

## THE MAIN SKIN DISEASES ENCOUNTERED IN PRACTICE CANINE IN THE CENTRAL DEPARTMENT OF ALGERIA

**Bachir Pacha M., R. R. Triki Yamani**

*Faculty of Biology and Agro Veterinary, University Saad Dahleb, Blida, Algeria*

**Abstract.** *The grounds comprise 25% of dermatological consultations in the canine region of Blida. The 3/4 skin diseases are caused by parasites. The breeds which are affected mostly the German shepherd dogs and some other common races. In order of decreasing importance, the cases are dominated by first scabies or pulicose (25%) and then infested with ticks or mites (12.5%) and finally, by bacterial skin diseases (9.2%), demodicosis (8.3%) and metabolic or allergic skin diseases (4.2%).*

**Keywords:** Algiers, Canine skin diseases.

### INTRODUCTION

Skin conditions in dogs are of major importance in the daily veterinary medicine because they are very frequent, unsightly, difficult or delayed diagnoses. In addition to their impact on the value of animals, the risk of transmission of some to man (zoonoses) is not rare. According to Lewis and Wheeler (1967), the skin is a protective envelope which is an effective barrier to water loss, electrolytes and macromolecules.

Skin plays the roles of protection vis-à-vis the external environment, thermal control, passively (by conducting, convection, and radiation) or actively (vasomotor phenomena, pilo-motor skills). She also plays the role of touch and sensory perception of temperature, pain and pruritus. It gives the body shape and contour for the flexibility, elasticity and resistance. It is a secretor organ with these sebaceous glands (sebum makes the hair shiny and water proof), sweat (perspiration has a role of local cooling). It allows the production of skin appendages (hair, nails and stratum corneum of the epidermis), melanin and vitamin D (by UV irradiation of dihydro-7-cholesterol). Finally, the skin has an index role, revealing internal diseases (dermatoses neuro endocrine origin). Skin diseases are classified according to their etiology: allergic (immunological) (30.49,59), neuroendocrine, bacterial (Pyoderma), parasitic (arthropods, helminths, protozoa, fungi), autoimmune, nutritional, or related to disorders of pigmentation.

In dermatology, it is important to make the correct clinical diagnosis to prescribe a rational and efficient. For this, the clinician should first obtain a complete history and determine the predominant problem (pruritus, alopecia, pigmentation change) to list the differential diagnosis. The contribution of the laboratory is essential to see the causal agent or highlight the witnesses of "skin damage" in order to prescribe the most appropriate treatment. This study conducted during 2010, in the Blida region, aims to identify various types of dermatomes encountered in canine practice, to specify the corresponding topography and identify the possible etiology.

## MATERIAL AND METHOD

**Equipment:** It is mainly a small equipment that was necessary to achieve our samples, we mainly used (scalpel blade, immersion oil, bottles, box collection, blades and blades) and the optical equipment for visualization of parasites (magnifier binocular microscope) Finally, when suspected fungal infection, the Sabouraud medium was necessary for the detection of dermatophytes after culture.

**Methods:** The examinations are direct, that is to say that the samples obtained by scraping the skin surface or deep (up to the dew for blood parasites boring) are placed between slide and cover slip in a drop of chloral lactophenol and are observed by a microscope. Formacroscopic parasites, the diagnosis is also done under a dissecting microscope. The indirect tests on exploitation “mycotic” which are examined after their culture.

## RESULTS AND DISCUSSION

Dermatological consultations account for 25% of consultations in the canine region of Blida. The 3 / 4 skin diseases are caused by parasites. If one adds the fungal etiology, this often amounts to just over 86%. The breeds which is most affected are the common breeds and the German shepherd dogs. This is related more to their predominance in the kennel. Our results confirmed the presence of several dermatological entities.

The Pulicose represents 25% of skin disorders, particularly in dogs aged between 1 and 3 years. Halliwell (1986) considers the pulicose pure does not exist. Any flea infestation causes a FAD (65% of cases were found between 2 and 5 years and 35% of cases between 5 years and 8 years). This disease is dominated by alopecia and erythematic and crusts. Lichenification, hyper pigmentation is present in less than 50% of cases. Harvey and Mc Keever (1998) argue that alopecia, hyper pigmentation, excoriation and lichenification are the primary lesions and their intensity is proportional to the time of evolution. They sit in first place along the back then the head, lumbar region. The forelegs and hind legs are affected in almost half the cases. Nesbitt (1978) found that lesions occur preferentially at the thoracolumbar region, although in some animals the members of the trunk and face may be affected. This topography is characteristic of the safest places for fleas and beyond scratching.

