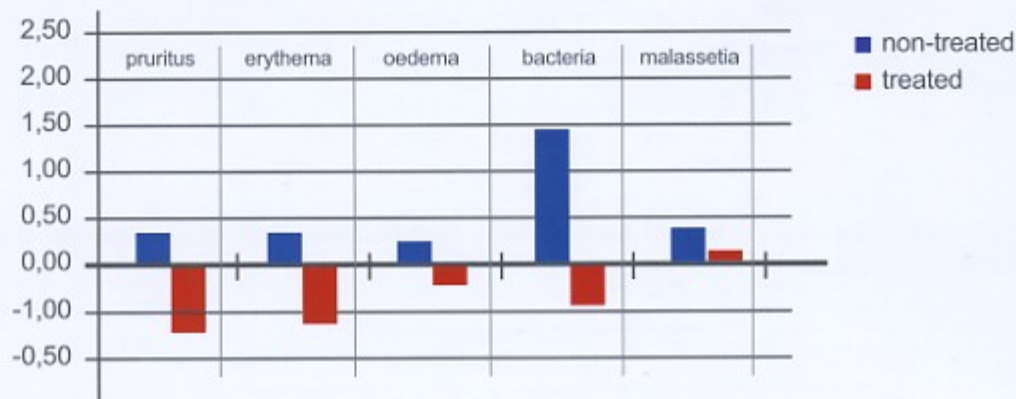
For the number of yeast (*Malassezia*), the two groups showed the same trend:

#### Yeast:



#### Summary:

Comparison of mean scores' difference between day 0 and at day 90 in the two groups: we see the importance and efficacy of Clorexyderm oto in preventing bacterial overgrowth and otitis in predisposed dogs. Moreover, some clinical parameters are improved, e.g. itching, erythema and oedema.



#### Topical ear product:

Number of cases in which use of topic antibiotic-anti-inflammatory-antifungal ear products was required in order to manage a relapse of the otitis.

