



Patologia rinoscópica

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4

Rhinoscopy

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Veterinary Endoscopy for the Small Animal Practitioner, Second Edition

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Indicações

- Inspeção visual
- Cavidade nasal
- Nasofaringe
- Seios frontais
- Coleta de material
- Procedimentos terapêuticos



Figure 4.1 Direct visual and physical access to the nasal cavity is achieved with rhinoscopy.

Indicações

- Doença aguda severa
- Doença nasal crônica
- Exsudato/secção não responsiva ao tratamento
- Espirros não responsivos ao tratamento (agudos e crônicos)
- Espirro reverso

Table 4.1 Common presenting complaints associated with nasal disease.

Sneezing
Nasal discharge
Epistaxis
Difficult or noisy breathing
Coughing
Gagging or choking
Rubbing or scratching at the nose or face
Ulceration of the rhinarium
Facial or nasal pain or sensitivity
Facial swelling or distortion
Knowledge of foreign body inhalation
Knowledge of foreign body ingestion with vomiting
Oral or nasal odor

Figure 1. Clinical examination of animal with nasal discharge.

Area	Assessment	Notes
Nose	Air flow (test with glass slide or cotton wool)	Reduced with diseases that obstruct the nasal cavity, e.g., nasal neoplasia, polyp
	Ulceration/depigmentation of the nares/nasal planum	e.g., aspergillosis in dogs (Squamous cell carcinoma of nasal planum, but this doesn't usually present with a nasal discharge)
Face	Symmetry	Asymmetry and facial/nasal distortion is typically caused by neoplasia (but also trauma and potentially fungal infections, especially <i>Cryptococcus</i> infection in cats)
	Pain	Following trauma or, more commonly, a destructive rhinitis e.g., aspergillosis

Approach to Investigation of Nasal Discharge

Britten SW, *Animal Veterinary Congress* 2008
 Rachel D. Burrow, BVetMed, CertSAS, CertVR, DECVS, MRCVS
 Small Animal Teaching Hospital, The University of Liverpool
 Leahurst, Neston, Cheshire

Eyes	Ocular discharge/epiphora	Viral infection in cats Obstruction of nasolacrimal duct by nasal mass
	Exophthalmos	Retrolbulbar mass (neoplasia, abscess)
Mucous membranes	Petechiation/ecchymoses	(Clotting disorders)
Teeth	Dental disease	Tooth root abscess Oronasal fistula
Palate	Ventral deviation	Nasopharyngeal polyp Neoplasia
	Cleft	Congenital Traumatic
Lymph nodes	Submandibular lymphadenopathy	Can accompany any disease of the nasal (and oral) cavity, non-specific finding

Ears	Aural discharge, mass in horizontal canal	Aural polyps can accompany nasopharyngeal polyps in cats
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Approach to Investigation of Nasal Discharge

Barnes S, Wall A, Ames, Veterinary Clinician 2008
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Doenças sistêmicas

- Emagrecimento
- Hiporexia
- Perda de peso

Table 4.2 Historical information that is obtained for nasal disease.

- Duration of the problem
- Progression of disease
- The side or sides involved
- Whether the same side has been involved throughout the course of the disease
- The character of the discharge
- Whether it has been the same throughout the course of the problem and any changes that have taken place
- The occurrence and character of epistaxis
- The presence or absence of nasal pain
- Any scratching or rubbing at the nose or face
- Whether there has been any change in the shape or contour of the nose or face
- Dyspnea
- Increased breathing sounds
- The presence of any coughing, choking, or gagging

Table 4.3 Diagnostic approach to nasal disease.

- Phase I
 - Signalment
 - History
 - Physical examination
 - Clinical pathology and serology
 - Thoracic/Abdominal imaging
- Phase II
 - CT/Radiology/MRI
 - Bacterial and fungal cultures
 - Rhinocopy
 - Histopathology
- Phase III
 - Allergy testing
 - Viral testing
 - Surgical exploration

Diagnóstico

- Histórico clínico
- Exame físico
- TC
- Cultivo
- Rinoscopia
- Histopatologia
- Citologia
- Sorologia
- Testes alérgicos

90% yield

Journal of Feline Medicine and Surgery (2013) 18, 1007-1017

UPPER RESPIRATORY TRACT ENDOSCOPY IN THE CAT
A minimally invasive approach to diagnostics and therapeutics



David S. Sobel


Chapter 19

Rhinocopy

Rhinoscopic Diagnosis and Treatment of Nasal Diseases, Transnasal Curettage for Palliation of Malignant Nasal Obstruction
<https://veteriankey.com/rhinocopy/>

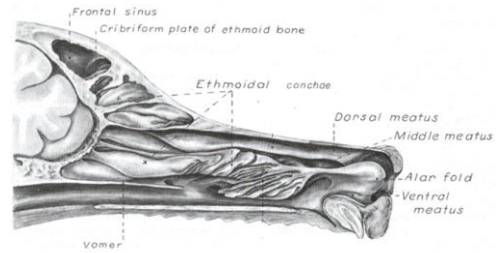
Impacto direto nos percentuais de erro e acerto diagnóstico

- Métodos:
 - Esfregaço direto da secreção nasal: 13,3% dos casos
 - Swab cego: 20% dos casos
 - Escovados guiados: 93,3% dos casos.
 - Squash de fragmentos de biópsia: 100% dos casos.



