

PREVALENCE AND ETIOLOGY OF LOWER RESPIRATORY TRACT DISEASES IN CATS IN SPAIN

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Introduction

Lower Respiratory Tract Diseases (LRTD) in cats are a common reason for veterinary consultations. Due to overlapping symptoms like coughing, dyspnea, and wheezing, diagnosing the specific etiology can be challenging. This study evaluates the prevalence and causes of feline LRTD in Spain identifying inflammatory, parasitic and other infectious conditions to improve therapeutic approaches.

Study design

This multicentric study included 458 cats not recently medicated or dewormed. Data collection included clinical evaluations (sex, age, breed, habitat, demographics, clinical symptoms) and diagnostic tests (blood serology, fecal analyses, radiological study, bronchoalveolar lavage, and pathological study). Diagnostic techniques assessed inflammatory diseases, parasitic infections (*Dirofilaria immitis* and *Aelurostrongylus abstrusus*), and bacterial infections (*Mycoplasma spp.*). Patients were categorized into those with LRTD (348/458; 75.98%) and those with other respiratory processes (110/458; 24.02%). Indoor-only cats were tested for parasitic infections highlighting potential exposure through intermediate hosts.



Cat with tachypnea, orthopnea and severe dyspnea secondary to a bronchial disease.

Results

All cats with LRTD exhibited radiological signs of bronchial or alveolar involvement. Chronic bronchitis and feline asthma were the most common conditions. Parasitic infections (107/348; 30.74%) included cases with *A. abstrusus* and *D. immitis* as the primary culprits [Heartworm-Associated Respiratory Disease (HARD)], adult *D. immitis* and *A. abstrusus*.

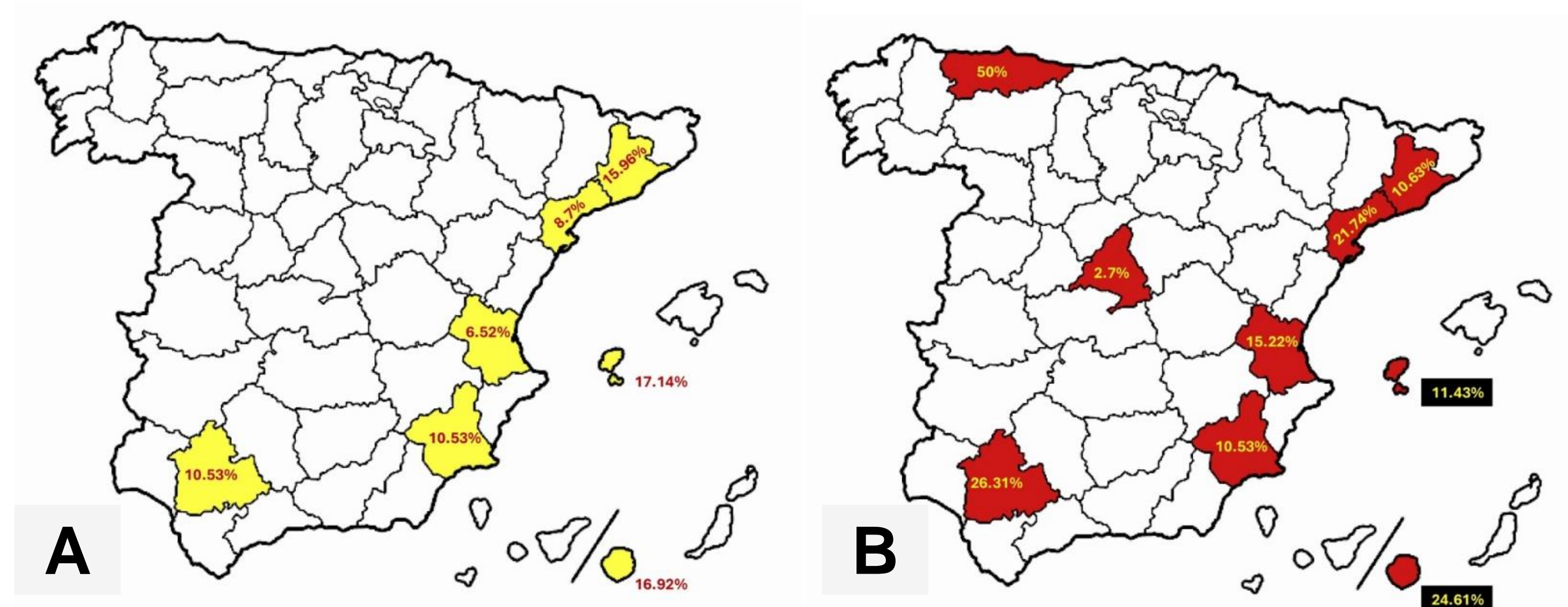
Regions like Ibiza and Gran Canaria exhibited high *D. immitis* prevalence likely due to climatic conditions favorable for mosquito vectors. *Mycoplasma spp.* was detected predominantly in Madrid and Valencia. Infectious bronchopneumonia was the least frequent LRTD. Inflammatory diseases associated with environmental irritants and allergens are the most frequent LRTD in cats while parasitic infections remain a significant concern (Table 1).

