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STUDY ON SOME SURGICAL AFFECTIONS IN CAMELS
(Camelus Dromedarius)
(With 11 Figs.)

By

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دراسة عن بعض الإصابات الجراحية في الجمال وحيدة
السنام

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تمت الدراسة علي ١٨ حالة مصابة من الجمال وحيدة السنم وتم فحص وتشخيص كل حالة
عل حدة إكلينيكيها ومعليا وتوقيع النتائج أن أكثر الإصابات شيوعا هي الأورام الحميدة
(الأورام الحليمية) والحويصلة الشبيهة بالجلد والتهاب الخصية . وتبين الدراسة أن الغالبية
العظمي من الإصابات توجد في منطقة الرقبة والصدر والقوائم وأن العلاج الامثل لعامانة
الأورام الجلدية هي استئصالها جراحيا تحت تأثير المخدر الموضعي مسبقا بمهدي الريميون - وتم
التئام الجروح بالقصد الأول في خلال عشر أيام من الإجراء الجراحي . واتضح أن طريقة الخصي
الجراحي المغطي هو أنسب السبل لمعاملة إلتهاب الخصية جراحيا في الجمال . ووجد بعض
الإصابات الجراحية مثل زيادة الطبقة القرنية للجلد وفتح المفصل والجروح المتفتحة تمثل نسبة
صغيرة في الجمال ، وتم علاج هذه الإصابات بالطرق العادية باستعمال المطهرات الموضعية وكذلك
النضادات الحبيبية . وتم شفاء الحيوانات المصابة في خلال أسبوعين .

SUMMARY

In the present study, the most surgical affections recorded in camels were cutaneous swellings (papilloma and dermoid cysts), orchitis, hyperkeratosis, open joint and suppurating wounds. The predilection seats of affections usually are situated in the neck, chest and limbs. Cutaneous swellings were excised successfully under the effect of tranquilizer (Rompun) and local infiltration anaesthesia. Healing was obtained by first intention within ten days. Covered bloody castration proved to be the suitable technique for surgical management of orchitis in camels.

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Other lesions such as local hyperkeratosis, open joint and suppurating wounds healed by second intention within two weeks after daily application of local dressing to the affected areas, accompanied with systemic administration of antibiotics.

INTRODUCTION

Camels in Egypt play an important role as a source of meat. Some of surgical affections of these animals produce trouble to their health and drop to their body weight. Some affections were observed by many authors: SHABAN, *et al.* (1985) noticed papillomas and fibromas at different parts of the body in camels, specially, neck, shoulder, hump, gaskin and prepuce. They also stated that the tumours (myxopapilloma) are present at the ventro lateral aspect of the neck and those present near the base of the prepuce in camels were pedunculated. Fibrous papilloma in pedunculated tumour of the skin, vary in size from a pinhead to diameters measuring many centimeters. In all cases the enlarged end of the papilloma is attached to the body wall by a neck of skin. A small papilloma may be removed with scissors or an emasculator (OEHME and PRIER, 1974).

Dermoid cysts rarely observed, and are usually located in the temporal region of the horse or other animals. They usually present similar symptoms to those of a dentigerous cyst, except that it contains dermoid tissue instead of the tooth. The treatment consists in dissecting out the lining of the cyst so as to cause an open wound, which will heal in the ordinary way (O'CONNOR, 1980). In some instances treatment can be performed by aspirating the fluid from the cyst and cauterizing the lumen (OEHME and PRIER, 1974).