Diagnosis of canine nasal aspergillosis by cytological examination: a comparison of four different collection techniques

Dr. De Lorenzi, U. Bonfanti, C. Maserdotti, M. Cadin, T. Furlanello



- Rinoscopia anterógrada
- Rinoscopia retrógrada
- Nasofaringoscopia

- Inspeção externa e interna da cavidade nasal, faringe, palato mole e duro, cavidade oral
- Inspeção e palpação dos linfonodos regionais (metástases)
- Perfil hemostático completo
- Anestesia geral
- Exame radiográfico, tomográfico, endoscópico ou por ressonância prévios a coleta (hemorragia local)
- Coleta por swab/escova, *flushing*, CAF, ou biópsia

- Tipos
 - Não traumático
 - Traumático
 - Retrógrado (cateter/sonda de Foley)
- Indicações
 - Lesões obliterantes parciais
 - Lesões com abundante material secretório
 - Lavagem terapêutica da cavidade nasal e seios nasais
 - Obtenção de material para cultivo microbiológico e testes de sensibilidade

- Cuidado com a placa cribiforme!
 - Medir o tamanho da sonda/cateter

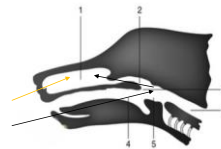
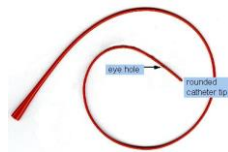
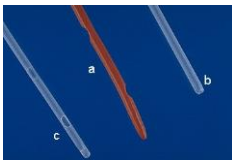


Figure 8 Rhinoscopy being performed in a cat with chronic nasal discharge to obtain samples for histology and culture of *Aspergillus* species. Courtesy of Birke Schulz, Ludwig Maximilians University, Munich, Germany

<https://www.youtube.com/watch?v=vt5o-HXzo7g>

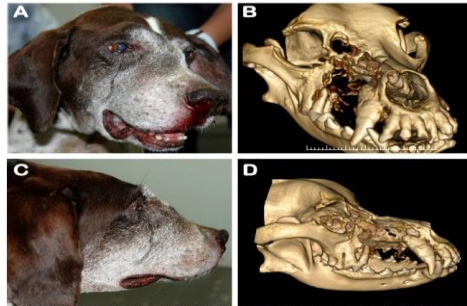


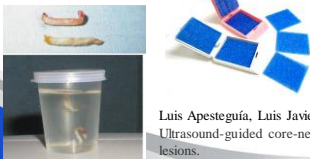
Figure 1. Dog. Clinical photographs (A and C) demonstrating epiphora, epistaxis and facial deformity due to soft-tissue swelling located medially around the right orbital region. Three-dimensional volume rendering of the skull using the workstation of the computed tomography equipment (B and D) revealed extensive bone loss due to neoplastic involvement of the right bony orbit, oral and nasal cavities, hard palate, vomer bone, maxillary bone, ethmoid bone, ethmoid turbinate, and frontal bone.

Biópsia

- Número de fragmentos
- Fatores obscurecedores
- Fixação (formol 10%)
- 48 horas
- Cassetes



Figure 4.15 Five French flexible biopsy forceps passed through the working channel of the operating or colonoscopy camera of the 2.7 MPRT. With this technique, the biopsy forceps is always positioned within the visual field of the telescope. This image shows use of this biopsy forceps in the bladder as this technique is rarely used with rhinoscopy and no images are available.



Luis Apesteguía, Luis Javier Pina
 Ultrasound-guided core-needle biopsy of breast lesions.

Nasal Hydropulsion: A Novel Tumor Biopsy Technique

Elizabeth A. Ashbaugh, DVM, Brendan C. McKiernan, DVM, DACVIM¹, Carrie J. Miller, DVM, DACVIM¹, Barbara Powers, DVM, DACVP

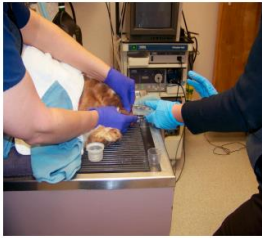


FIGURE 2 Saline is forcefully infused or “hydropulsed” into the nasal cavity.

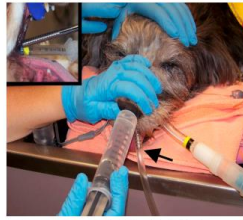


FIGURE 1 Preparations for hydropulsion include placement of a Poole suction tip (arrow, inset) into the opening of the esophagus, insertion of the syringe tip into one nostril, and occlusion of the contralateral nostril.



FIGURE 3 An example of the amount of tissue obtained via nasal hydropulsion.

TABLE 1
Results of Nasal Biopsies Performed in 41 Dogs and Cats Between Jan 2006 and April 2008

Case number	Signalment	Method of biopsy	Histologic diagnosis
1	9 yr old FS Labrador retriever	Hydropulsion	Chondrosarcoma
2	10 yr old FS Dalmatian	Hydropulsion	Osteosarcoma
3	9 yr old MN Labrador mixed-breed dog	Hydropulsion	Carcinoma
4	3 yr old MN DSH	Hydropulsion	Osteosarcoma
5	9 yr old MN papillon mixed-breed	Hydropulsion	Carcinoma
6	12 yr old FS Old English sheepdog	Hydropulsion	Chondrosarcoma
7	7 yr old MN shepherd mixed-breed	Hydropulsion	Lymphoma
8	7 yr old MN husky	Hydropulsion	Carcinoma
9	10 yr old FS golden retriever	Hydropulsion	Myosarcoma
10	10 yr old MN shepherd mixed-breed	Hydropulsion	Carcinoma
11	14 yr old MN Cavalier King Charles spaniel	Endoscopic pinch	Osteosarcoma
12	14 yr old MN Wheaten terrier	Hydropulsion	Adenocarcinoma
13	13 yr old FS DSH	Hydropulsion	Adenocarcinoma
14	12 yr old MN pointer	Hydropulsion	Spindle cell sarcoma
15	6 yr old MN Maine coon	Hydropulsion	Lymphoma
16	6 yr old MN Persian	Hydropulsion	Lymphoma, large cell
17	8 yr old MN Rhodesian ridgeback	Hydropulsion	Carcinoma
18	9 yr old FS Labrador retriever	Endoscopic pinch	Sarcoma
19	12yr FS Labrador retriever	Hydropulsion	Chondrosarcoma
20	9 yr old MN miniature schnauzer	Hydropulsion	Adenocarcinoma
21	12 yr old MN Brittany	Hydropulsion	Adenocarcinoma
22	3 yr old MN DSH	Hydropulsion	Lymphoma
23	13 yr old MN husky	Hydropulsion	Carcinoma
24	16 yr old MN Siamese	Hydropulsion	Lymphoma

