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PREVALENT SURGICAL AFFECTIONS OF THE THORACIC LIMBS IN EQUINES

(With 16 Figs.)

By

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الإصابات الجراحية الشائعة في القوائم الأمامية
للفصيلة الخيلية

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أجريت هذه الدراسة علي عدد 16 حيوان من الفصيلة الخيلية وجمعت هذه الحالات من قسم الجراحة بكلية الطب البيطري بأدفينا وتم فحص الحالات إكلينيكيًا والتدخل الجراحي تحت تأثير مخدر الكلورال ايدرات كمخدر عام . وقد وجد أن الإصابات الشائعة في القوائم الأمامية في تشقق الحافر - إنقلاب السلاميات للأمام - تعظم مفصل العقصم - أرقام ليفية - ورقم نسيج خام وأخيرًا الكسور .

SUMMARY

In the present study, 16 animals of equine species were collected from the clinical cases presented to the clinic of the Fac. Vet. Medicine, Edfina. All cases were subjected to clinical examination and surgical interventions under chloral hydrate narcosis. Results indicated that, the most common surgical affections of the thoracic limbs in equines were Hoof crack, fractures, tendinitis and septic arthritis, knuckling at fetlock, ankylosis and dorsal flexion of fetlock joint, sarcoid, fibroma, and hypergranulation tissue in the different parts of the thoracic limbs.

INTRODUCTION

Congenital contraction of the flexor tendons in one or both tendons may affect one or more limbs. When both flexor tendons are affected there is complete flexion of the fetlock joints (FRANK, 1964).

ADAMS (1974) reported that the most lameness involve the lower limbs, with the foreleg being affected more often than the hind because of the greater stress placed upon the fore limbs during weight bearing and location. The most common foreleg lameness occur below the carpus.

Flexion of the fetlock in adults may be due to cicatricial contraction of the tendons following chronic tendinitis, or shortening of these structures may be secondary to other lesions. The condition interfere more or less with the normal support of weight on the limb, causing the fetlock to assume a permanent degree of flexion (O'CONNOR, 1958).

Sarcoids are specific fibromas occurring in the horse and frequently recur after surgical removal. Fibromas are tumours composed of fully developed connective tissue. They are firm pedunculate or sessile swellings occurring at any location on the body (OEHME and PRIER' 1976).

Cryosurgical treatment was carried out on donkeys affected with sarcoids. It is concluded that cryosurgical treatment should be regarded as one of the treatment of choice for sarcoids in donkeys whenever the cryosystems are available (OMAR; ABD-EL-MABOUD; HASSANEIN; KAMEL and AWAD, 1985).

MAKADY; MAHMOUD and YOUSSEF (1987) recorded that five cutaneous growths were found on the inner aspect of the thigh and three on the medial and anteromedial aspect of the leg. The examined tumours were associated with exuberant granulation tissue.

Sand cracks identified as toe, quarter or heel cracks depending upon their location in the hoof wall and may occur in either the front or hind feet. Paring the lips of the crack is essential for relief of pressure, improve lameness and promote healthy horny material formation. (O'CONNOR, 1958 and ADAMS, 1974).

HEGAZI; FAHMY; KHAMIS and SAID (1982) stated that the most common anatomical sites of equine tumours were the eye, limbs and genital organs. The most frequent types of neoplasms were fibromas, squamous cell carcinoma, sarcoids, Melanoma and papilloma.

MATERIAL and METHODS

The present study was carried out on 16 animals of equine species (4 horses and 12 donkeys) suffering from some surgical affections of the thoracic limbs. These cases were admitted to the clinic of Faculty of Vet. Med., Alex. University at Edfina. The affected animals were subjected to clinical examination and surgical treatment. Surgical procedures for removal of the tumours at the thoracic limb were carried out under

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the effect of local infiltration analgesia using 2 per cent procaine hydrochloride and chloral hydrate intravenous anaesthesia. Each site of operation was prepared for aseptic surgery.

RESULTS

In a male donkey a transverse hoof crack at the left thoracic limb was present. The crack was superficial and a piece of the horny wall including the crack was removed. After 3-4 weeks the gap was filled by a thin layer of horny material which began to increase gradually until the whole gap was filled with healthy horny material. At the same limb, old septic wound with skin necrosis was present above the fetlock as the result of rope or wire tied around the metacarpal region. The wound responded to the treatment using Hydrogen peroxide and tincture of Iodine after removal of necrotic tissues (Fig. 1).

