

Clinical and Surgical Survey on most common skin affections in police guard and explosive dogs

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SUMMARY

Medicinal and surgical skin affections are common health problems in police guard and explosive dogs used for protection of organizations of high economic importance and tourism in Egypt. The present study was aimed to calculate the percentage of skin affections and to evaluate the degree of success for routine management of these problems. The study was performed on 156 working dogs where allergic conditions were represented by 7.7% with main complaint of severe pruritus. These conditions were constituted of flea allergic dermatitis (0.6%), contact allergic dermatitis (1.1%), food allergy (4.1%), atopy (1.7%) and urticaria wheals after penicillin injection (0.24%). Surgical wounds shared with 14.3% and abscesses were represented by 0.35%. Insects (fleas) were represented by 0.6%, while

acarides were represented by 24.4% which contained ticks (23.7%), sarcoptic mange (0.6%) with complaint of intense pruritus, and demodectic mange (0.12%). Fungal infection was represented by 0.35%. Ear affections included otitis externa (12.4%) and ear hematoma (2.9%). Pyoderma was represented by 20.3% which included surface pyoderma (18.3%), superficial pyoderma (1.72%) and deep pyoderma (0.24%). Tail arrada was represented by 1.5%. Scrotal affections were represented by 6.1%. Anal sacculitis was represented by 7%. Internal worms which induced bisymmetrical alopecia (5 cases of Dipylidium caninum, 6 cases of Toxocara canis in puppies, 3 cases of Toxascaris leonina in puppies) were represented by 1.7%. There were also reported 0.48 % superficial swellings. The routine work was satisfactory in most cases except recurrent cases of

pyoderma to which we recommended the use of alternative therapy.

Keywords: (Dog, skin, pyoderma, allergic, mange, otitis, hematoma, arrada).

INTRODUCTION

The present study was aimed to record and classify the common skin affections and to evaluate the routine treatment regimen in working dogs at the same condition. These police dogs trained for guarding and for detection of explosives in important hotels, hypermarkets, and private and governmental organizations; and international conferences.

Allergic diseases of the dog most often involve the skin rather than the respiratory system as is seen in man. Allergies are caused by a complex chain of events in the immune system, and even today, we do not understand all of the trigger factors. The immune system in allergies over-reacts for exposure to allergens in the environment. These allergens can be proteins from pollens, plants, insects, or foods (Kunkle, 2000).

There are four different types of allergy in animals which include atopy, flea allergic dermatitis, food intolerance and contact allergic dermatitis. Allergic inhalant dermatitis is an immediate-type hypersensitivity reaction seen in dogs that are genetically predisposed to produce high quantities of IgE (Griffen, 1993; and Leib and Monroe, 1997).

Flea allergic dermatitis is common and occurs when a dog is exquisitely sensitive to the flea bite. Although it have a higher incidence of hot spots, it is rare to find fleas as the pets immediately ingest it. Many effective medical management techniques are now available (Jasmin et al., 2004).

Dogs with adverse food reactions may have dermatologic signs or gastrointestinal signs or both. There is no accurate diagnostic test for determination of these conditions. No blood or skin test is especially helpful. The best test was to place the dog on a very special hypoallergenic diet and watched for improvement. The numbers of cases were likely not high as recorded in the studies of Rosser, 1993 and Roudebush, 1993.

Contact dermatitis may be divided into two syndromes: irritant contact dermatitis (ICD) and allergic contact dermatitis (ACD). For a long time, dermatologist believed that contact allergy was rare in the dog because they were covered with hair and protected. ACD is a delayed-type hypersensitivity reaction that occurs after haptens contact the skin, are absorbed, and combine with cutaneous proteins to form a hapten protein complex. The Langerhans cell modifies and transport the complex to a regional lymph node, where T-lymphocyte stimulation occurs. Sensitized T-lymphocytes migrate to the site of exposure, and on subsequent exposure to the sensitizing allergen, the lymphocyte release cytokines then induce

vascular changes and recruit inflammatory cells into the area (Olivry et al., 1990; and Lewis, 1993).

Mange in dogs occurs in two forms, sarcoptic mange, also called scabies, and demodectic mange, which may be called red mange or follicle mange. Demodectic mange is the more common of the two types. Both types are caused by mites that burrow into the dog's skin to cause intense itching. Sarcoptic mange usually occurs in young strays, but can occur in any dog of any age. The mites are usually localized to small areas, particularly those without much hair, such as the chest, ears, elbows, or belly. Localized demodicosis is often found in younger dogs, around one year old, and often resolve themselves without further intervention. Hair loss and skin lesions are the main symptoms of localized demodicosis and will be centered around a particular area of the body (Sabnis et al., 2007). Generalized demodicosis is a severe infestation and spreads over the skin fairly quickly. Hair loss, pus-filled lesions (secondary pyoderma), and crusting skin are the obvious signs. This most frequently occurs in very young dogs and very old dogs or others with weakened immune systems (immunocompromized animals). This type of mange is generally not contagious, as most dogs have

demodectic mange mites on their skin anyways (Leib and Monoroe, 1997).

Pyodermas were classified according to the depth into surface, superficial and deep pyoderma. Antibiotic therapy needs to be maintained until the pyoderma is gone and then 2 weeks beyond clinical cure for superficial pyodermas and 3–4 weeks beyond for deep pyodermas. This usually requires 3 to 6 weeks for superficial and 6 to 12 weeks or longer for deep pyodermas (Kwochka, 1993; Ihrke, 1996; Kania et al., 2004 and Rosenkrantz, 2006).