Scabies represents 25% of cases of dermatitis. According Guagere (2005), the incidence of sarcoptic mange is difficult to evaluate because of the lack of diagnosis of the onset of clinical forms rough and confusing. 20% of cases occurred between 2 months and 1 year, 50% observed between 1 and 5 years and 30% between 5 and 8 years. According Guagere (2005) this parasite has a reputation as a dermatosis of the young dog less than one year. The lesions are dominated by alopecia (85.7% of cases), erythema and the presence of crusts. According Harvey and Mc Keever (1998) early lesions consist of small erythematous papules topped crusts while diffuse alopecia or excoriations of the lesions are secondary to scratching. The lesions are located preferentially on the ears and limbs (100%)

while the head and abdomen are achieved in half the cases. This topography is similar to that identified by Harvey and Mc Keever (1998) who found that the lesions occur on the edges of the outer ear elbows and knees. The tick infestation represents 12.5% of cases of dermatitis. According Harvey and Mc Keever (1998) this infestation is common in summer. It was also observed in the three age groups [2 months - 1 year] [1 - 5 years] [5-8 years]. According Harvey and Mc Keever (1998), the tick infestation is not dependent on the age of the dog. The lesions are dominated by erythema (80% of cases). According to these authors, the lesions observed are represented by an erythematous reaction around the bite area. Ticks are present in all parts of the body, especially areas with thin skin: the inner ears, head, under the shoulder, groin and inter digital space. These same authors note that the lesions correspond to the points of attachment of ticks on the skin. Bacterial skin diseases represent 9.2% of cases. According to Moraillon *et al.* (1992) is one of the most common skin diseases. It has been observed between 1 and 5 years (100% of cases).

According Harvey and Mc Keever (1998), there is no single cause for the occurrence of this disease. The lesions are erythematous (83%), hyper pigmentation, hyperkeratosis and lichenification are only present in 33% of cases. According to these authors, the skin is red and in most cases there is an exudation. Hyper pigmentation, hyperkeratosis and lichenification correspond to the evolution of primary lesions. 100% of lesions involve the lumbosacral region, 80% of cases the lesions are seen on the right thigh while 60% on the left thigh. According Jennings (1953), the areas most often affected are the lumbosacral region and the perianal area. The moth represents 12.5% of cases of dermatitis. According to the laboratory care products and hygiene Biocanina, fungal infections are mainly represented in the dog by ringworm. One third of cases is observed between 2 months and 1 year and two-thirds of cases between 1 and 5 years. According Moraillon *et al.* (1992) age is a very important factor. It is mostly puppies less than one year who are most affected. 100% of lesions are circular, non-pruritic erythematous. The squamosa is present in two thirds of cases.

According Right (1989), the typical lesions consist of one or more discrete areas (diameter = 3 cm) of broken hairs with a squamosa important. In 33.3% of cases the lesions are observed on the hindlimbs. By contrast, Right (1989) the lesions are localized mainly on the face, head or feet. Demodicosis represents 8.33% of cases of dermatitis. According Harvey and Mc Keever (1998), in all dermatoses alopecia is the most diagnostic hypothesis demodicosis. 100% of cases occur between 2 months and 1 year. According to Folz (1983) transmission occurs in the first hours of life the pups in contact with the mother. The lesions of alopecia, erythema with ulcerative formations are present in 100% of cases. According Harvey and Mc Keever (1998) it may be noted extensive areas of alopecia with erythema, seborrheic kerato-state and ulceration. The affected areas are represented by the face, neck and limbs in 100% of cases and the stomach in 50% of cases.

According to Folz (1983), these lesions can be observed anywhere on the body but most commonly on the face and forelegs. On balance, this dermatosis responds in most cases, the square of demodicosis LEBLOIS "non-pruritic, erythematous dermatosis, affecting mainly dogs under 2 years. The metabolic

dermatoses represent 4.2% of all skin diseases. According Moraillon *et al.* (1992) this condition is very rare. It may however occur when some owners, for various reasons (financial or ethical) do not provide a sufficient amount of food or of dubious quality (kitchen waste, fascia, and tendon) to their pet. It is observed in the age group 5 to 8 years or growing in subjects whose needs have increased. Lesions are represented by hyperkeratosis and hyper pigmentation of the skin, in patches of alopecia with hairs become thinner, rough, dry and brittle so they break easily. These lesions are accompanied by crusty scales. In our topographical study, the lesions are more pronounced in the hind limbs and muzzle, flanks and tail.

