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COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER

Consultation CAPdoulleur

SIGNES CLINIQUES

Stomatite ulcéreuse alvéolaire

Stomatite labio-jugale

Fosses palatoglosses

Affection inflammatoire buccale

- Gingivite
- Parodontite,
- Palato-glossite ulcéreuse
- Bucco-stomatite

Douleur omniprésente

- Anorexie
- Ptyalisme
- Mâchonnements

Troubles comportementaux

- Dépression
- Anxiété
- Séquences d'agression fréquentes

d'après Philippe Hennet

CAPdoulleur CHANGE ANIMAL PAIN
ADVETIA Centre Hospitalier Vétérinaire

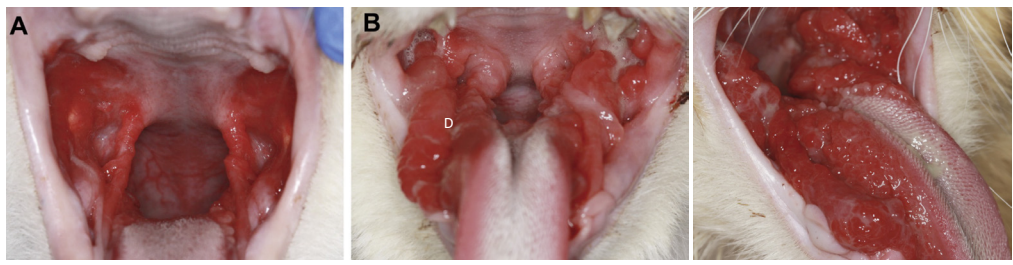
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COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER



INFLAMMATION CONSTANTE



Phénotype ulcératif

Phénotype prolifératif

- | | | |
|---------------------------------|----------------------|------------------------------------|
| Affection inflammatoire buccale | Douleur omniprésente | Troubles comportementaux |
| ➢ Gingivite | ➢ Anorexie | ➢ Dépression |
| ➢ Parodontite, | ➢ Ptyalisme | ➢ Anxiété |
| ➢ Palato-glossite ulcérate | ➢ Mâchonnements | ➢ Séquences d'agression fréquentes |
| ➢ Bucco-stomatite | | |
- d'après Philippe Hennet



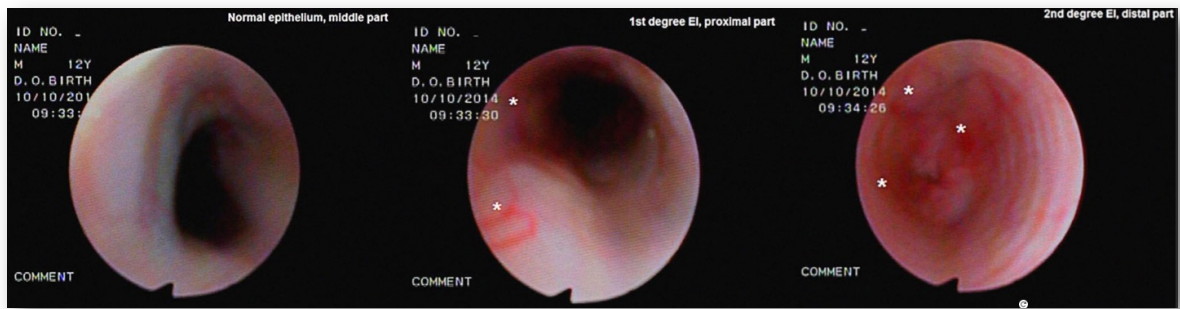
Bin Lee Da et al. An Update on Feline Chronic Gingivostomatitis Vet Clin Small Anim 50 (2020) 973-982

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OESOPHAGITE



58 chats CGSF: 98% oesophagites



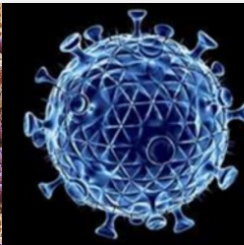
Kouki MI. Chronic Gingivostomatitis with Esophagitis in Cats. J Vet Intern Med 2017;31:1673-1679