Wounds are classified into closed or open. Closed wound is a wound in which there is no solution of the continuity of the skin or mucous membrane but the deeper tissues are severed to a varying degree. It may be classified into contusion or abrasion. Contusion is a lesion produced by applying violence by blunt object as result of it there is rupture of blood vessels and varying amount of damage of soft tissues without breaking of the skin but beneath it. Abrasion is damage of the epidermis and portions of the dermis which is produced by friction of the skin or mucous membrane upon hard or rough surface (Slatter, 2003 and Boden, 2005). Open wound is that one in which there is solution of the skin and other tissues to a varying depth. Open wounds are classified into incised, lacerated, punctured, penetrating, perforating, ulcerating and granulation

wounds. Incised wound is a wound made by a sharp cutting instrument such as knife, surgical scalpel and pieces of glass or rarely by blunt object upon tightly stretched skin as that of the forehead. Lacerated wound is caused by blunt instrument by machinery as wheels of a vehicle, in which there is extensively injured underlying tissue with irregular wound edges. Punctured wound is made by sharp pointed object which is regular such as nail, needle and wood splinter which has small orifice and is deeper than longer. Penetrating wound is made by sharp, blunt or pointed objects, which penetrated the skin and underlying tissues and extended into serous or joint cavity. Perforating wound is similar to penetrating wound but it has inlet and exit orifices. Ulcerating wound is a circumscribed lesion in the skin or mucous membrane has no tendency to heal and characterized by progressive necrosis. Granulation wound is an old wound characterized by presence of unhealthy granulation tissue (Pavletic, 2002; Slatter, 2003 and Boden, 2005).

Dermatoses occurred in the pinnae include aural hematoma, physical dermatoses (e.g., trauma, solar dermatitis, and frostbite), arthropod bites, neoplasia, vasculitis, contact dermatitis, fissure or seborrhea of the ear margin, pinnal alopecia, and psoriasiform-lichenoid dermatitis of Springer Spaniels. Many other dermatoses may induce lesions that begin or stay confined to the pinna for some time, but they usually involve other

body sites at some point of their evolution (e.g., sarcoptic mange, dermatophytosis, atopic dermatitis, pemphigus complex) after Gotthelf (2005).

Aural hematomas can form within (intrachondrally) or along (subparachondrally) the cartilage of the pinna. There is no sex predilection, but affected dogs are usually middle-aged or older (Gotthelf, 2005). It was occurred frequently in dogs with pendulous ears rather than dogs with erect ears. Hematomas are most apparent in the concave surface of the ear. The etiology is not clear, but the most accepted theory is that the lesion is self-inflicted from head shaking, scratching, and rubbing the ear. The underlying causes for irritation to the ear should include all the external factors and diseases that predispose an animal to otitis externa, including immune-mediated diseases, food and inhalant hypersensitivities (Bojrab et al., 1998). Hematomas should be treated immediately when delayed or untreated hematomas usually cause various cosmetic alterations resulting from fibrous contracture (Tracy, 2000). Identification and treatment of the underlying cause are critical to long-term management of patients with aural hematoma (Bojrab et al., 1998 and Gotthelf, 2005).

Several surgical techniques have been described. Fluid drainage (aspiration, indwelling drain, partial or whole-length incision) and flushing are effective in relieving the animal but usually lead to post-

treatment deformity of the ear pinna. Griffin (1994) found that surgical procedures aiming at prevention of immediate relapse by compression (without necrosis) and at restoration of the pinna's initial shape and carriage are the most cosmetically effective and have the least recurrences. This can be achieved by several techniques. The most commonly used are multiple mattress sutures placed after incision or multiple punch holes made through the skin (Fossum et al., 2002 and Gotthelf, 2005).

Otitis externa is an inflammation of the epithelium of the external ear canal characterized by an increased production of ceruminous and sebaceous material, desquamation of epithelium, pruritus and pain. The condition is caused by one or more etiologic agents including parasites, bacteria and fungi. In addition, allergy and trauma may play a role in otitis externa (Bojrab et al., 1998). Otitis externa is a common malady, occurring in 15% to 20% of dogs and 5% to 7% of cats seen in veterinary practice (Gotthelf, 2005). Treatment regimens vary widely and a many of products containing a variety of ingredients are available for the treatment of ear disease (Hoad, 2006). Flea allergy may contribute to overall pruritus, but rarely causes otic pruritus singularly (Gotthelf, 2005). New combinations of topical medications have been formulated to be effective against bacteria, fungi, and inflammation. The fluoroquinolone

antibiotics, injectable ivermectin, and topical fipronil for ear mite infestations have reduced the use of potentially ototoxic antibiotics, oils and insecticides in the ear canal (Gotthelf and Young, 1997; and Kiss et al., 1997).

Anal sac disease (anal sacculitis) in the dog is common and affects approximately 12% of the canine population (Van Duijkeren, 1995). The majority of anal sac disease consists of impactions and infections, with neoplasia being an uncommon occurrence (Goldschmidt and Shofer, 1992; and Washabu and Brockman, 1995). Blockage of the ducts or the orifices of the sacs may result in either unilateral or bilateral distention with exudates or purulent material. It may also predispose the sacs to secondary bacterial infection (Jones et al., 1996). Canine anal furunculosis is a chronic, painful, progressive inflammatory and ulcerative disease suspected to be immune-mediated (Ojeda et al., 2010).