4.7 Nasal Pathology

The primary abnormalities found in the nasal cavity and frontal sinuses are neoplasia and rhinitis with many etiologies (Table 4.8). Mycotic infections, foreign bodies, dental disease, bacterial infections, viral infections, allergies, parasitic infestations, otitis, irritants, trauma, congenital abnormalities, breed-specific anatomic deformities, idiopathic, or undetermined origin are all causes of rhinitis. Systemic conditions that can be manifested as nasal signs include viral infections, coagulopathies, hypertension, Ehrlichia, idiopathic vasculitis, and other nonspecific generalized systemic illnesses.

Table 4.8 Diagnoses of nasal diseases with rhinoscopy.

669 Procedures in 545 cases (14 July 1982 to 18 August 2019)		
Normal	18	3.4%
Neoplasia	250	46.3%
Rhinitis	261	48.0%
Undetermined origin	92	17.0%
Mycotic	57	10.4%
Allergic	39	7.2%
Foreign bodies	32	5.9%
Dental disease	13	2.4%
Turbinate infarction	11	2.0%
Trauma	7	1.3%
Otitis	6	1.1%
Parasitic	4	0.7%
Other entities		
Strictures	12	2.2%
Hamartoma	2	0.4%
Vascular dysplasia	2	0.2%
Angiofibroma	1	0.1%
Brachiocephalic	1	0.1%

Table 4.9 Tumor types diagnosed in the nasal cavity using rhinoscopy in 100 consecutive cases seen from 14 July 1982 to 29 October 1996.

Carcinoma
Respiratory carcinoma
Adenocarcinoma
Undifferentiated carcinoma
Squamous cell carcinoma
Epidermoid nasal carcinoma
Sarcoma
Lymphosarcoma
Chondrosarcoma
Fibrosarcoma
Undifferentiated sarcoma
Melanoma
Osteosarcoma
Neurofibrosarcoma
Mast cell tumor
Malignant schwannoma
Histiocytic sarcoma
Rhabdomyosarcoma
Other
Inflammatory polyp
Chondroma
Adenoma

Rinites e sinusites fúngicas

- *Aspergillus fumigatus*
- *Aspergillus flavus*
- *Aspergillus niger*
- *Aspergillus nidulans*
- *Penicillium spp*
- *Cryptococcus neoformans*
- *Alternaria alternata*, *Exophiala spinifera* (feohifomicoses)
- *Rhinosporidium seeberi* (ex-fungo=protozoário aquático)
- *Microsporium canis*
- *Blastomyces dermatidis*
- *Histoplasma capsulatum*
- *Trichosporon spp*
- *Saprotizos ambientais – inalação*

Etiopatogenia

- Dificilmente primárias
- Antibioticoterapia crônica
- Imunodeficiências - FeLV
- Emaciação
- Neoplasias

Aspergilose

- Cães jovens (<1 ano) ou adultos/idosos (>8 anos)
- Dolicocefálicos e mesocefálicos
- Raro em braquicefálicos

Source: SC Psychological Enterprises Ltd.



Dolichocephalic

Mesocephalic

Brachycephalic



<https://www.vetrx.co.uk/information-sheets/aspergillus-fungal-rhinitis/>

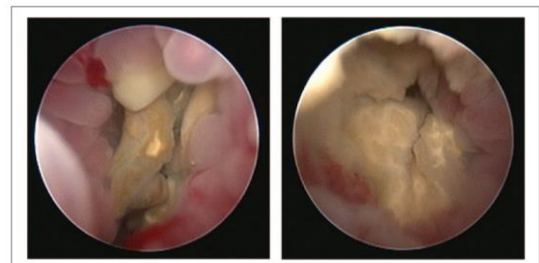


Figure 2 Anterograde rhinoscopy. Left nasal meatus 6 months after diagnosis: fungal plaques and polypoid appearance of nasal mucosa, confirming relapse of infection

Sinonasal aspergillosis in a British Shorthair cat in the UK

Alice Tamborini¹, Elton Robertson², Jessica J Taylor³ and Vanessa R Barra⁴

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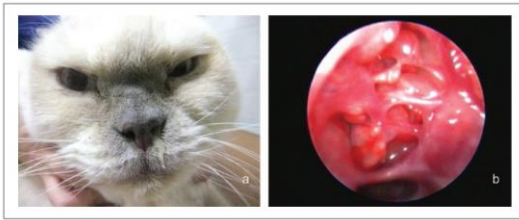


Figure 3 Twelve months after diagnosis: (a) mucopurulent nasal discharge; (b) anterograde rhinoscopy showing atrophic rhinitis and sinus exposure

Sinusal aspergillosis in a British Shorthair cat in the UK

Alice Tambourin¹, Elise Robertson¹, Jessica J Taylor¹ and Vanessa B Barne²

¹ School of Veterinary Medicine and Biomedical Sciences, University of Bristol, Langford House, Langford House, Langford Park, Langford, Bath BA1 3QX, UK
² School of Veterinary Medicine and Biomedical Sciences, University of Bristol, Langford House, Langford House, Langford Park, Langford, Bath BA1 3QX, UK

BSAEP



Sinusite e rinite por *Aspergillus* spp

- Etiologia
 - Corpos estranhos?