Orchitis is inflammation of the testicle and occurs in all species of domestic animals. The inflammation may occur as the result of traumatism. In those cases where the traumatism is severe large hematoma may form in the testicle (FRANK, 1964). The cause of inflammation may be, an irritant applied in the scrotal region, or toxin of an infectious disease such as glanders, tuberculosis, dourine, or chronic pyemia or the presence of the strongylus armadas in the testicle (O'CONNOR, 1980). Orchitis and epididymitis are caused mainly by mechanical injury or Brucella swim in boars and B-abortus and viral agents in bulls. The condition is also caused by salmonella abortion (RUNNELLUS, *et al.* 1965). Chronic inflammation is characterized by fibrous or reticulo-endothelial proliferation here as elsewhere with or without the accompaniment of active exudation. The specific granuloma, may involve the testes, tuberculous orchitis is not especially rare in animals already having primary lesions elsewhere (SMITH, *et al.* 1972).

Hyperkeratosis is the thickening of the keratinized layer of the skin. It is recognized most often as a clinical entity in cattle, particularly calves (BODDIE, 1950; KELLY,

CAMEL AFFECTIONS

1974 and UDDAL, 1972). The commonest affected areas were the sides of the neck, wither and chest in buffalo-cow and camels (KASSIM, 1961). Secondary infection of the fissures may occur if the areas is continuously wet. (BLOOD, *et al.* 1979).

Open joint is a condition caused by open wound penetrating into the joint. The wounds are caused by sharp objects like nails, broken glass, etc. In the horse the common joint affected in this way is the carpal joint. Open joint is characterized by the escape of synovia. Septic arthritis may occur as a result of infection (VENUGOPALAN, 1982).

The wounds of the camels may become suppurating and infected after biting and action by insects. They lay eggs in these sites, through the deprivations of their larvae (WILSON, 1985).

MATERIAL and METHODS

In this work, 18 camels aged 2-4 years, were submitted to the Veterinary clinic. They suffered from external surgical affections. These animals were clinically examined. They suffered from cutaneous swellings (papilloma and dermoid cysts), orchitis hyperkeratosis, open joint and suppurating wounds. All swellings were excised surgically under the effect of tranquilizer, using Rompun in a dose rate 0.1 mg/kg B.wt. and local infiltration anaesthesia using 2% procaine Hcl injected around and beneath the cutaneous swellings.

Camels were controlled in sitting or lateral recumbent position, according to the site of operation. The surgical wounds were sutured by sterile silk and left for healing by first intention. Covered bloody castration was done in cases of orchitis under the effect of ring block around the spermatic cord using 3% procaine Hcl preceded by xylazine Hcl as pre-anaesthetic medication.

The excised lesions were examined grossly. Specimens were processed, through the routine paraffin embedding technique. Sections of 3-5 U "microns" thickness were prepared and stained with Hematoxylin and eosin stain for microscopic examination (CARLETON, 1967).

Other surgical affections such as local hyperkeratosis, open joint and suppurating wounds were surgically manipulated in a routine manner. The lesions were left for healing by secondary intention, after being treated by salicylic acid ointment 10%, antiseptic and Antibiotics.

RESULTS

In the present study some surgical affections in camels were recorded in 18 cases. The examined animals which suffered from cutaneous swellings were of good general condition and the tumors were painless and varied from a pinhead size to an orange. The swellings in front of the carpal and at the neck exhibited firm taster while the skin was adhered to underlying tissues. These swellings were sessile, hard, and round in shape. The skin over the swellings was abnormally thick and firm (Fig. 1 & 2).

The operated camels showed good healing by first intention within ten days following surgery. There is no recurrency of excised lesions or gross reactions on neighboring lymphnodes.

In cases of chronic orchitis the affected camels were of faire general condition and the affected testis showed painless, hard swelling, interfere with the motion of the animal (Fig. 3). Covered bloody castration was done easy and successfully under the effect of Rompun and ring block around the spermatic cord while the animal in setting position.

The commonest affected areas with hyperkeratosis in camels was chest pad (Fig. 4). The skin was seen dry, hard, leathery and deeply cracked with itching was not observed in all affected camels. Daily dressing with salicylic acid ointment for 3 weeks, gave good results.

All cases of infection (open joint, Fig. 5 and suppurating wound Fig. 6) were recovered completely after daily using of systemic administration of antibiotic accompanied with local surgical manipulation of the affected areas. Recovery was obtained by secondary intention.