MATERIAL AND METHODS

A total number of 156 guard and explosive dogs in K9 police center- police officers insurance fund were thoroughly investigated; and age, breed and sex were recorded. The examined dogs included 120 male dogs and 36 female dogs with age ranging from 48 days- 9 years. Breeds of dogs were 120 German Shepherd dogs, 19 Labrador retriever dogs, 18 Malino dogs, 7 Rotweiller dogs and 3 Golden retriever dogs.

An accurate medical history of previous treatments and routine health care, such as deworming and vaccination programs was recorded. All investigated dogs were vaccinated and received Drontal® plus (50 mg praziquantel, 150 mg Febantel, 144 mg pyrantel- Embonat, made in Germany by Bayer) as internal worm prophylaxis. Physical dermatological examinations were performed by inspection of different clinical signs. All areas of the skin were carefully palpated and visually examined. A magnifying lens was used to identify lesions. The smelling was helpful to identify bad odor occurred in pyoderma or otitis externa. The appearance of pelage (hair coat), the ease of hair removal from follicles (epilation) and the pattern of lesions on the skin was recorded. The findings were recorded on a special dermatologic examination form containing a silhouette of a dog for recording the location of the lesions.

Skin scrapings performed for all examined dogs as mentioned by Leib and Monroë (1997).

Fecal concentration floatation was performed to exclude nematodes and cestodes as described by Thiopont et al. (1986)

Hypoallergenic (Elimination) dietary trial was performed to identify an adverse reaction to food as directed by Leib and Monroë (1997).

Routine treatment regimens: The allergic conditions were treated principally by the use of corticosteroids to control pruritus as

fortecortin (dexamethasone 8 mg/ ml/ ampoule, by GSK) in a dose of 0.1 mg/ Kg. Elimination of the primary etiology was the principal therapy as insecticide in fleas and offending food by hypoallergenic diets, avoidance of contact with allergens. Thus beside treatment of secondary pyoderma which was performed.

Control and prevention of mange, ticks, fleas for the dog is accomplished by dipping the dog into a petroleum-based chemical such as Amitraz @solution in a dose of 0.5 ml of the solution/ L of water (emulsifiable concentrate containing 125g amitraz per liter, made in Egypt by ADWIA veterinary pharmaceutical company). Treatment involved bathing dogs every 2 weeks, followed by application of the dipping solution (Sabnis, 2007).

A total number of 121 cases suffered from wounds, were subjected to thorough investigations, classification and treatment which were based on Slatter (2003). Contusion was simple affection which undergone resolution at the moment of the accident when cold fomentation and ointment (anodine ointment as lignocaine ointment 2%) were applied. Abrasion was treated by washing with normal saline and application of antibiotic ointment (Fucidin® ointment 2%, Sodium fusidate, by Minapharm). Cases suffering from recent incised wound were treated by suturing the wound lips with

suitable pattern and suture material under aseptic preparation of the wound site (clipping, sheaving and washing with normal saline). Daily dressing with antibiotic ointment (Fucidin® ointment 2%) and removing of the stitch after 7-10 days was performed. Dogs affected with old granulating and ulcerating wounds were subjected for destruction of the unhealthy granulation by curetting, debridement or by excisions. Daily dressing using povidone iodine (Betadine®) solution was applied for 7 up to 21 days.

Fungal infection (ringworm) was treated with topical application/ 12 hours of Betadine® antiseptic solution (povidone iodine 10%, Mundi pharmaceutical company) for 2-3 weeks after Leib and Monoroe (1997).

In cases of otitis externa, ear cleaning was performed by the use of glycerine bicarbonate 1% then application of otal® ear drops (dexamethasone 0.1%, antipyrine 3%, gramicidin 0.025 and cinchocaine Hcl %) which were used as antibacterial antifungal anti-inflammatory in a dose of 2 drops as instillation/ twice daily for 10 days (Gotthelf and Young, 1997).

In cases of aural hematoma, incisional drainage combined with suturing had consistently been the most successful treatment for aural hematomas. The pinna was surgically prepared on both sides.

Hematomas had been opened using longitudinal or S-shaped incision. The fibrin clot was removed and the cavity was curetted and flushed with saline. The horizontal mattress sutures were placed in rows parallel to the skin incision. The first row of sutures was placed at the outer edge of the cavity and the succeeding rows placed toward the skin incision. The sutures penetrated the full thickness of the pinna. When placing the sutures, the surgeon should avoid the three main great auricular branches, which are visible on the convex surface of the pinna. Various suture materials had been used. Silk, vicryl or polypropylene suture materials of size 1, 0 or 1-0 were the most commonly used. A light protective bandage was applied to protect and immobilize the ear. While body hematomas in cases of swellings firstly ripened in 10 days and then opened to evacuate blood clots (McCarthy, 1996, Bojrab et al., 1998 and Gotthelf, 2005).

Pyodermas were treated by the use of topical antibacterials (povidone iodine 10% + fusidic acid) and systemic antimicrobials. The lesions were clipped prior to therapy to facilitate penetration of the medicament. Surface pyoderma was treated by the use of topical antibacterial Betadine® shampoo (povidone iodine 7.5%, Mundi pharmaceutical company) and Fucidin® ointment (fusidic acid 2%, Leo pharmaceutical company) only/ 12

hours/ 10- 14 days. Superficial pyoderma was managed by the use of Augmentin® tablets (clavulinic acid potentiated amoxicillin 156, 312, 375, 625, 1g., GSK pharmaceutical company) in a dose of 10 mg/ Kg and topically treated as surface pyoderma for 2- 3 weeks. Deep pyoderma therapeutically approached by Ciprocil tablets® (ciprofloxacin Hcl 250, 500, and 750, Eipico pharmaceutical company) topically treated as surface pyoderma for one- 3 months. These treatments also were described by Faires et al. (2010).