Figure 4.204 Foreign material in the nasal cavity of a dog with an *Aspergillus* infection. The type of foreign material was not identifiable due to degradation.



Figure 4.205 Fungal material surrounding a tooth foreign body in the nasal cavity of a dog. The tooth was free in the nasal cavity and was from a previous injury where the dog was bitten in the face. Part of the tooth from the biting dog broke off and was left in the nasal cavity.

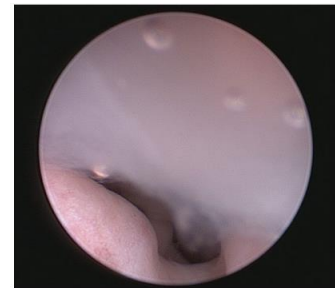


Figure 4.156 A large quantity of mucopurulent exudate in the nasal cavity of a dog with mycotic rhinitis.

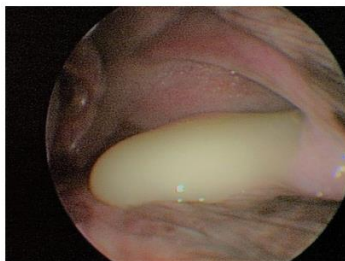


Figure 4.159 Thick viscous mucopurulent exudate extending caudal to the nasal septum into the nasopharynx and visible with the telescope in the contralateral normal nasal passage.



Figure 4.157 Thick viscous mucopurulent exudate seen between nasal turbinates in a dog with an *Aspergillus* infection.

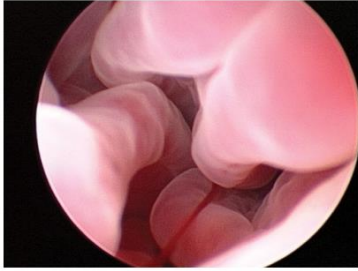


Figure 4.160 Decreased turbinate thickness with increased interturbinate space in a dog with mycotic rhinitis.

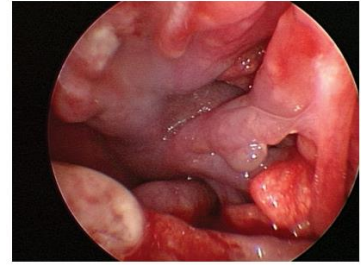


Figure 4.167 An end-stage nasal cavity with a nasal fungal infection and almost complete loss of turbinates creating a large empty space lined with inflammatory tissue.



Figure 4.177 Individual small white nodules representing inflammatory polyps on the nasal septum of a dog with an Aspergillus infection.

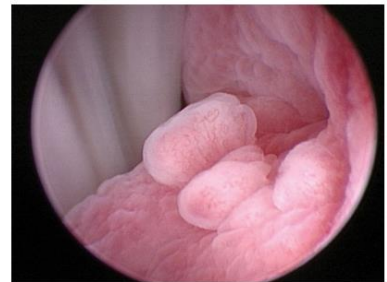


Figure 4.180 Two small irregular inflammatory polyps in the nasal cavity of a dog with a fungal infection.

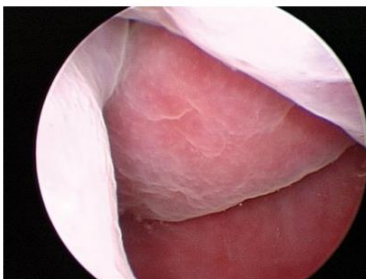


Figure 4.184 A larger tumor-like mass in the nasal cavity secondary to a nasal Aspergillus infection.

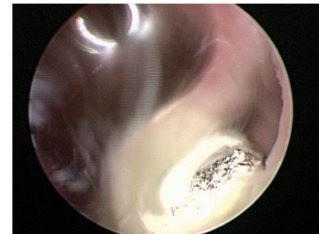


Figure 4.186 The bright iridescent metallic appearance of a small fungal colony seen through irrigant in the nasal cavity of a dog. A fungal colony can be seen in this image but in some cases only the bright flash is seen without being able to see an actual fungal colony. There is an air-water interface in this image that interferes with visualization of the remainder of the nasal cavity.

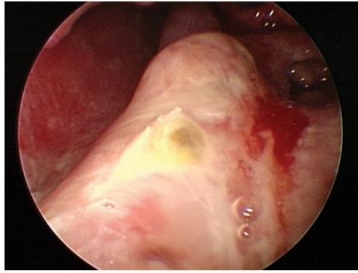


Figure 4.189 A small spherical dull fungal colony sitting directly on the mucosa.

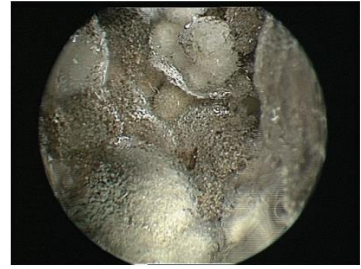


Figure 4.188 A large fungal colony with areas of the bright iridescent metallic appearance typically seen with smaller colonies.

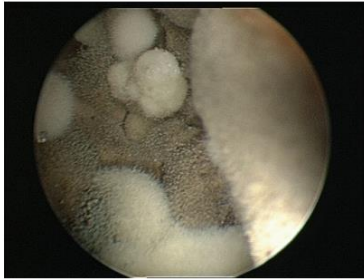
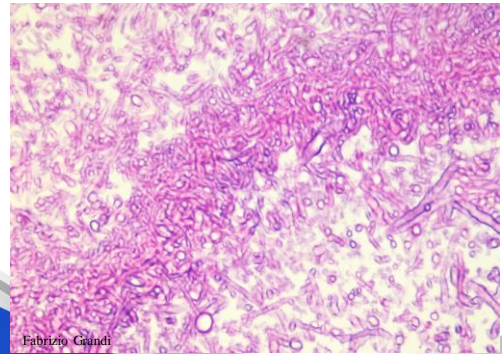


Figure 4.196 A large black *Aspergillus niger* colony in the nasal cavity of a dog.