Pathological findings:

The pathological findings of the examined lesions showed the presence of papilloma in 5 cases, dermoid cysts in 3 cases, unilateral acute serofibrinous orchitis and chronic organized fibrinous orchitis in 3 cases.

Microscopical findings:

Dermoid cyst: It is a tumour composed of multiple tissues foreign to the site of the growth. It consists mainly of ectodermal structures such as skin and its appendages, lining of stratified squamous epithelium enormous number of hair follicle and sebaceous gland (Fig. 7), where the neoplastic stroma is well developed. Degenerative and necrotic changes are slight.

Acute serofibrinous orchitis:

Grossly the testis (unilateral) was severely enlarged with somewhat fluctuious

in consistency, while in cut section a huge amounts of bloody serofibrinous exudates oozed from the cavity of tunica vaginalis of testis were observed.

Microscopically severely necrotic and destructed seminiferous tubules which lake an irregular contour and separated by the above serofibrinous exudates, inflammatory cells and congested blood vessels (Fig. 8 & 9) were seen.

Chronic organized fibrinous orchitis:

Grossly there was slight enlargement of the testis with some areas of firm or hard consistency. On cut section few amounts of thick fibrinous exudates were detected.

Microscopically in the superficial layers there was thick organized fibrinous layer from parietal and visceral layer of tunica vaginalis, while the underlying seminiferous tubules suffered from degeneration and pressure atrophy (Fig. 10 & 11).

DISCUSSION

The most surgical affections recorded in camels were summerised as cutaneous swellings like papilloma and Dermoid cysts, these results are in agreement with that obtained by SHABAAN, et al. (1985). In this work, cutaneous swellings mainly affect limbs and neck, FOUAD, et al. (1984) noticed fibroma at the neck in camels while SHABAAN, et al. (1985) noticed these tumors situated in the ventral aspect of the neck and near the base of prepuce.

In the present study, dermoid cysts were seen in the neck of the camel, it was hard, sessile and an orange in size. O'CONNOR (1988) described these lesions at the temporal region in the horse and other animals. While KASSEM and HASSIEB (1986) observed another type of dermoid cyst at the temporal aspect of the cornea and bulberal conjunctiva at the right eye in a male dog. The surgical excision of the dermoid cyst proved to be the successful method for treatment from this affection in domestic animals, (KASSEM and HASSIEB, 1986). While OEHME and PRIER' 1974, Prefer aspiration of the fluid fromthe cyst and cauterizing its lumen.

In this study trauma is considered a main cause of orchitis in camels. This affection may be unilateral or bilateral according to the seats of traumatization, (FRANK, 1964 and RUNNELLES, et al. 1965). Covered bloody castration proved to be the suitable technique for manipulation of orchitis in camels under the effect of tranquilizer and ring block of spermatic cord by procaine Hcl 3%.

Local Hyperkeratosis was seen at the chest in calves, FOUAD, et al. (1984) described this lesion at the neck wither and chest in buffalo, cow and camel as localized affection. He added that when the affection is generalized all over the body, the limbs were the prediliction seats of hyperkeratosis.

CAMEL AFFECTIONS

In the present work open joint commonly affected the carpal joint in camel as a result of penetrating wound by sharp object. These results are agreement with that discussed by VENNGOPALAN, (1982) in horse.