Tail arrada was managed by dressing topically by Betadine® and Fucidin 2% ointment. While Scrotal affections was treated as pyoderma. While anal sacculitis was treated effectively by evacuation and topical application of local anti-inflammatory and antibacterial (terracortril® eye ointment, oxytetracycline 5 mg+ hydrocortisone, by Pfizer) and the use of flagentyl (secnidazole 500mg, by Aventis) in a dose of one tablet/ 20 Kg once after Matthiesen and Manfra (1993)

Table was constituted of columns which illustrated different breeds of dogs and rows which displayed medicinal and surgical skin affections. Also, percentage of skin affections were calculated and written in the table. The table was designed in a manner similar to method described by Orgogozo et al. (1994)

RESULTS

The distribution of skin problems in 156 police working dogs were illustrated in table (1). Allergic conditions were represented by 7.7% (in which the main sign was intense pruritus). Flea allergic dermatitis was represented by 0.6%. It was manifested by intense pruritus, presence of fleas or flea dirt, crusting, papules and pustules. Contact allergic dermatitis was represented by 1.1% and showed intense pruritus, alopecia, crusts at site of contact. Food allergy was represented by 4.1% and manifested by intense pruritus and self inflicted trauma. Atopy was represented by 1.7% and displayed massive self mutilation, scratching, papules, pustules and crusting allover the body in the spring season. Urticaria after penicillin injection were represented by 0.24% and characterized by wheals and erythema. Response to treatment was 100% in flea allergic dermatitis, 88.9% in contact allergic dermatitis, 82.9% in food allergy, 92.9% in atopy and 100% in urticaria.

Surgical wounds were represented by 14.3% The results from the present study revealed that incised form (42.1%) recorded the higher incidence among the cases affected with wounds followed by ulcerating (18.2%), granulating (14.9%), lacerated (12.4%), contusions (5%), abrasion (3.3%), penetrating (3.3%) then puncture (0.8%) wounds. Forty six out of 51 cases suffering from recent

incised wound were healed properly within 7-10 days after suturing. Five cases showed sepsis of the wound after suturing. Those cases were treated as old septic wound after removing of the stitches. Cases suffering from lacerated, punctured, penetrating and old septic wounds (ulcerating and granulation) were healed as 46 out of 60 cases within 7 up to 21 days. Six cases (granulation wounds) were healed after one month and eight cases (five ulcerating and three granulation wounds) were healed with secondary intension after two months. Six cases suffering from contusion undergoes resolution, as the moment of the accident apply cold fomentation and apply ointment (anodine ointment as lignocaine ointment 2%). Abrasion was recorded in four cases and was treated. While abscesses were represented by 0.35%. Response of treatment was 100% in abscesses.

Insects (fleas) were represented by 0.6%, while acarides (ticks, sarcoptes, demodex) were represented by 24.4%. Response to treatment was 100% in fleas. Ticks (Fig. A) were represented by 23.7% which spread during hot and high relative humidity season (from April till October) with high incidence and high risk in July and August. Response to treatment was 93% by weekly treatment during tick season. Sarcoptic mange (Fig. E) was represented by 0.6%. Response to treatment was 100% in one month. Demodectic mange (Fig. F) was

represented by 0.12%. Signs of sarcoptic mange include hair loss, crusting of the skin, infected lesions, severe itching and self-inflicted injuries (bite wounds or scratch wounds). The most common infested areas of a dog are the chest, ears, abdomen, elbows and legs. Symptoms generally begin around the eyes, but can spread to the head or elsewhere on the body. One case of generalized mange in the present study had occurred in which the symptoms spread to larger areas of the body. The primary symptom was hair loss accompanied by scaly, crusty skin and mild itching. The lesions became secondarily infected, causing inflammation, reddening of the skin, oozing of pus or blood, and a very strong odor. The reddening of the skin was what led to the name "red mange".

Fungal infection (ringworm) was represented by 0.35% in puppies. It was manifested by circular circumscribed area of alopecia covered by fine scales. Response to treatment was 100% within 3 weeks to one months.

Ear affections (otitis externa and ear hematoma) were represented by 15.3%. Otitis externa (Fig. H) was represented by 12.4%. Response to treatment was 93.3% within 10-14 days. Ear hematoma (Fig. G) was represented by 2.9%. Response to treatment was 64% in early detected cases without dropping of ear. Clinical signs associated with otitis externa were headshaking, purulent

discharge, malodour and pain on ear examination.

Pyodema was represented by 20.3%. Surface pyoderma (Fig B) was represented by 18.3%. It was manifested by erythema, hair loss and mild to moderate pruritus. Response to treatment was 88.4% within 7- 12 days. Superficial pyoderma (Fig. C) was represented by 1.72%. It was displayed by redness, itching, papules, pustules, patchy alopecia, lumpy- bumpy appearance (3 cases) and easily epilated hair (folliculitis). Response to treatment was 86.7% within 14- 27 days. Deep pyoderma (Fig. D) was represented by 0.24%. It was showed diffuse itching, very offensive odor of the skin, deep abscesses, and pustules. Response to treatment was 100% within 2 months.

Tail arrada was represented by 1.5%. It was characterized by necrosis of tail gradually until sloughing (2 cases). Response to treatment was 84.6%. While scrotal affections were represented by 6.1%. It was a form of pyoderma characterized by bad offensive odor, thickening of skin of scrotum, and oozing of pus. Response to treatment was 98.1% within 2 weeks. Anal sacculitis was represented by 7%. The dogs showed tail chasing, biting of perineal region, scooting, constipation, and swelling with pain on palpation. Response to treatment was 96.6%. Cases of swellings were 3 cases of hematoma and one case of superficial skin tumor.