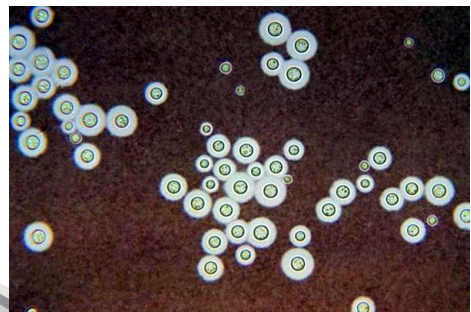


Fabrizio Grandi

VET SCHOOL SÃO PAULO

Criptococose

- Etiologia
 - *Cryptococcus neoformans*
 - *C. gatii*
 - Variantes com virulência variada
- Regiões úmidas e sub-tropicais
- 30% dos gatos com criptococose tem lesão cutânea e linfadenomegalia
- Não há predisposição racial ou sexual aparente



- Infecção oportunista
 - Imunossupressão (FeIV, FIV, glicocorticóides, quimioterapia)
- Fonte de infecção



Figure 1: Sub-cutaneous swelling over the bridge of the nose in a cat with sinonasal cryptococcosis

<https://au.vet.vet.com/fungal-diseases/cryptococcosis-in-cats/cryptococcosis/>

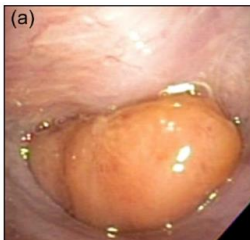


Figure 2 Nasopharyngoscopy in a cat with a nasopharyngeal polypoid mass. (a) Note the well-defined appearance of the mass completely filling the nasopharynx prior to withdrawal. (b) A grasping basket passed through the channel of the endoscope is advanced cranial to the mass. (c) The basket is opened and then pulled caudally in order to grasp the entire mass. (d) Severely inflamed nasal choanae are visible following mass removal

Cryptococcal nasopharyngeal polypoid mass in a cat

Véronique Livet, Romain Javard, Kate Alexander, Christiane Girard and Marilyn Dunn

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VETERINARY JOURNAL AUSTRALIAN PREMIER VETERINARY SCIENCE TEXT

Nasopharyngeal cryptococcosis

B. MALK, F. MARTEL, D. WIGLEY, CR. CHURCH, W. BRADLEY, CR. BELLENGER, WA. LAMB, VS. BARRIS, S. FOSTER, S. HEMSLY, PJ. CARFIELD, DN. LOVE



Figure 6. Endoscopic appearance of nasopharyngeal cryptococcosis in the dog (case 6), after biopsy. The image is oriented with the soft palate at the bottom of the photograph. Cryptococcomas partially obstruct both choanae. Note the haemorrhage and gelatinous exudate. The latter is characteristic of cryptococcal infection, reflecting the abundant polysaccharide capsular material present.



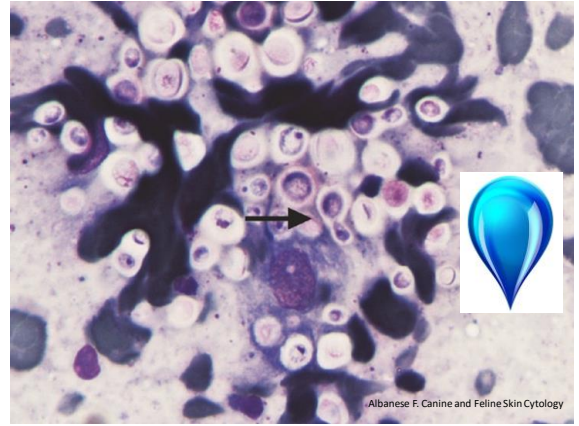
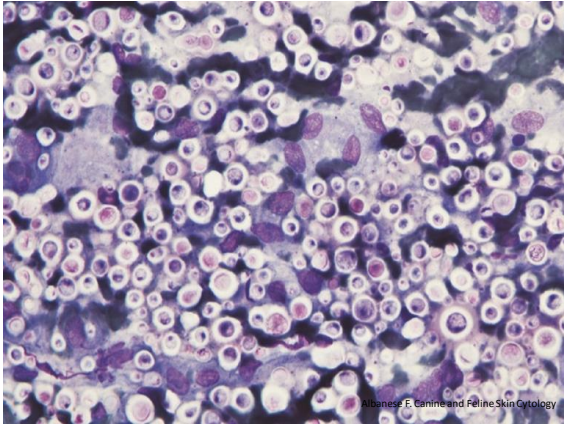
Figure 2. Polypoid nasopharyngeal cryptococcoma removed from the cat (case 1). The lesion was first dislodged from the nasopharynx by orthograde flushing, and subsequently massaged into the oral cavity by digital manipulation through the soft palate.



Albanese F. Canine and Feline Skin Cytology



Albanese F. Canine and Feline Skin Cytology



Dermatofitose

Etiologia: fungos queratinofílicos

- *T. mentagrophytes*, *M. canis*, *M. gypseum*
- Transmissão
- Contato direto ou fômites
- Potencial zoonótico
- Cães >1 ano de idade

Figure 2 Nasal passage rhinoscopy image trough anterograde technique in an adult mixed breed dog. A. Foreign whitish body (gauze) on left nasal cavity (black arrow), soaked in mucopurulent and amorphous material, greenish-brown material (intranasal mycetoma - black arrow with square tip). B. Greenish-brown amorphous structure (mycetoma) uncovered by velvety white material (red arrow), subsequently isolated and identified as *M. Canis* colonies. C. Right nasal passage with severe nasal turbinate deformity and swelling (blue arrow), suggestive of severe lymphoplasmacytic rhinitis. A discrete pink proliferative area was evidenced in association, suggestive of hyperplasia tissue as consequence of chronic rhinitis (blue arrow with circular tip).