The inguinal region is slightly affected. By cons, according Moraillon *et al.* (1992) these lesions can appear symmetrically on the head, thorax, abdomen and legs to their ends. Allergic dermatitis is also 4.2% of all skin diseases. According Tikiyamani *et al.* (2009) is the most common disease after DAPP. This condition is observed between 5 and 8 years. According Harvey and Mc Keever (1998), generally the symptoms appear at age 1 to 3 years. However, the disease has been reported in very young animals (3 months) or very old (16 years).

The lesions are erythematous but very slightly alopecia with hyper pigmentation and hyperkeratosis. These same authors observed erythema and secondary lesions such as hyper pigmentation and lichenification. Alopecia may appear at the areas affected in case of chronic or severe damage. The topographical survey has revealed that the lesions are located mainly in the neck and stomach and to a lesser degree around the eyes and the sides and free edges of the ears. Harvey and Mc Keever (1998) found that one can observe lesions secondary to pruritus at the inter digital spaces, ears, abdomen, perineum, and axillary areas of the face, around eyes, sometimes along the lips.

## CONCLUSIONS

Dermatology in veterinary medicine has taken its place in the practice of pets, because of the frequency of skin disorders, their impact on the aesthetics of their contagiousness, the difficulty of diagnosis and therapy cost. Dermatological cases can usually be seen as a puzzle with a medical history, clinical symptoms and further investigations. Each piece by itself, does not provide a complete picture, but by combining the picture becomes clearer. Multiple causes (bacterial, parasitic, metabolic, nutritional, neuro endocrine or trauma), diagnosis is often difficult and tedious treatment or discouraging. This is the main reason which should motivate us to combine efforts in the prevention hope to reduce their appearance.

**Table 1**

**Number of dermatoses Vs Consultation**

Region	Consultation	%	Dermatoses	%
Meftah, Boufarik, Blida, El-Afroun, Bougara, Soumaa, Oued El-Alleug, Chebli, Chr�a, Bouinane	256	100	65	25

Table 2

## Etiology of dermatoses

Dermatoses	Parasitic	Mycotic	Allergic	Bactérial	Métabolic
Number	17	3	1	2	1
%	70.8	13	4.2	8.3	4.2

Table 3

## Frequences des differents types de dermatoses

Dermatoses	Number	%
Sarcoptic mange	18	27
Demodicosis	3	4.6
Pulicose	9	13.8
Ticks	15	23.1
Ringworm	8	12.3
D.A.P.P	4	6.2
Pyoderma	2	3
Leishmaniasis	2	3
Otitis externa	2	3
Other	2	3

Table 4

## Frequency of Dermatoses According to the species

Races	German shepherd dog	Beagle	Rottweiler	poodle	Commun	Mixed race
Number	6	2	1	3	11	1
%	25	8.33	4.16	12.5	45.83	4.16

Table 5

## Frequency of Dermatoses According to the Age

	Demodicosi	Scabies	Ringworm	Pulicose	Tick	Pyoderma	D.A.P.P	Leish
2-12 months	2	2	1	1	1	1	0	0
1-2 years	1	11	5	-	9	-	3	1
2-5 years	0	3	2	5	2	1	0	0
5-8 years	0	2	0	3	2	2	1	1

Table 6

## Study lesional dermatitis

N° of cases	Erythima	Hyper-pigmentation	Hyper – kératosis	Lichéni-fication	dander	Alopécia	Ulcer
PYODERMa	5 (83.3%)	2 (3.3%)	2 (3.3%)	2 (3.3%)	-	-	
ringworm	3 (100%)	-	-	-	2 (66.6%)		
DEMODECosis	2 (100%)					2 (100%)	2
D. MET.	1	3	3	-	2	1	-
D. ATOPic	3	2	2	-	-	2	1
PULICOsis	7		2	4	9	9	4
scabies.	5 (71%)	3(43%)	5 (71%)	4 (57%)	10 (100%)	6 (86%)	2 (28%)
Ticks	2 (40%)				3 (60%)	2 (40%)	4 (80%)

Table 7

## Study of Topographic Lesions

Nber	Etiology	CG	CD	head	body	M.ant	M. post	neck	belly	Flank	tail	D.L
7	Pyoderma		4	-	-	-	-					
2	Demodecicos			2		2		2	1			
3	ringworm			2	2	2	1					
3	D. Métabolic			3			3		1	2		2
1	D. Atopic			1				1	1	1		
9	Pulicose			6		4	5					8
18	Sarcoptic mange			7		6	5		3			
15	Ticks			3	10			3	3			

Nbre = Nombre / Leish. = Leishmaniose / C.G = left thigh / C.D = right thigh.  
D.L = Dorso-lumbar /M. post. = inferior numbers / M. ant. = anterior Members.  
D. = Dermatitis / D. MET = metabolic Dermatitis.

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