Response to treatment was 75% as the case of tumor euthanized.

Internal worms (5 cases of Dipylidium caninum, 6 cases of Toxocara canis in puppies, 3 cases of Toxascaris leonina in puppies) were represented by 1.7%. It was displayed alopecia, diarrhea, vomiting and botbelly (in cases of toxocara infestation). Response to treatment was 100%.

DISCUSSION

Skin affections are most common health problem in working dogs. There was also zoonotic aspect of some skin affections to human. As sarcoptic mange, ringworm and resistant staphylococci were easily transmissible to contact human (Van Duijkeren et al., 2004).

Allergic conditions were represented by 7.7%. Flea allergic dermatitis was represented by 0.6%. Contact allergic dermatitis was represented by 1.1%. Food allergy was represented by 4.1%. Atopy was represented by 1.7%. Urticaria wheals after penicillin injection were represented by 0.24%. The management of allergy by corticosteroids was the magic solution for treatment at the period of administration. But the actual treatment was based on avoidance of the offending etiologies (Rust, 2005; and Snyder et al., 2007)

Surgical wounds were represented by 14.3% The higher incidence of the traumatic

injuries among working dogs attributed to the heavy duty and efforts which faced by those dogs. The results from the present study revealed that incised form (42.1%) recorded the higher incidence among the cases affected with wounds which caused by trauma during transportation of the dogs from the kennel to the site of work. The low number of the recorded cases suffering from contusions and abrasions was resulted from the ill developed signs of these forms of wounds, so they did not get attention of the dog trainer (Boden, 2005). While abscesses were represented by 0.35%. They were responded to surgical treatment effectively (100%) and the most obvious etiology was infected wounds (Slatter, 2003).

Insects (fleas) were represented by 0.6%, while acarides (ticks, sarcoptes, demodex) were represented by 24.4%. Ticks were represented by 23.7% and were not easily controlled as it was weekly treated on animal by dipping in diluted insecticidal bath. Control of environment was not only by spraying every week during tick season but also by firing all surrounding walls monthly. Sarcoptic mange was represented by 0.6%. Demodectic mange was represented by 0.12%. Sarcoptic mange, or canine scabies is a highly infectious infestation of *Sarcoptes Scabiei* var *Canis*, and is found throughout the world (Leib and Monroee, 1997). While generally found on dogs only, these can be transmitted to human, although it is fairly

rare, but they can also be transmitted through human contact, where the human is not the host animal, merely an agent of transmission. Sarcoptic mange was easily treated by the use of topical amitraz (Sabnis et al., 2007). Demodectic mange, red mange, or demodex infestation, is a common skin condition caused by tiny mites that inhabit the hair follicles. The only recorded case of generalized red mange in the present study suffered from captivity for long time. Problems arised when these mites multiplied into numbers too large for the host animal or poor health weakened the immune system into reacting to any and all irritants. The immune system's inability to prevent generalized mange is genetically determined, so littermates of an affected puppy should watched carefully for symptoms. In addition, dogs who have had mange or who have produced puppies with mange should not be bred again (Sabnis et al., 2007; and Snyder et al., 2007).

Fungal infection was represented by 0.35%. It was poorly represented as it was very rare in dogs and common in cats. It was easily treated within 3 weeks in dogs (Leib and Monroe, 1997)

Ear affections (otitis externa and ear hematoma) were represented by 15.3%. Otitis externa was represented by 12.4%. Ear hematoma was represented by 2.9%. Otitis externa in dogs and cats is a complex disease, resulting from the interaction of

microorganisms and the inflammatory status and microclimate of the external auditory canal. Bacterial and fungal involvement in otitis is usually secondary, the microbes colonizing an already damaged and inflamed ear canal (Tracy, 2000).

In the present survey, trauma was seemed a precipitating factor rather than an underlying factor in aural hematoma. This agreed with Gotthelf (2005) who said that aural hematoma is uncommon findings in chronic skin diseases and many dogs affected with aural hematoma did not have signs of any concurrent auricular, cutaneous or systemic disease. In the other hand, Bojrab et al. (1998) said that the lesion is self-inflicted from head shaking, scratching, and rubbing the ear.

In one study, results were in favor of an autoimmune cause (Kuwahara, 1986). Although Joyce and Day (1997) could not confirm these results, they found histopathologic evidence of cartilage degeneration associated with fibrovascular granulation tissue filling the cartilage defect.

Pyoderma was represented by 20.3%. Surface pyoderma was represented by 18.3%. Superficial pyoderma was represented by 1.72%. Deep pyoderma was represented by 0.24%. The routine treatment of deep pyoderma in the present study was the use of ciprofloxacin (flouroquinolones). Also, The of results of Mueller and Stephan (2007) was indicated that pradofloxacin