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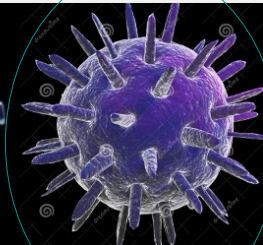
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ÉTIOPATHOGÉNIE

*Tannerella forsythia**Pasteurella multocida*

FIV FeLV



80-100% Calicivirus

- Prolifération bactérienne anaérobie
- Surinfection virale
- Maladie dentaire
- Stress environnementaux
- Dysfonctionnement immunitaire
 - Hypersensibilité aux antigènes bactériens et viraux
 - Nbre de plasmocytes, lymphocytes T DC8+ corrélé avec sévérité des lésions

Da Bin Lee, Frank J.M. Verstraete, Boaz Arzi, An Update on Feline Chronic Gingivostomatitis Vet Clin Small Anim 50 (2020) 973-982



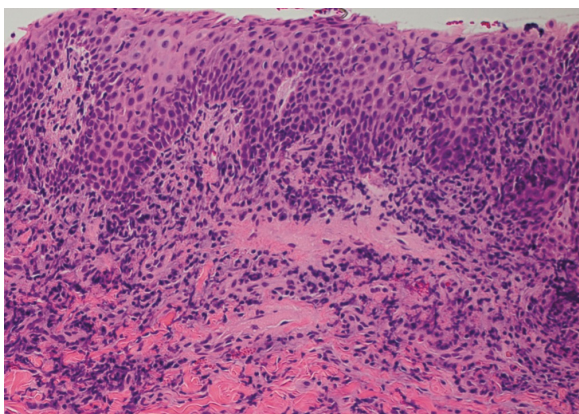
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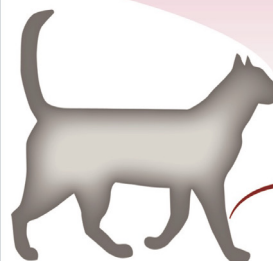
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Hypersensibilité locale et systémique



Infiltration ++++ lymphocytes et plasmocytes



1. Hyperglobulinemia
60 % des cas
2. $11\text{IFN}\gamma$, $\text{TNF}\alpha$, $\text{IL-1}\beta$
3. ↑ Neutrophilie
30 à 40 % des cas
4. Expand → Resolve Infection
 Prime → Memory Cells → Contract
 Tissue-Resident Memory (T_{RM}) → Effector Memory (T_{EM}) → Central Memory (T_{CM})
 Cellules mémoire effectrices CD8+.

Maria Soltero-Rivera, Stephanie Goldschmidt and Boaz Arzi. Feline Chronic Gingivostomatitis. Current concepts in clinical management. Journal of Feline Medicine and Surgery (2023) 25, 1-16



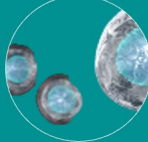
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OPTIONS THÉRAPEUTIQUES

 Contrôle plaque dentaire Extractions dentaires 87% amélioration 50% de guérison à 6 mois Antibiothérapie	 Diminuer l'inflammation Corticoïdes AINS ARA 3000 ?	 Diminuer la réponse immunitaire Cyclosporine Interféron ω Virbagen Interféron α Roferon
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COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER



EXTRACTIONS DENTAIRES

RADIOGRAPHIES



COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER



EXTRACTIONS DENTAIRES

ANALGÉSIE
PROTECTRICE

d'après Philippe Hennet

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Sédation

- Médétomidine 1000 µg/ml:
50 µg/kg 0,1ml/2kg - 30 µg/kg 0,1ml/3kg
- Méthadone 10mg/ml:
0,2mg/kg 0,1ml/5kg
- Midazolam 5mg/ml:
0,2-0,3mg/kg 0,2-0,3ml/5kg

Induction

- Kétamine 100mg/ml
0,5 -1mg/kg 0,05 -0,1 ml/10kg
- Propofol à effet

ALR: Ropivacaine 1% 0,2 ml/bloc Durée: 4-6h

Per-opératoire

- CRI Méthadone 0,2 mg/kg/h
- + Kétamine 0,5 mg/kg/h

Post-opératoire

- CRI Méthadone 0,1 puis 0,05 mg/kg/h
- + Kétamine 0,5 mg/kg/h
- Méloxicam 5mg/ml IV SC 0,3 mg/kg 0,3 ml/5kg
- Relais VO 0,5 mg/ml 0,05 mg/kg 4-7j
- Gabapentine 5 mg/kg BID
- Tramadol (Antalgique de secours): 1-3 mg/kg BID

