

REPORT ABOUT CRYO-SURGERY WITH THE CRYOSUCCESS-SYSTEM

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Baden, Österreich
XII / 2005

PATIENTMATERIAL

The Cryosuccess-System (2 mm . reps. 4,5 mm . probe) was used for 60 patients (55 dogs, 4 cats, 1 hamster) (**table 1**). All together 105 skin-lesions were treated. Those were subdivided in 82 epithelial tumors (warts, intracutaneous horny epithelioma, virus papilloma, sebaceous adenoma) and 22 different skin-lesions (**table 2**). When several treatments were necessary, they were done in an interval of 2 to 10 days. The treatment intervals were also influenced by the wishes of the animal owner.

(profession, distance). The necessary number of treatments for a healing, the duration of the treatment in seconds, the intervals of the treatments and the reasons why treatments were interrupted, can be seen in **table 3 to 15**..

SKIN-CHANGE	NUMBER	%
Epithelial tumor dog	78	74,29
Epithelial tumor . Sebaceous adenoma dog	3	2,85
Epithelial tumor cat	2	1,91
Melanoma dog	2	1,91
Benignes histiocytoma dog	1	0,95
Artherom dog	3	2,85
Skin cysts dog	3	2,85
Bad healing wound dog	4	3,82
Granulation tissue dog	3	2,85
Pyoderma in the area of the nasal wrinkle cat	2	1,91
High-grade pyoderma in the area of the ankle-joint cat	1	0,95
Gingivitis cat	2	1,91
Volume increase of the foot-ball hamster	1	0,95
TOTAL	105	100

Table 2: Type and number of skin-changes in dog, cat and hamster

EPITHELIAL TUMOR - DOG (n = 78)					
Size in mm	Number of treatments in a 2 - , 4 - ,7 Æ resp. 10 Æ days interval				Duration in seconds
	1	2	3	5	
5	1 *)	0	0	0	15
6	0	1	0	0	15
7	47	14	6	0	10 - 35
8	1	1	1	0	15
9	0	2	0	0	15
10	0	1	1	1	15, 20
14	1 **)	0	0	0	30
TOTAL	50	19	8	1	
%	64,1	24,3	10,3	1,3	

Table 3: Number and size of skin-changes; frequency and duration of the treatments

*) Interrupted due to tear flood, on demand of the owner

***) 4,5 mm probe

EPITHELIAL TUMOR - SEBACEOUS ADENOMA DOG (n = 3)					
Size in mm	Number of treatments in a 4 Æ resp. 14 Æ days interval				Duration in seconds
	1	2	3	4	
∅ 10	0	1	0	1 *)	35, 30
∅ 12	0	1	0	0	25, 30
TOTAL		2		1	
%		66,66		33,33	

Table 4: Number and size of skin-changes; frequency and duration of the treatments

*) Recovery. interrupted, owner problem

EPITHELIAL TUMOR - CAT (n = 2)					
Size in mm	Number of treatments In a 4 Ë days interval				Duration in seconds
	1	2	3	5	
7	1	1	0	0	15
TOTAL	1	1			
%	50,0	50,0			

Table 5: Number and size of skin-changes, frequency and duration of the treatments

MELANOMA - DOG (n = 2)					
Size in mm	Number of treatments in a 4- days interval				Duration in seconds
	1	2	4	6	
ø 12	0	0	0	1 *)	25, 30
30 x 15	0	0	1 *)	0	30, 35
TOTAL			1	1	
%			50,0	50,0	

Table 6: Number and size of skin-changes, frequency and duration of the treatments

*) Control after 6 month, no relapse

BENIGNES HISTIOCYTOMA - DOG (n = 1)					
Size in mm	Number of treatments in a 2 Ë days interval				Duration in seconds
	1	2	3	5	
ø 10	0	0	1	0	10, 20, 30
TOTAL			1		
%			100,0		

Table 7: Number and size of skin-changes, frequency and duration of the treatments

ARTHEROM - DOG (n = 3)					
Size in mm	Number of treatments in a 2 Ë days interval				Duration in seconds
	1	2	3	5	
∅ 12	1	0	0	0	30
∅ 18	0	0	2	0	25, 30
TOTAL	1		2		
%	33,33		66,66		

Table 8: Number and size of skin-changes, frequency and duration of the treatments

SKIN CYSTS - DOG (n = 3)					
Size in mm	Number of treatments in a 6 Ë days interval				Duration in seconds
	1	2	3	4	
∅ 10	1	0	0	0	30
∅ 15	0	1	1	0	25, 35, 15
TOTAL	1	1	1		
%	33,33	33,33	33,33		

Table 9: Number an size of skin-changes, frequency and duration of the treatments

WOUND - DOG (n = 4)					
Size in mm	Number of treatments in a 4 Ë days interval				Duration in seconds
	1	2	3	4	
∅ 20	0	0	0	1	25, 30
20 x 35	0	1	0	0	150 *)
∅ 40	0	0	0	1	25, 30
20 x 50	0	1	0	0	20, 40
TOTAL		2		2	
%		50,0		50,0	