Isolated *Microsporum Canis* from a canine nasal cavity bearer of intranasal foreign body and Transmissible Venereal Tumor - Radiografic imaging and rhinoscopy - case report

[*Microsporum canis* isolado em cavidade nasal de canino portador de corpo estranho e tumor venéreo transmissível intranasal - imagens radiográficas e rinoscópicas - relato de caso]

Rolemberg DS et al.

Rinosporidiose



FIGURE 66-6 Rhinoscopy image of a polypoid mass caused by *Rhinosporidium seeveri* in the nasal cavity of a 10-year-old intact female yellow Labrador retriever.

<https://veteriankey.com/rhinosporidiosis/>

Rinosporidiose

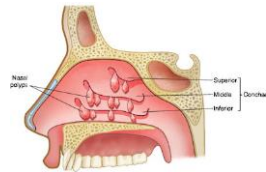


FIG. 66-1 Two-year-old male dog of mixed German shepherd breeding from Argentina, with a benign red sessile growth in the right nostril. Rhinosporidiosis was diagnosed after histologic examination.

<https://veteriankey.com/rhinosporidiosis-2/>

Pólipos e neoplasias nasais

- Definição
 - Espessamentos da mucosa sésseis ou pedunculados
 - Etiologia desconhecida (rinite crônica, bloqueio linfático local)



<https://www.tabers.com/tabersonline/view/Tabers-Dictionary/764515/all/polyp>



Neoplasias nasais

- Baixa correlação entre as características rinoscópicas e histotipos

- Neoplasias epiteliais
 - Adenocarcinomas
 - Carcinomas transicionais
 - Carcinomas de células escamosas
 - Carcinomas de células acinares
 - Carcinoma adenóide cístico
 - Carcinomas não especificados
- Neoplasias mesenquimais
 - Condrossarcomas
 - Osteossarcomas
 - Sarcomas indiferenciados
 - Melanomas
 - HSA
 - Leiomiiossarcomas
 - Tumor ósseo multilobular
- Neoplasias de células redondas
 - Linfomas
 - TVT



Neoplasias nasais

- Hemorragia ativa

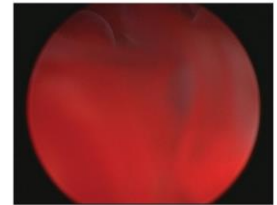


Figure 4.52 Active bleeding encountered at the beginning of rhinoscopy in a dog with nasal neoplasia. Irrigation is used to remove the unclotted blood and provide a clear visual field.

Neoplasias nasais

- Hemorragia comum

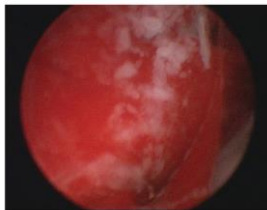


Figure 4.53 Fresh blood adhered to the surface of a visible tumor in the nasal cavity of a nine-year-old Golden Retriever.

Neoplasias nasais

- Coágulo fresco (recente)



Figure 4.54 A fresh blood clot from a recent bleeding episode that has not undergone organization or maturation of the clot.

Neoplasias nasais

- Coágulo fresco (recente)

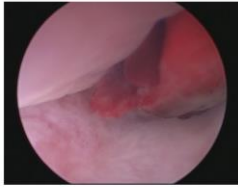


Figure 4.56 Clotted blood from a recent bleeding episode that formed into a rounded solid but friable structure. There is no visible tumor tissue with this blood clot.

Neoplasias nasais

- Coágulo organizado

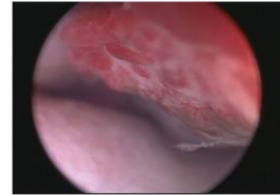


Figure 4.62 An organized blood clot-like structure that appears encapsulated with smooth rounded areas interspersed with strands of fibrosis-like tissue.

Neoplasias nasais

- Cistos

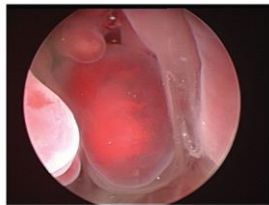


Figure 4.99 A red neoplastic cyst filled with fresh blood in the nasal cavity of a dog.

Oncology—Brief Communication

Co-occurrence of Nasal Polyps and Neoplasms of the Canine Nasal Cavity

Veterinary Pathology
2019, Vol. 56(6) 885-888
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DOI: 10.1177/089801011984418
journals.sagepub.com/home/vet

James C. Tarrant¹, David E. Holt², and Amy C. Durham¹

- 69% dos casos rebiopsiados chegam a um diagnóstico de malignidade, a despeito do diagnóstico inicial de lesão benigna, incluindo pólipos
- Pólipos nasais + carcinoma (21,9% dos casos)
- Pólipos nasais + tumores não epiteliais (5%)

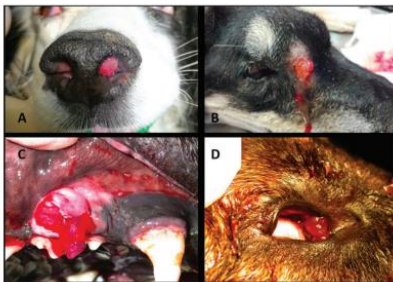


Figure 2. Clinical manifestations of canine nasal polyposis. There is evidence of polypoid tissue in the nostril (A), the zygomatic fistula (B), the periodontal space (C), and the medial canthus of the eye (D).