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Sédation

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0,2mg/kg 0,1ml/5kg
- Midazolam 5mg/ml:
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Induction

- Kétamine 100mg/ml
0,5-1mg/kg 0,05-0,1 ml/10kg
- Propofol à effet

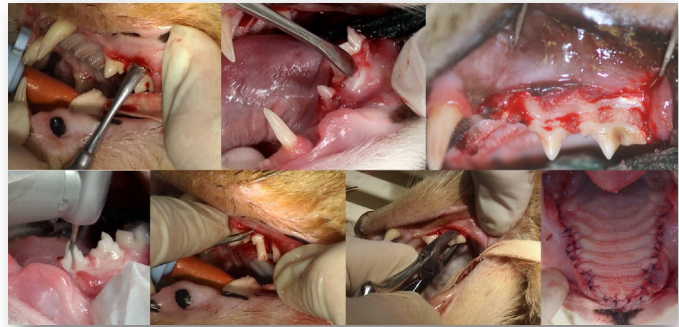
ALR: Ropivacaïne 1% 0,2 ml/bloc Durée: 4-6h

Per-opératoire

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Contrôle de la plaque dentaire

- Oxygénation des tissus
- Activité antibactérienne anaérobie

Antalgique

↓ Inflammation

- ↓ Cytokines
- ↓ Prostaglandines
- ↑ Macrophages



À travers la joue:
6-10J/ cm²



Bouche ouverte:
3-4 J/cm²



Squarzoni P, Bani D, Cialdai F and Monici M. NIR Laser Therapy in the Management of Feline Stomatitis. SM Dermatolog J. 2017; 3(3): 1021

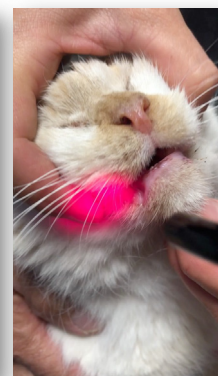
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+ 10 MOIS

+ 16 MOIS

+ 36 MOIS

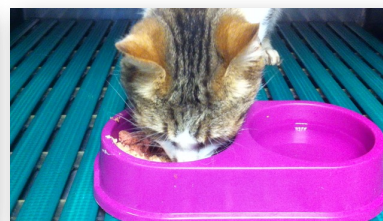
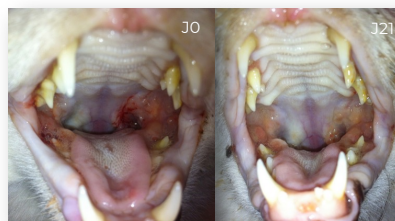

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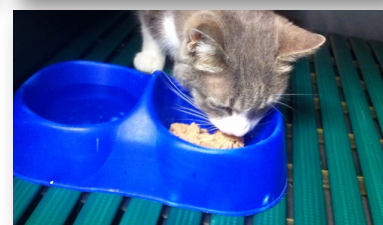
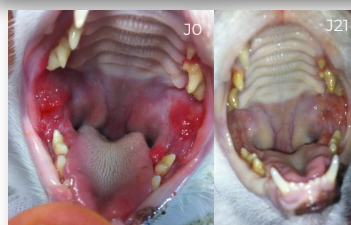
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LASER + 6H



LASER + 2H


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Journal of Feline Medicine and Surgery (2011) 15, 577-587
doi:10.1016/j.jfms.2011.05.012



Comparative efficacy of a recombinant feline interferon omega in refractory cases of calicivirus-positive cats with caudal stomatitis: a randomised, multi-centre, controlled, double-blind study in 39 cats

Philippe R Hennet ^{Douglas Veterinary, Quivroc, Guyane¹}, Guy AL Camy ^{Douglas Veterinary²}, David M McCabe ^{Small Animal³}, Maxime Y Albouy ^{Small Animal⁴}