(flouroquinolones) is an efficacious therapy comparable to amoxycillin/ clavulanic acid for deep bacterial pyoderma in dogs. The appropriate management of superficial and deep pyoderma requires the use of both topical and systemic therapy. Topical therapy was used as an adjunctive to systemic antibiotics because it was accelerated the healing process, aiding in the elimination of bacterial byproducts and generally made the patient felt better. Topical therapy also used as a preventative therapy in cases prone to recurrences and was beneficial in the management of Methicillin-resistant staphylococci (MRS) infections. Systemic antibiotic therapy is needed in most pyoderma cases; even the most superficial pyodermas are best treated by systemic therapy. Extended antibiotic protocols or "pulse therapies" were unfortunately needed in some cases of chronic recurrent pyoderma. Knowing when and how to use these extended pulse protocols is also critical to reduce the development of Methicillin-resistant staphylococci (MRS) infections (Guardabassi et al., 2004; and Van Duijkeren et al., 2004). Dogs get pyoderma more readily than people due to the unique characteristics of dog skin. Dog skin has a thin stratum corneum with less lipid material and unprotected hair follicles that are at increased risk for bacterial invasion and subsequent colonization and overgrowth (Leib and Monoroe, 1997). This was led to superficial bacterial folliculitis. Perhaps more

important, there was a higher incidence of primary inflammatory and other non-inflammatory diseases that affect the first-line defenses against colonization in dogs when compared to human. For example, studies had shown that staphylococci adhere more to the skin of dogs with atopic dermatitis than from dogs without atopic dermatitis. The present study detected recurrence of 20 out of 172 cases which attributed to bacterial resistance. Also, Morris, et al. (2006) and Faires et al. (2010) recorded that there was large number of recurrent pyodermas as bacterial resistance. As Methicillin resistance (MR) is an increasingly important problem in staphylococci.

Tail arrada was represented by 1.5%. It was managed by dressing topically by Betadine®. While Scrotal affections were represented by 6.1%. It was treated easily as pyoderma. Also, anal sacculitis was represented by 7%. It was treated effectively by evacuation and topical application of local anti-inflammatory and antibacterial (terracortril® eye ointment) and secnidazole for anaerobic bacteria which was parallel to that mentioned by Matthiesen and Manfra Marretta (1993); and Fossum et al. (2002).

Internal worms (5 cases of Dipylidium caninum, 6 cases of Toxocara canis in puppies, 3 cases of Toxascaris leonina in puppies) were represented by 1.7%. It was very low % as the good routine control measures by the use of broad spectrum

anthelmintic Drontal® every 3 months. So, it limited the infestation by internal worms (Leib and Monoroe, 1997).

It was concluded that there were 22 recorded skin affections. Also, the research focused on the most common dermatological disorders and planed an effective routine therapeutic approach for each problem. These skin problems arranged according to percentage in descending manner as follow: Ticks (23.7%) which recorded the highest percentage followed by surface pyoderma (18.3%), surgical wounds (14.3%), otitis externa (12.4%), anal sacculitis (7%), scrotal affections (6.1%), food allergy (4.1%), ear hematoma (2.9%), superficial pyoderma (1.72%), atopy (1.7%), internal worms (1.7%), tail arrada (1.5%), contact allergic dermatitis (1.1%), flea allergic dermatitis (0.6%), fleas (0.6%), sarcoptic mange (0.6%), swellings (0.48%), abscesses (0.35%), fungal infection (0.35%), urticaria (0.24%), deep pyoderma (0.24%) and demodectic mange (0.12%).

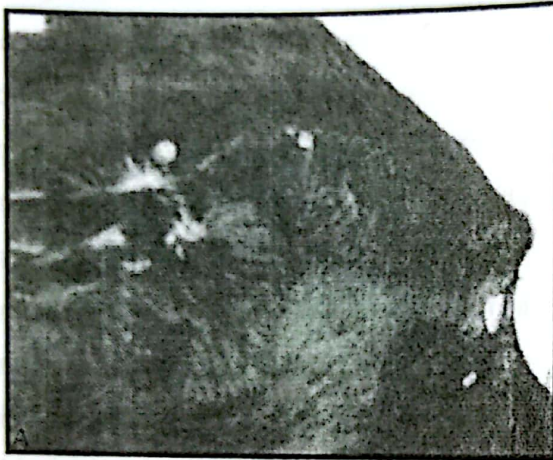
CONCLUSION

Medicinal and surgical skin affections in guard and explosive dogs are common health problems. The present survey was succeeded to direct the efforts to control serious and common skin affections which affect life of dogs and health of human. It was recommended to play every effort for early

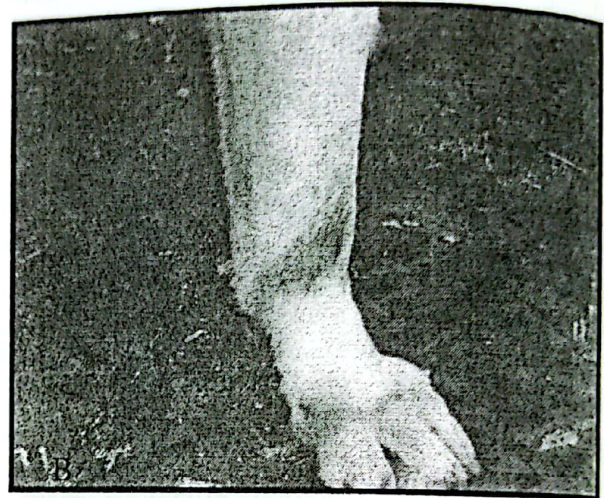
control of ticks by repairing of all damaged walls and weekly spraying by insecticides with shifting to avoid resistance of all grounds, floors, walls, all fomits beside weekly dipping of the pets. Cases of recurrent pyoderma needed further diagnostic evaluation by isolation and identification of etiological agents and antibiotic sensitivity

testing. Kennels, transmitting vehicles if repaired and fights if prevented; surgical wounds, ear hematoma and otitis externa will be minimized. Wide space in transmitting vehicles and hygienic kennels were advised to reduce percentage of scrotal affections. It was also recommended to use alternative medicine in treatment of skin affections.