Article

Diagnosis and outcome of nasal polyposis in 23 dogs treated medically or by endoscopic debriement

Enrico Bottero, Emanuele Musci, Fabiano Raponi, Davide De Lorenzi, Pietro Ruggiero

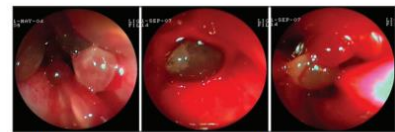


Figure 4. Endoscopic appearance of canine nasal polyposis. Evidence of newly formed tissue with a smooth translucent surface, pink color, and elastic consistency.

Article

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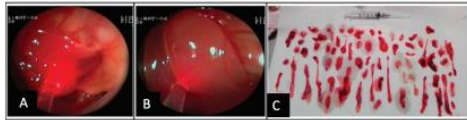
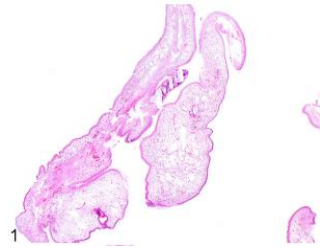
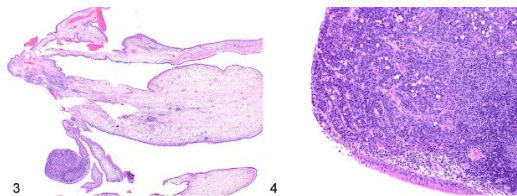


Figure 5. Endoscopic debulking with a diode laser of the polypoid tissue of the nasal cavity (A and B) and the removed tissue (C).



Figures 1-2 Nasal polyp with subsequent diagnosis of adenocarcinoma, nasal tissue, dog. Hematoxylin and eosin. Figure 1. Tissue from a rhinoscopy-assisted mucosal biopsy from a dog with chronic epistaxis and a nasal mass effect seen radiologically. The tissue consists of edematous mucosa lined by an intact respiratory epithelium, diagnosed as nasal polyp. Figure 2. Clinical signs persisted in this dog, and a repeat biopsy was performed 3 months later, which revealed an adenocarcinoma characterized by islands and acini of neoplastic columnar epithelial cells infiltrating the mucosa. Figures 3-4. Co-occurrence of nasal polyp and transitional carcinoma, nasal cavity, dog. Hematoxylin and eosin. Most of the submitted tissue consists of edematous mucosa compatible with a nasal polyp (Figure 3). A densely cellular region (Figure 3 at lower left, and Figure 4) contains the neoplasm, in which islands of cuboidal neoplastic epithelial cells infiltrate the mucosa.



Figures 1-2 Nasal polyp with subsequent diagnosis of adenocarcinoma, nasal tissue, dog. Hematoxylin and eosin. Figure 1. Tissue from a rhinoscopy-assisted mucosal biopsy from a dog with chronic epistaxis and a nasal mass effect seen radiologically. The tissue consists of edematous mucosa lined by an intact respiratory epithelium, diagnosed as nasal polyp. Figure 2. Clinical signs persisted in this dog, and a repeat biopsy was performed 3 months later, which revealed an adenocarcinoma characterized by islands and acini of neoplastic columnar epithelial cells infiltrating the mucosa. Figures 3-4. Co-occurrence of nasal polyp and transitional carcinoma, nasal cavity, dog. Hematoxylin and eosin. Most of the submitted tissue consists of edematous mucosa compatible with a nasal polyp (Figure 3). A densely cellular region (Figure 3 at lower left, and Figure 4) contains the neoplasm, in which islands of cuboidal neoplastic epithelial cells infiltrate the mucosa.

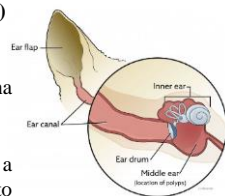
Article

Diagnosis and outcome of nasal polyposis in 23 dogs treated medically or by endoscopic debriement

Enrico Bottero, Emanuele Musi, Fabiano Raponi, Davide De Lorenzi, Pietro Ruggiero

Pólipo nasofaríngeo felino (PNFF)

- Massas não-neoplásicas
- Epitélio ciliado da orelha média ou cavidade timpânica
- 1-3 anos de idade
- Crescimento em direção a nasofaríngeo ou conduto auditivo externo
- Recidiva comum



Nasopharyngeal Polyps in Cats
By Krista Williams, BSc, DVM; Ernest Ward, DVM
Medical Conditions, Surgical Conditions, Pet Services

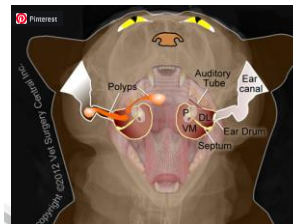


Figure 4.115 A smooth vascular red-appearing nasopharyngeal polyp in a one-year-old DSH cat seen through the oral cavity with rostral retraction of the soft palate.

- Etiologia
 - Infecção crônica do TRS
 - Otite média
 - Infecção crônica ascendente da tuba auditiva
 - Defeitos congênitos
 - Inflamação x pólipos?
 - Diagnóstico



Hamartoma mesenquimal nasal felino (HMNF)

- Sinônimos
 - Pólipo inflamatório dos turbinados nasais
- Diferentes de PNF
- Sinais clínicos
 - Obstrução do fluxo de ar, epistaxe, deformidade facial com eventual osteólise
- Etiologia
 - Congênita (6-12 meses de idade)
 - Irmãos de ninhada
 - Infecções do TRS?

Hamartoma mesenquimal nasal felino (HMNF)

- Recidiva frequente (excisão incompleta)
- Regressão espontânea possível

Table 1. Signalment, clinical signs, duration of clinical signs and lesion localization of the five cases of the study.