¹Clinique vétérinaire ADVETISA, Paris, France
²Clinique vétérinaire Td Dailin, Gers, France
³Clinique vétérinaire Td Dailin, Gers, France
⁴Clinique vétérinaire Td Dailin, Gers, France

Chronic caudal stomatitis with alveolar/buccal mucositis in calicivirus-positive cats is the most severe presentation of feline chronic gingivostomatitis. Refractory cases are helped by antibiotic and anti-inflammatory treatments, often including glucocorticoids. In order to evaluate the comparative efficacy of controlled administration of recombinant feline interferon omega (rFIF- ω) versus oral administration of glucocorticoids, a randomised, multi-centre, controlled, double-blind study was performed in 39 cats. The progression of behavioural, clinical and histological scores was assessed over 90 days. Daily intranasal treatment with 0.1 MU of rFIF- ω was associated with a significant improvement of clinical lesions (caudal stomatitis and alveolar/buccal mucositis) and a decrease of pain scores from D45 to D90. Although no such statistical improvement was noticed in the placebo group, there was, however, no significant difference between the two groups for most of the parameters, except pain at D45 and D90.

Date accepted: 12 May 2011

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Feline chronic gingivostomatitis (FCGS) is an ill-defined syndrome characterised by inflammatory lesions, mostly ulcerative or ulceroproliferative in nature, affecting gingival and non-gingival oral mucosa.^{1,2} Apart from inflammation associated with periodontal disease, which has been recognised with a very high prevalence in cats, inflammatory lesions have been identified in cats in two specific causal anatomical sites: the mucosa lateral to the palatogingival arches and the alveolar mucosa in the periodontal area, sometimes extending to the buccal mucosa. These inflammatory conditions have been recently respectively referred to as caudal stomatitis and alveolar/buccal mucositis and are the main lesions in cats treated for this painful condition.^{3,4} Because FCGS syndrome may relate to various and inflammatory lesions among which gingivitis/periodontitis is predominant, this broad term should be used with caution. It should always be specified whether or not FCGS is associated

with caudal stomatitis, as the significant factor seems to be the presence or absence of this type of lesion.⁵ It is thought that this clinical entity is a multifactorial condition where the host's immune system is responding inappropriately to chronic and antigenic stimulation of various origins, dental related conditions such as periodontal disease and dental impaction, as well as the influence of viral infections or carriage have been suggested to play a role.⁶⁻¹⁰ Calicivirus has been known for a long time to cause acute focal or multifocal ulcerative gingivitis and gingivitis as well as acute upper respiratory disorders.¹¹⁻¹³ The prevalence of calicivirus carriage associated with chronic gingivitis/stomatitis has also been reported to be higher than in the random population.¹⁴ More specifically, it has been shown that acute caudal stomatitis can be experimentally induced with calicivirus strains sampled from the oropharynx of cats suffering from chronic stomatitis.¹⁵ However, this experimentally induced acute caudal stomatitis did not result in a chronic disease in the experimental setting. Recently, it was shown using polymerase chain reaction (PCR) technology that almost all cats presenting with caudal stomatitis were chronic and



Interféron F Virbagen Transmucosal
0,1 MU / j

Effet positif, non supérieur à corticoïdes

1 ml = 10 MU
3 seringues de 0,3 ml = 3 MU
2 flacons au congélio
0,3 ml ds 15 ml serum phy
ds réfrigérateur

0,5 ml = 100 000 UI / j
30 j

Hennet, P. R., Camy, G. A. L., McCabe, D. M., & Albouy, M. V. (2011). Comparative efficacy of a recombinant feline interferon omega in refractory cases of calicivirus-positive cats with caudal stomatitis: a randomised, multi-centre, controlled, double-blind study in 39 cats. *Journal of Feline Medicine & Surgery*, 15(8), 577-587.