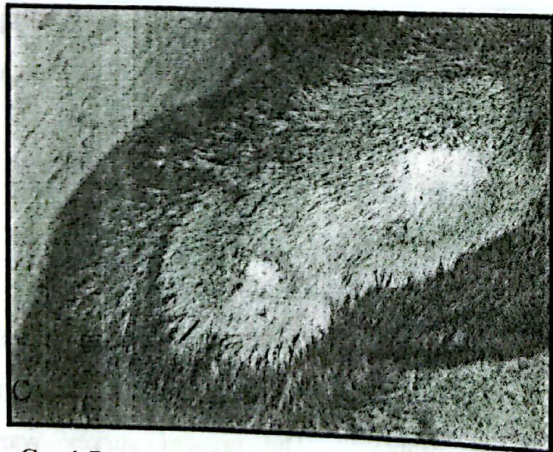
Figures: clinical conditions in working dogs suffered from skin diseases



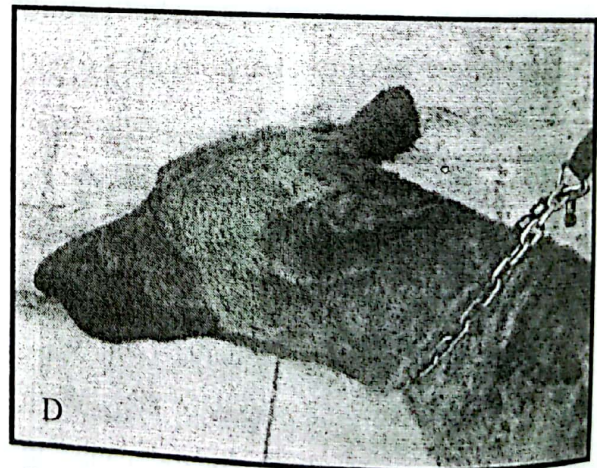
A- 3.2 years old German shepherd bitch infested with ticks (around the ear and bellow the eye).



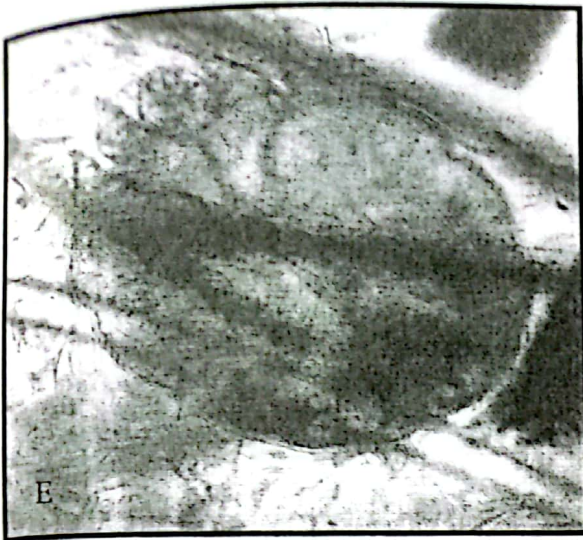
B-2.4 years old Labrador retriever dog suffered from surface pyoderma showing erythematous weepy lesion (Hot spot with purulent exudates)



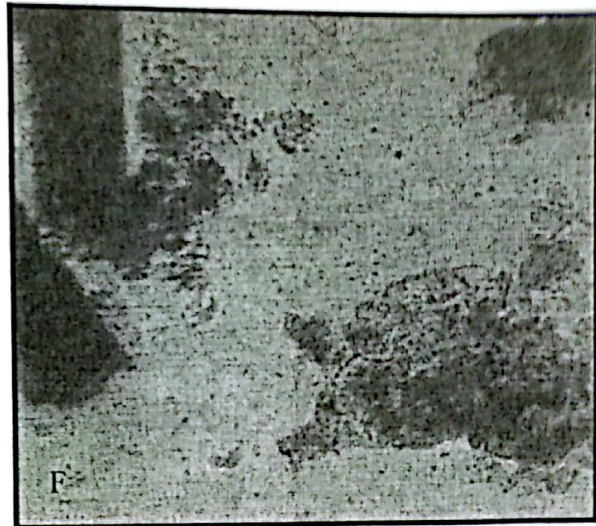
C- 4.7 years old German shepherd dog suffered from superficial pyoderma displaying crusts, pustules and patchy alopecia (folliculitis).



D- 3.9 years old German shepherd dog suffered from deep pyoderma showing diffuse alopecia, crusts, small abscesses, lichenifications and cracks (furunculosis).



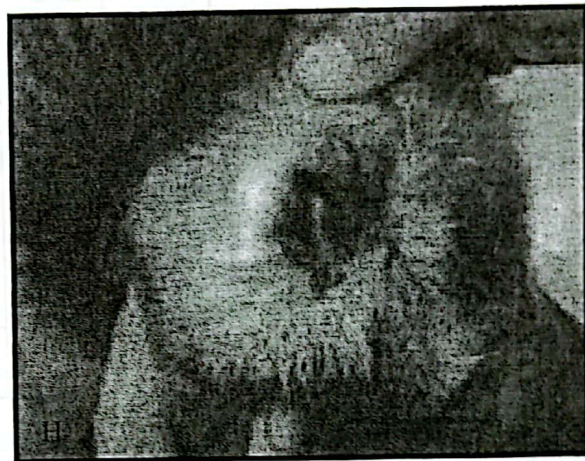
E-Sarcoptes mite isolated during skin scraping from 4.3 Ys old German shepherd dog (10X).