Conclusion

This study underscores the importance of raising awareness among veterinarians and pet owners about the prevention of parasitic and respiratory diseases in cats. Prophylactic care is crucial for all cats, regardless of habitat, to mitigate the risks of infection. Further research is recommended to better understand LRTD and improve diagnostic and treatment protocols.

DIAGNOSIS	ASTURIAS	MADRID	BARCELONA	TARRAGONA	VALENCIA	IBIZA	MURCIA	SEVILLA	GRAN CANARIA	TOTAL
FELINE ASTHMA	4/10 (40%)	15/37 (40.55%)	16/94 (17.02%)	3/23 (13.04%)	17/46 (36.96%)	12/35 (34.28%)	8/19 (42.10%)	6/19 (31.58%)	14/65 (21.54%)	95/348 (27.3%)
CHRONIC BRONCHITIS	1/10 (10%)	5/37 (13.51%)	51/94 (54.26%)	13/23 (56.52%)	11/46 (23.91%)	8/35 (22.86%)	5/19 (26.31%)	4/19 (21.05%)	8/65 (12.31%)	106/348 (30.46%)
INFECTIOUS BRONCHOPNEUMONIA	0	8/37 (21.62%)	0	0	0	0	0	0	3/65 (4.62%)	11/348 (3.16%)
HARD	0	0	15/94 (15.96%)	2/23 (8.7%)	3/46 (6.52%)	6/35 (17.14%)	2/19 (10.53%)	2/19 (10.53%)	11/65 (16.92%)	41/348 (11.78%)
CHRONIC FELINE DIROFILARIOSIS	0	0	2/94 (2.13%)	0	0	1/35 (2.86%)	0	0	5/65 (7.69%)	8/348 (2.3%)
BRONCHOPULMONARY PARASITES	5/10 (50%)	1/37 (2.7%)	10/94 (10.63%)	5/23 (21.74%)	7/46 (15.22%)	4/35 (11.43%)	2/19 (10.53%)	5/19 (26.31%)	16/65 (24.61%)	55/348 (15.8%)
MYCOPLASMA SPP.	0	7/37 (18.92%)	0	0	8/46 (17.39%)	4/35 (11.43%)	2/19 (10.53%)	2/19 (10.53%)	5/65 (7.69%)	28/348 (8.05%)
CATS WITH MORE THAN 1 DIAGNOSIS	0	1/37 (2.7%)	0	0	0	0	0	0	3/65 (4.62%)	4/348 (1.15%)
TOTAL LOWER AIRWAY PROCESSES	10/348 (2.87%)	37/348 (10.63%)	94/348 (27.01%)	23/348 (6.61%)	46/348 (13.22%)	35/348 (10.06%)	19/348 (5.46%)	19/348 (5.46%)	65/348 (18.68%)	348

Table 1: Diagnosis of lower respiratory tract diseases detected according to location.



Detected incidences of patients seropositive for (A) *Dirofilaria immitis* (compatible with HARD) and (B) bronchopulmonary parasites (excluding *Dirofilaria immitis*) according to the Spanish locality.