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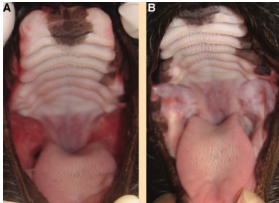
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16 chats avec extraction PM –M ou complète
2,5 mg /kg BID cyclosporine versus placebo
52,7% amélioration



Maine Coon F 6 ans
Cyclosporine: 5mg/kg BID
SDAI = 10
SDAI = 4 à + 15 mois

Lommer, M. J. (2013). Efficacy of Cyclosporine for Chronic, Refractory Stomatitis in Cats: A Randomized, Placebo-Controlled, Double-Blinded Clinical Study. *Journal of Veterinary Dentistry*, 30(1), 8-17.

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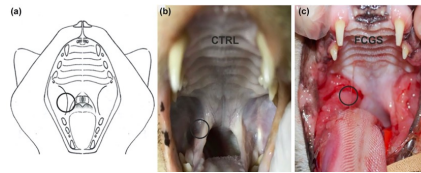


COMPLEXE GINGIVO-STOMATITE FÉLIN: THÉRAPIE K-LASER

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Récepteurs	Chats sains	Chats CGSF
CB1	++	+++
CB2	+/-	+++
TRPA	++	++
5-HT	++	++
GPR55	+/-	+++

Polidoro G et al. Expression of cannabinoid and cannabinoid-related receptors in the oral mucosa of healthy cats and cats with chronic gingivostomatitis. *Journal of Feline Medicine and Surgery* 2020


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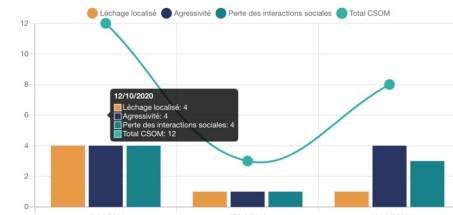
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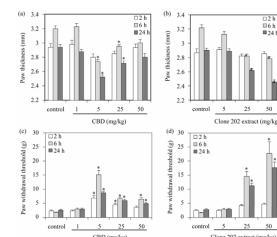
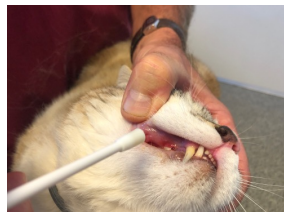


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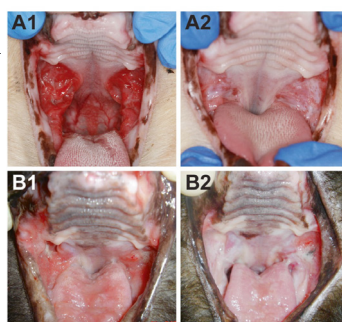
Cannabidiol:
0,5 - 2 mg/kg
Broad spectrum?

Céléstène 0,05% :
0,5 mg/ml/ 40 gttes
6 gttes : 0,075 mg bétaméthasone
équivalent 0,5 mg prednisone
Chat 4 kg 0,5 mg/kg prednisolone : 2 mg
= 24 gttes bétaméthasone 0,3 mg

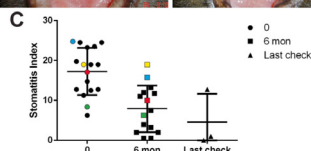

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- 2 inj 20 M de CSM à 30 j intervalle en 3 à 6 mois:
- 72% réponse positive
- 28% rémission
- 44% amélioration notable
- Selon ER : 50 % TB résultats

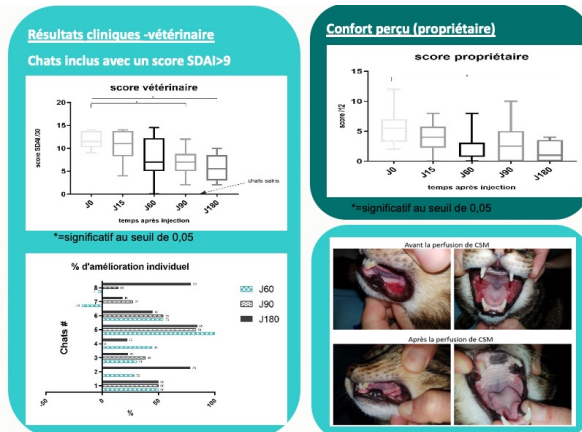


Arzi et al. A multicenter experience using adipose-derived mesenchymal stem cell therapy for cats with chronic, non-responsive gingivostomatitis. *Stem Cell Research & Therapy* (2020) 11:115



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A 3 et 6 mois, tous les chats présentent une amélioration clinique.