Examination of the fetlock joint of both thoracic limbs in a female horse revealed flaccid collateral ligaments around the fetlock and pastern. The fetlock joint turned at right angle in a state of permanent flexion.

Laminitis and destruction of the horny material of the hoof were observed. Plaster of paris bandage was applied to maintain the limbs to the normal position (Fig. 2).

Dorsal flexion and severe ankylosis of the fetlock joint of both thoracic limbs were observed in a female donkey. The first phalanx was nearly horizontal forming right angle between it and large metacarpal bone as well as with the second phalanges (Fig. 3). The animal was unable to walk and bore weight on the heel of the hoof. X-ray film showed ankylosis of the fetlock joint with osselet formation (Fig. 4). This case did not respond to any treatment.

Septic arthritis of the fetlock joint was recorded in the right thoracic limb in a donkey. The condition was characterized by severe lameness and the animal was unable to bear weight during progression. There are also skin ulcer over the fetlock joint and acute tendinitis at the flexor tendons (Fig. 5). Good results were obtained after treatment using intra-articular injection of penicillin and hydrocortisone.

Old healed fracture at the upper extremity of the large metacarpal bone was recorded in a donkey. Faulty callus formation at the site of the fracture leads to deformity of the carpal joint. This case was considered incurable (Fig. 6).

A large size fibroma weighed 1.5 Kilogram was located at the large metacarpal and fetlock region of the left thoracic limb in a donkey. The tumour was excised and complete recovery resulted one month later (Fig. 6 & 7). Histopathological examination of the tumour revealed fibroblast cells with abundant stroma of collagen fibers.

Fibroma and severe dermatitis were observed in knee region of both thoracic limbs in a donkey (Fig. 9).

In another case a large sarcoid tumour was present at the posterior aspect of the fetlock and pastern region of the left thoracic limb. The tumour surface was ulcerated, moist, oozing blood and of blackish coloration. Surgical excision of the tumour was performed (Fig. 10).

Two donkeys were presented to the clinic with hypergranulation tissues at the posterior aspect of the fetlock joint of right thoracic limb in one animal (Fig. 11) and at the medial aspect below the knee joint in the other animal (Fig. 12).

Hypergranulation tissue at the medial aspect of the elbow region was observed in one animal (Fig. 13 & 14) and at the lateral aspect in the other animal (Fig. 15 & 16).

In all cases, the tumours were removed, recovery was uneventful and healing took place by first intention.

DISCUSSION

The aim of the present study is to detect the prevalent surgical affections of the thoracic limb in equine, symptoms observed in these cases included permanent flexion of fetlock joint, the animal was unable to walk and beared weight on the heel of the hoof. These findings were in agreement with that was mentioned by FRANK (1964), ADAMS (1974) and O'CONNOR (1958).

In our findings the plaster of paris bandage used for treatment of flexion of the fetlock joint was good enough and practicable. These findings were in agreement with that was mentioned by O'CONNOR, (1958). On the other hand the affected donkey with fetlock joint ankylosis and osseletes did not respond to any treatment.

When the hoof crack was superficial and a piece of the horny wall including the crack was removed, after a 3-4 weeks the gap was filled with healthy horny material. These results are in agreement with those mentioned by O'CONNOR (1958) and ADAMS (1974).

In the present study a large size fibroma weighed 1.5 kilogram was located in the carpal region. The tumour was removed surgically and complete recovery was observed. On the other hand OMAR, et al. (1985) used cryosurgical treatment for removal of sarcoids in donkeys.