Table 10: Number and size of skin-changes, frequency and duration of the treatments

*)150 seconds dispersed on 10 sites

WOUND - CAT (n = 1)					
Size in mm	Number of treatments				Duration in seconds
	1	2	3	4	
20	1	0	0	0	35 *) **)
TOTAL	1				
%	100,0				

Table 11: Number and size of skin-changes, frequency and duration of treatments

*) 4,5 mm probe

**) Good visible recovery after 4 days. Euthanasia on demand of the owner

GRANULATION TISSUE - DOG (n = 3)					
Size in mm	Number of treatments in a 2 Ë days interval				Duration in seconds
	1	2	3	5	
ø 25	0	0	0	1	15, 20, 30
ø 30	0	2	0	0	20, 30
TOTAL		2		1	
%		66,66		33,33	

Table 12: Number and size of skin-changes, frequency and duration of treatments

DERMATITIS of the NASAL WRINKLE Ë CAT (n = 2)					
Size in mm	Number of necessary treatments in a 7- days interval for a complete healing				Duration in seconds
	1	2	3	4	
4 x 1	0	1 *)	0	0	10
5 x 2	0	1 *)	0	0	10
TOTAL		2			
%		100,0			

Table 13: Number and size of skin-changes, frequency and duration of treatments

*) Relapse after approx. 1 month

GINGIVITIS Ę CAT (n = 2)					
Size in mm	Number of treatments in a 7- days interval				Duration in seconds
	1	2	3	4	
Right up along the molars a border of approx.. 3 mm large	0	1 *)**)	0	0	20
Left up around caninus a border of approx. 3 mm large	0	1 *)**)	0	0	20
TOTAL		2			
%		100,0			

Table 14: Number and size of skin-changes, frequency and duration of treatment

*) First treatment under narcosis

**) Control after 5 month: no relapse

HAMSTER					
Size in Mm	Number of treatments in a 7- days interval				Duration in seconds
	1	2	3	4	
Volume increase of the foot-ball	0	0	0	1 *)	10, 10, 10, 10
TOTAL				1	
%-				100,0	

Table 15: Number and size of skin-changes, frequency and duration of treatments

*) Almost full volume reduction, relapse after 1 month after 4th therapy, no further therapy

SUMMARY

In 54 cases (51,5 %) one -, in 31 cases (29,5 %) two -, in 12 cases (11,4 %) three -, in 2 cases (1,9 %) five . and in one case (0,9 %) six treatments were necessary for a complete recovery of the skin-changes. All together 94,3 % of the cases ended with a positive result. In 5,7 % (n =6) the treatment was interrupted. In 3 cases on demand of the owner, notwithstanding the improvement of the clinical picture. In three more cases a relapse was observed (Dermatitis of the nasal wrinkle of the cat; volume increase of the foot-ball of the hamster) **Table 16; Tables 3-15.** 2 Melanomas were treated with 4 resp. 6 interventions in a 4 days interval with the Cryosuccess-System. Up to 6 month after the end of the therapy no relapse was diagnosed (**Table 1, 6, 16**).

SUMMARY (n = 105)								
Skin-change	Number of treatments in a 2 - , 4 - , 7 Æ resp. 10 Æ days interval						Recovered N (%)	Interrupted N (%)
	1	2	3	4	5	6		
ET Dog	50	19	8	0	1	0	77 (98,7)	1 (1,3)
SA Dog	0	2	0	1	0	0	2 (66,6)	1 (33,3)
ET Cat	1	1	0	0	0	0	2 (100)	0 (0)
Melanom Dog	0	0	0	1	0	1	2 (100)	0 (0)
BHC Dog	0	0	1	0	0	0	1 (100)	0 (0)
A Dog	1	0	2	0	0	0	3 (100)	0 (0)
SC Dog	1	1	1	0	0	0	3 (100)	0 (0)
W Dog	0	2	0	2	0	0	4 (100)	0 (0)
W Cat	1	0	0	0	0	0	0 (0)	1 (100)
GT Dog	0	2	0	0	1	0	3 (100)	0 (0)
DNW Cat	0	2	0	0	0	0	0 (0)	2 (100)
G Cat	0	2	0	0	0	0	2 (100)	0 (0)
VI Hamster	0	0	0	1	0	0	0 (100)	1 (100)
TOTAL (%)	54 (51,5)	31 (29,5)	12 (11,4)	5 (4,8)	2 (1,9)	1 (0,9)	99 (94,3)	6 (5,7)

Tabelle 16: Ergebnisse

ET = Epithelial tumor **SA** = Sebaceous adenoma. **BHC** = Benignes histiocytoma **A** = Artherom **SC** = Skin cysts **W** = Wound **GT** = Granulation tissue

DNW = Dermatitis of the nasal wrinkle **G** = Gingivitis; **VI** = Volume increase of the foot-ball