

**Original Study**

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## **Canine atopic dermatitis: medico-legal implications**

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### **Abstract**

Canine atopic dermatitis is a common skin problem involved dogs and cats, genetically predisposed, associated with the synthesis of IgE antibodies against environmental antigens. The disease is present in young animals (aged between 6 months and 3-4 years), most frequently in female than male clinical features. Pruritus and erythema are principal clinical signs. Non-dermatological forms characterized by rhinitis, cataracts, asthma, gastrointestinal symptoms and irregular estrous cycle. The Authors analyze the conditions enabling the redhibitory action in cases of dogs affected by atopic dermatitis and suggest new medico-legal perspectives concerning buying and selling to prevent disputes

**Key-Words:** atopic dermatitis, dog, purchase, redhibitory vice

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### **Introduction**

Canine atopic dermatitis (CAD) is a very common skin disorder, with a chronic and recurring course, associated with the synthesis of IgE antibodies, more frequently directed towards environmental allergens (pollen, mold, human dandruff, dust mites, etc.). Genetic factors are involved in the onset. Generally, CAD is reported in dogs aged between 6 months and 3-4 years, most frequently in female than male (1,2). Its appearance under 6 months of life is particularly unusual (2). Scottish Terrier, Fox Terrier, Staffordshire Bull Terrier, Boxer, Lhasa Apso, Labrador, German Shepherd, Dalmatian, Shar Pei, West Highland White Terrier are the breeds most frequently affected. CAD is a multifactorial disease caused by immune abnormalities (hypersensitivity of type I and IV), skin barrier defects, genetic and environmental factors, including microorganisms (bacteria and malassezie) (3). Dogs with CAD have high levels of IgE, an imbalance ratio of lymphocyte populations with an increase in the Th2 fraction, alteration of epidermal integrity and skin hyperactivity. The activation of IgE, following exposure to the antigen, causes the degranulation of mast cells.

## Clinical features and management

The CAD has a remarkably different clinical features, characterized primarily by: pruritus and erythema (1). Skin lesions on head, neck, limbs, trunk and auricles appear in the chronic phase. Subjects affected by CAD are at risk to secondary pyoderma, malassezia dermatitis, external otitis and hypersensitivity to flea bites (4). Sometimes the disease shows only as recurrent otitis, conjunctivitis, perianal adenitis, secondary bacterial dermatitis, secondary seborrheic dermatitis or licking dermatitis (5). There are non-dermatological forms characterized by rhinitis (in less than 5% of subjects), cataracts, asthma, gastrointestinal symptoms and irregularities in the estrous cycle (1) (Table 1).

The diagnosis is complex, since it is mainly based on patient signaling (breed, age), on clinical signs and on the history of the disease (presence of pruritus, autotraumatism, etc.). There is not specific biomarker for the CAD (6, 7).

Furthermore, it is necessary to exclude the presence of other diseases that could give the same clinical signs. The therapy involves a supplementation of essential fatty acids in the diet and the administration of immunomodulatory drugs (cortisone or cyclosporine). Frequent shampoos are recommended to remove allergens on the skin. The Authors analyze the legal consequences of CAD, classifying as a redemptive vice, for the purposes of the buyer's guarantee actions from the Civil Code.

## Medico-legal aspects

Based on the characteristic of the disease, in buying of dogs with CAD the Authors propose a medico-legal evaluation. It is clear that the CAD can be considered a “*redhibitory defect*” (8), because is: *severe*, *pre-existing* and *noteasily recognizable* (9, 10, 11, 12) It is possible that most of the dogs are affected by a mild form of CAD. But the severe form of the disease can lead to self-mutilation and chronic stress. This can cause behavioral problems, aggression, immunosuppression and gastric ulcers (cortisol prevents the repair of ulcers). Chronic stress is also responsible for the appearance of stereotypical behaviors. The response to pruritus or pain will be different due in relation to context and previous experiences of the atopic subject (13). A stressed animal can become asocial and aggressive, thus constituting a considerable problem for public health (13). Therefore, even in the presence of an animal almost completely asymptomatic, we can define the disease as *severe*, because the itching induced by atopy will be responsible for the stress of the affected dog, with serious consequences on its behavior.

Genetic factors, that give onset of the clinical disease beyond the year of age, from a legal point of view, are characteristic of the *pre-existence*. Therefore, in case of sale of adult

subjects, these may already be affected by atopy, although are asymptomatic.

The pathology is *not easily recognizable*, as it is often characterized by modest and unspecific symptoms. Even a visit by a veterinarian could diagnose the CAD with certainty only after some time and several tests to exclude other diseases. These assumptions constitute an important medico-legal aspect. In fact, the prescription for a possible redhibitory or action estimatory action against the seller expires within 8 days from the discovery of the disease and within one year of purchase in according to civil code (articles 1490-1496). It may happen that the CAD show itself in a severe clinical form only after 1 year from the delivery of the animal and, in this case, the buyer can not exercise any legal action against the seller.

### Conclusion

Considering as above said, it would be appropriate to extend the warranty for the canine breeds most affected by the CAD (14). In this way the buyer can be guaranteed and legal disputes can be avoided, according to the Messineo (1952) (15). Furthermore, it is advisable for the breeder to eliminate animals affected by CAD from reproduction plans.

Finally, a veterinarian should visit the dog at the time of purchase, in order to check the health of the puppy.

**Conflicts of Interest:** There is no potential conflict of interest, and the authors have nothing to disclose. This work was not supported by any grant.

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