F-Demodex mite isolated during skin scraping from 7.9 Ys old German shepherd dog (10X).



G- 5.7 Ys old Malino dog manifested dropped right ear (ear hematoma).



H-3.5 Ys old German shepherd suffered from blackish exudates and crusts inside external ear canals (otitis externa).

Table (1): Survey of Most Common Skin affections in Police Working Dogs
Months: 3/2008 to 6/2010

Breeds	Allergic conditions					Surgical		Insects:Fleas	Acarides			Fungal	Ear		Pyoderma			Tail Arrada	Scrotal affections	Anal sacculitis	Int. worms	Swelings	Total
	FAD	Contact AD	Food allergy	Atopy	Urticaria	Wounds	Abscess		Ticks	Sarcoptes	Demodex		Otitis externa	Hematoma	Surface	Superficial	Deep						
German Shepherd	2	4	23	12	2	61	3	2	78	5	1	3	71	13	104	14	2	9	27	29	5	4	474
Malino	0	1	4	1	0	18	0	0	21	0	0	0	10	5	10	1	0	4	12	12	1	0	100
Rottweiler	0	2	0	0	0	7	0	0	17	0	0	0	4	1	14	0	0	0	2	8	1	0	56
Golden Retreiver	1	0	4	0	0	5	0	1	23	0	0	0	6	1	11	0	0	0	1	1	1	0	46
Labrador Retreiver	2	2	4	1	0	30	0	2	62	0	0	0	14	5	16	0	0	0	10	9	6	0	163
Total	5	9	35	14	2	121	3	5	201	5	1	3	105	25	155	15	2	13	52	59	14	4	848
Percentage (%)	0.6	1.1	4.1	1.7	0.24	14.3	0.35	0.6	23.7	0.6	0.12	0.35	12.4	2.9	18.3	1.72	0.24	1.5	6.1	7	1.7	0.48	

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استبيان اكلينيكي و جراحى على معظم الاصابات الجلدية الشائعة فى كلاب الحراسة و المفرقات الشرطية

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تمثل الاصابات الجلدية سواء الباطنية او الجراحية عددا كبيرا من الحالات اليومية فى كلاب الشرطة التى تستغل لأغراض الحراسة و المفرقات (تستخدم لحماية المؤسسات الضخمة وتأمين المؤتمرات الدولية وحماية السياحة في صورة الفنادق والمناطق الأثرية في مصر) ، لذلك اجريت هذه الدراسة بهدف تقييم حالات الاصابة الجلدية والطرق الروتينية للعلاج اليومي لهذه الكلاب. تمت هذه الدراسة على ١٥٦ كلب ، وجد ان عدد الحالات الجلدية فى الفتره من ٢٠٠٨/٣ الى ٢٠١٠/٦ كانت ٨٤٨ حالة وكانت اكثر الاصابات فى كلاب الجيرمان شبرد وتمثل ٤٧٤ حالة بينما فى كلاب المالبينو ١٠٠ حالة وفى كلاب الروت ويلر كانت ٥٦ حالة وفى كلاب الجولدن كانت ٤٦ حالة وفى كلاب اللابرادور كانت ١٦٣ حالة وسجلت الدراسة نسبة حدوث الحالات الجلدية ومثلت كالاتى: ٧.٧% حالات حساسية جلدية (وتتمثل فى ٠.٦ % حساسية البراغيث الجلدية، ١.١% حساسية التلامس، ٤.١% حالات حساسية الأطعمة ، ١.٧% حساسية الربيع ، ٠.٢٤ % حساسية البنسلين)

ومثلت حالات الجروح عددا كبيرا وكان ١٤.٣% بينما حدوث الخرايج نسبة ضئيلة جدا وكانت ٠.٣٥ % ومثلت الاصابة بجرب الديموديكس والجرب المركوبتى نسبة ضئيلة ايضا (وتتمثل ٠.١٢ % ، ٠.٦ % بالترتيب)

ولكن كانت الاصابة بالقراد اصابة كبيرة وخصوصا فى الشهور التى تزداد فيها درجة الحرارة والرطوبة من شهر ابريل الى نهاية شهر اكتوبر وكان اكثر انتشارا فى شهرى يوليو واغسطس وهى تمثل ٢٣.٧ %.

وتمثل الاصابات الفطرية نسبة متواضعة وهى ٠.٣٥ % حيث انها قليلة الحدوث فى الكلاب واكثر شيوعا فى القطط

وسجلت الدراسة ايضا اصابات الاذن الجراحية من التهاب الاذن الخارجية وهى تمثل ١٢.٤ % والتجمع الدموى بالاذن ويمثل ٢.٩ % ووضحت الدراسة ايضا ان الاصابات البكتيرية الجلدية (الببوديرما) تمثل ٢٠.٣ % وهى من اعلى نسب الامراض الجلدية حدوثا

بينما حالات تنكز الذيل (الأرادا) تمثل ١.٥ % وحالات التهاب كيس الصفن ٦.١ % واصابات الغدة جانبى فتحة الشرج ٧% والاصابات بالديدان التى تسبب سقوط الشعر والهزال كانت ١.٧ % وقد اكدت الدراسة توجيه الرعاية والعلاج للمشاكل ذات النسب الكبيرة وتغير طرق العلاج الروتينية واستخدام التقنيات الحديثة فى تشخيص الامراض للوصول السريع للمسبب الحقيقى وقد اوصت الدراسة ايضا استخدام الطب البديل فى علاج بعض الحالات الجلدية.