Pour 3 de ces chats l'amélioration clinique est supérieure à 75%

Au suivi à 6 mois:

- 5/8 chats n'ont plus de traitement
- 2 ont nettement diminué la prise d'anti-inflammatoire
- 1 a stoppé tous les traitements mais a conservé l'interféron

Single infusion of allogeneic neonatal Mesenchymal stromal cells to manage refractory feline gingivostomatitis- A clinical pilot study
M. Febre, S. Maddens, C. Robert, R. Rakic, N. Plantier, N. Saulnier* Vetbiobank, Marcy I, France
Febre M1, Saulnier N1, Roux P2, Girard N3, Boutolle F4, Rosset ES, Maddens S1, 1 Vetbiobank, Marcy l'Etoile ; 2 Dentovet, Lausanne (Suisse)
; 3 Azurvet, Saint-Laurent-du-Var ; 4 CHV Atlantia Nantes ; 5 CERREC, Marcy l'Etoile



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COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER

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Ramsès II Siamois M 17 ans 9 mois 2,7 kg CGSF depuis 04/2018 Corticoïdes retard MRC IRIS II



Célestène 0,05% : 0,5 mg/ml/ 40 gttes
6 gttes : 0,075 mg bétaméthasone
équivalent 0,5 mg prednisone

Chat 3 kg
0,5 mg/kg prednisolone : 1,5 mg
= 18 gttes bétaméthasone 0,23 mg

4 mg CBD/ pulv

Frunévetmab: 7 mg



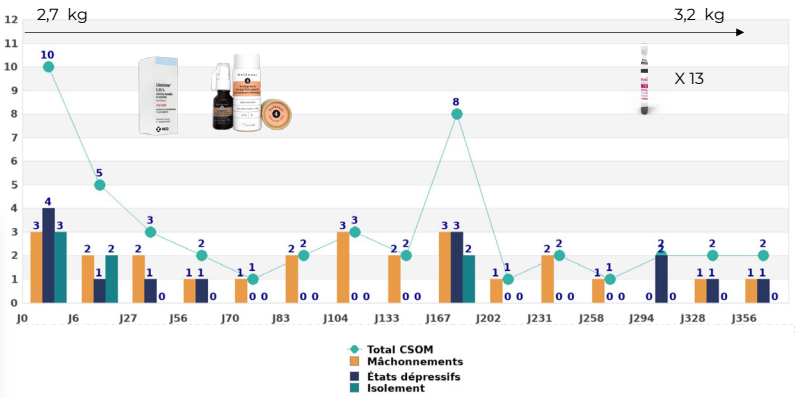
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COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER

PRISE EN CHARGE DES ÉCHECS

Ramsès II Siamois M 17 ans 9 mois 2,7 kg CGSF depuis 04/2018 Corticoïdes retard MRC IRIS II



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COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER

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Meili Siamois
F 15 ans 2,9 kg



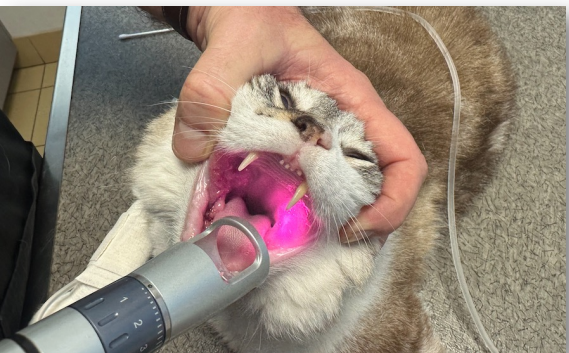
Minuit Européen
F 8 ans 3,6 kg



COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER

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Moka Européen M 12 ans 7 kg Diabète
Extraction dentaire 01/21 - ACM - CBD - AINS



COMPLEXE GINGIVO-STOMATITE FÉLIN: THERAPIE K-LASER

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Moka Européen M 12 ans 7 kg Diabète
Extraction dentaire 01/21 – ACM – CBD – AINS