Case	Breed	Age (month)	Sex	Duration (month)	Clinical signs	Localization	Treatment
1	DSH	6	F	1	Parosymal sneezing, epistaxis, stertorous breathing	Momodateral right	Per-endoscopic removal
2	DSH	7	M	1	Parosymal sneezing, sneezing, bilateral serous nasal discharge	Bilateral	No therapy
3	DSH	18	Fs	8	Stertorous breathing, open mouth breathing	Momodateral left and rhinopharynx	Dorsal rhinotomy
4	Holy Roman	16	F	5	Parosymal sneezing, epistaxis, nasal stridor, mass protruding from the nostril	Momodateral left	Per-endoscopic removal
5	DSH	7	Mn	2.5	Parosymal sneezing, epistaxis	Momodateral left	Per-endoscopic removal

DSH = domestic short hair, F = female, Fs = female spayed, M = male, Mn = male neutered.

Inflammatory polyps of the nasal turbinates of cats: an argument for designation as feline mesenchymal nasal hamartoma
 Valentina Grazi *et al.*, Carlo M. Monteleone *et al.*, Daniela Oliveira *et al.*, Andrea Corci *et al.*, Eleonor C. Moreira *et al.* <https://doi.org/10.1111/j.1365-3113.2013.05313.x>



Fig 3. Macroscopic appearance of the lesion at necropsy in a 9-month-old male castrated DSH cat presenting epistaxis and stertorous breathing. Note the severe extension of the lesion in the sinusal cavity and the haemorrhagic content of the several cystic spaces. On physical examination the cat exhibited severe nasofrontal deformation. Source: Hedlund, Taboada, eds. Clinical atlas of ear, nose and throat diseases in small animals, the case-based approach. Hannover, Germany: Schlütersche, 2002.

Journal of Feline Medicine and Surgery 2013 18, 233-239

Inflammatory polyps of the nasal turbinates of cats: an argument for designation as feline mesenchymal nasal hamartoma

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Fig 4. Macroscopic features: (A) several cystic spaces filled with serous to serosanguineous variably sized cystic spaces (black arrow); (B) cystic spaces containing transparent to hemorrhagic fluid.



Figure 4.290 An irregular enlarged nasal turbinate that histopathology revealed to be a hamartoma.

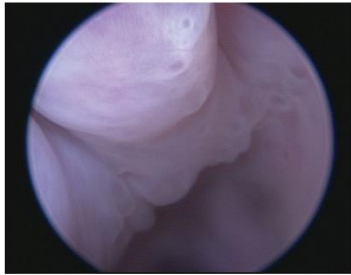


Figure 4.293 A nasopharyngeal hamartoma in a cat.

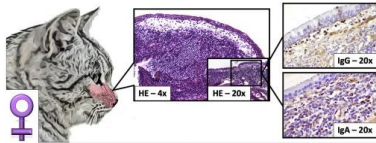
Rinite linfoplasmocitária felina e canina



Idiopathic lymphoplasmacytic rhinitis in dogs: 37 cases (1997–2002)

Rebecca C. Windsor, BS, Lynelle R. Johnson, DVM, PhD, DACVIM; Eric J. Hergesell, DVM, DACVR; Hilde E. V. De Cock, DVM, PhD, DACVP

- Etiologia e sinais clínicos em gatos
 - FIV, FeLV, FCV, FHV (controverso)
 - Reações à alérgenos (polén) mediadas por IgE: improvável em gatos
 - Fêmeas castradas (maior incidência de RLPF):
↓
estrógeno



- Cães
 - Sinônimos: rinite linfoplasmocitária idiopática, rinite crônica, rinite imunomediada)
 - Meia idade a idosos
 - Pastor alemão sobrerrepresentado
 - Evolução: 1 mês a 3 anos
 - Tosse, exsudato mucopurulento, epistaxe, destruição de turbinados
 - Acometimento de seios frontais

- Cães
 - Pouca resposta ao tratamento clínico
 - ATB: exsudato mucopurulento > seroso
 - Resposta pouco duradoura
 - Corticóide: resposta variável

An Immunohistochemical Study of Canine Nasal Aspergillosis

D. Peeters, M. J. Day* and C. Clercx

Department of Clinical Veterinary Sciences, Faculty of Veterinary Medicine, University of Liège, Liège, Belgium and *Division of Veterinary Pathology, Infection and Immunity, School of Clinical Veterinary Science, University of Bristol, Langford, UK

Summary

In this study, histochemistry and immunohistochemistry were used to characterize the phenotype and distribution of leucocytes in the distal nasal mucosa of 15 dogs with nasal aspergillosis. **The most consistent histopathological finding was a severe, predominantly lymphoplasmacytic inflammatory infiltration of the lamina propria.** Fungal hyphae were not observed to invade the mucosa but were found at the mucosal surface and within material collected from the nasal cavity. The main immunohistochemical findings were (1) a predominance of IgG⁺ plasma cells over IgA⁺ and IgM⁺ plasma cells, (2) significant numbers of macrophages and dendritic cells expressing MHC class II molecules, (3) macrophages and neutrophils expressing L1 antigen and (4) a mixture of CD4⁺ and CD8⁺ T cells. These findings are consistent with a dominant Th1-regulated cell-mediated immune response. The nature of the inflammatory infiltrate and the lack of invasiveness of the mucosa by the fungus, together with the clinical course of the disease and the apparent immunocompetence of the affected dogs, suggest that canine nasal aspergillosis resembles the chronic crone non-invasive fungal sinusitis described in human patients.

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Keywords: *Aspergillus fumigatus*; dogs; fungal infections; nasal aspergillosis