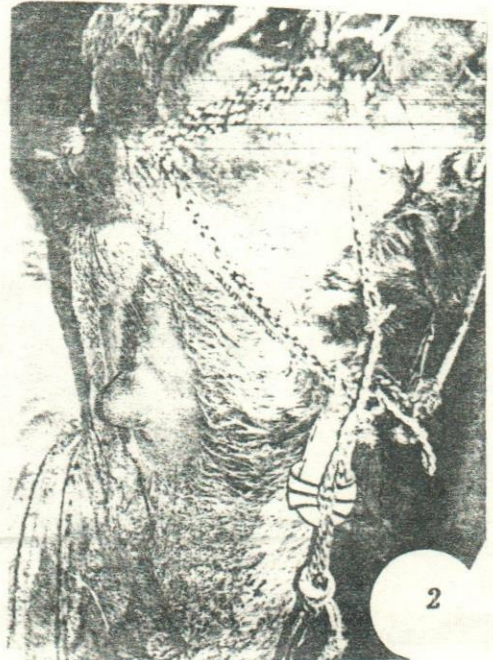
The predilection seat for suppurating wound in camels was the base of the neck usually due to infection of the prescapular lymphnode, while WILSON (1989) stated that the infection may be as a result of biting or action of the insects.

REFERENCES

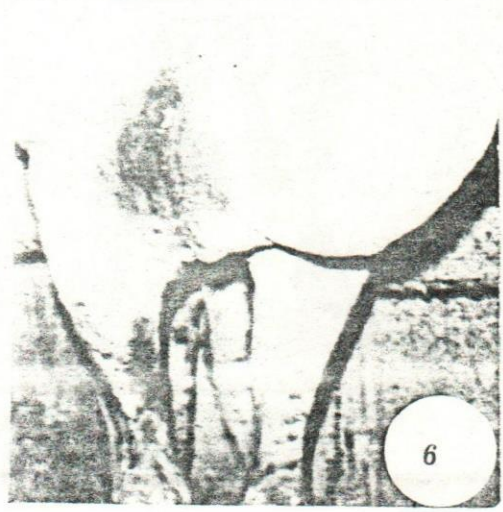
- Boddie, G.F. (1956): Diagnostic method in Veterinary Medicine 4th Ed. Alivere and Boyd, Edinburghs, Tweeddale court, London.
- Blood, D.C.; Henderson, J.A. and Radostits, O.M. (1979): Veterinary Medicine 5th Ed. The English Language book Society and Baillere Tindall.
- Carleton, M.A.; Druny, G.A.; Willington, E.A. and Commeron, H. (1969): Cpreleton's histological Technique 4th Ed. Oxford Uni. Press, New York, Toronto.
- Frank, E.R. (1964): Veterinary surgery 7th Ed. CBS publishers & Distributors, Shahdra, Delhi, India.
- Fouad, K.; Misk, N.A. and Kassem, M.M. (1984): Studies on certain skin affections among ruminants. Assiut Vet. Medical J., Vol. 11, No. 22, pp. 183-187.
- Kassem, M.M. (1981): Studies on surgical affections of the skin in domestic animals in Egypt. A thesis presented for M.V.Sc. to Faculty Vet. Med., Alex. Univ.
- Kassem, M.M. and Hassieb, M.M. (1986): A corneo-conjunctival Dermoid cyst in a day. Vet. Med. Review, No. 1, pp. 74-76.
- Kelly, W.R. (1978): Veterinary clinical Diagnosis 2nd Ed. Bailer-Tindall, London.
- O'Connor, J.J. (1980): Dollar's Veterinary Surgery 4th Ed. Baillere, Tindall and Cox., London.
- Oehme, F.W. and Prier, J.E. (1974): Textbook of large animal Surgery. 1st Ed. The Williams and Wilkins Co., Baltimore, U.S.A.
- Runnells, R.A.; Monlux, W.S. and Monlux, A.W. (1965): Principles of Vet. Pathology 7th Ed. Scientific Book Agency, 22 Rago Woodmunt st. Cakutta.
- Shabaan, I.A.; Soliman, I.; El-Meligy, A. El-Seddawy, F. and Moustafa, M.A.A. (1985): Prelimanar studies on cutaneous neoplasma of one humped camels (Camelus Dromedarius). Zagazig Vet. Med., Vol. 12, pp. 326-339.
- Smith, H.A.; Jones, J.C. and Hunt, R.D. (1972): Veterinary Pathology 4th Ed. Lea & febiger Philadelphia, U.S.A.
- Uddal, D.H. (1972): The practice of Vet. Pathology 6th Ed. Oxford and IBH publishing Co. New Delhi, India.
- Venngopalan, A. (1982): Essential of Veterinary Surgery 4th. Oxford & IBH Publishing Co., New Delhi Bombay Calcutta.
- Wilson, R.T. (1989): The camel 1st Ed. The English Language Book, Society and Baillere Tindall.

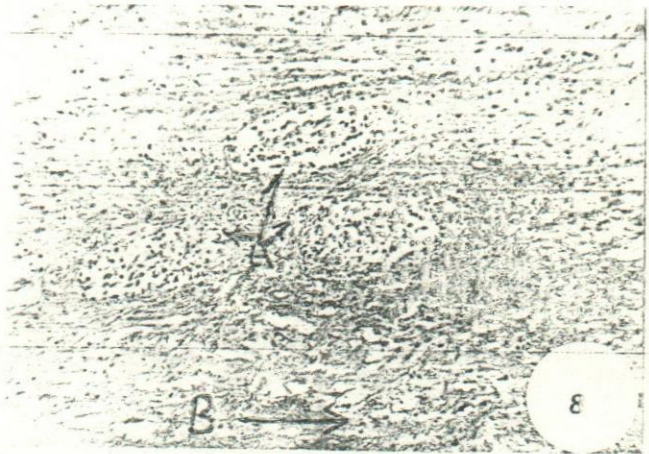
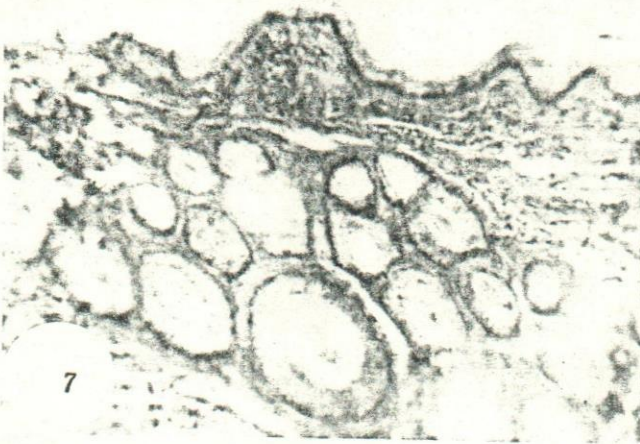
LEGENDS TO ILLUSTRATIONS

- Fig. (1): Cutaneous swelling (papilloma) at the dorsal aspect of the carpal region.
 Fig. (2): Cutaneous swelling (Dermoid cyst) at the right side of the neck.
 Fig. (3): Unilateral Acute orchitis in a camel.
 Fig. (4): Hyperkeratosis of the chest pad in camel.
 Fig. (5): Open carpal joint in a camel.
 Fig. (6): Suppurating wound of the distal part of the neck in a camel.
 Fig. (7): Dermoid cyst showing enormous number of hair follicles, epithelial cell lining and well developed stroma (H & E. X-160).
 Fig. (8): Necrosis and desquamation of the cellular contents of numerous seminiferous tubules (A) with slight fibrosis of the intercellular exudates. (H & E. X 160).
 Fig. (9): Severely necrotic and destructed seminiferous tubules of irregular contour (A); separated by serofibrinous exudate (B), inflammatory cells (C) and some congested blood vessels (D) (H & E. X 160).
 Fig. (10): Area of organized fibrinous exudations contains fibroblastic proliferations (A) and numerous congested newly formed blood capillaries (B). (H & E. X s 63).
 Fig. (11): Thick area of organized fibrinous exudation (A), with underlying compressed and atrophied seminiferous tubules (B) separated by some inflammatory cells (C) and serofibrinous exudates (D) Hard. (H & E. X 160).



CAMEL AFFECTIONS





CAMEL AFFECTIONS