Among the collected cases of tumours in the thoracic limbs of equine, the most common anatomical sites of these tumours were the lateral and medial aspect of the

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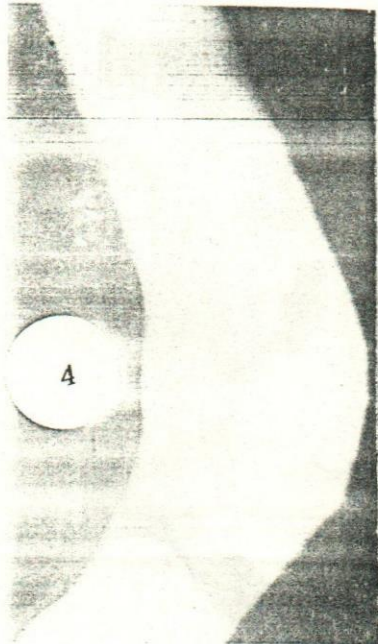
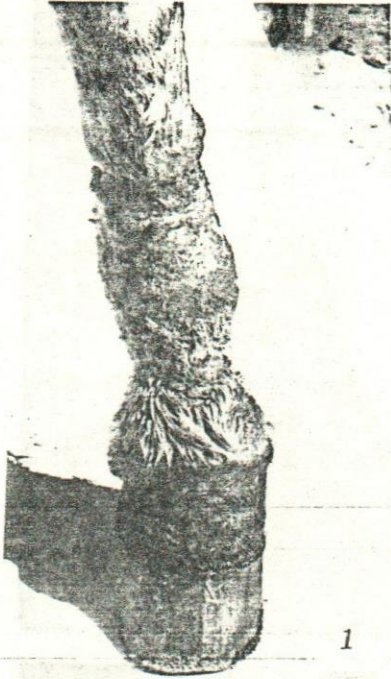
knee joint, elbow region, and at the caudal and cranial aspect of the fetlock as well as the lateral and medial aspect of the fetlock.

REFERENCES

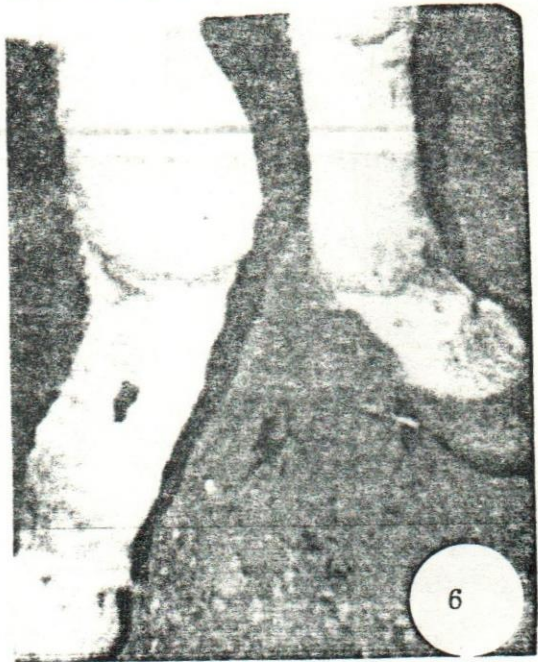
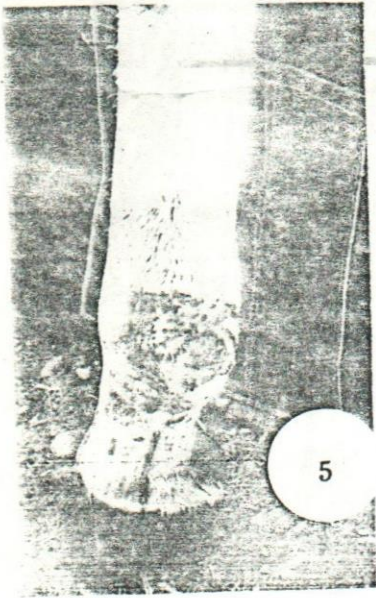
- Adams, O.R. (1974): Lameness in horses. 3rd Ed. Lea & Febiger. Philadelphia, 320-322.
- Frank, E.R. (1964): Veterinary surgery. 7th Ed. Burgess, Publishing comp. 202-203.
- Hegazi, A.; Fahmy, L.; Khamis, Y. and Said, A. (1982): Pathological studies on equine tumours. Res. bull. No. 798, Zagazig Univ., 1: 22.
- Makady, F.M.; Mahmoud, A.Z. and Youssef, H.A. (1987): Sarcoid in donkey. Assiut Vet. Med. J., No. 37, 19.
- O'Connor, J.J. (1958): Dollar's Veterinary surgery. 4th Ed. Baillive Tindall, London, 846, 944.
- Oehme, F.W. and Prier, J.E. (1974): Textbook of large animal surgery. 1st Ed. the Williams & Wilkins Comp. baltimor, U.S.A., 192: 193.
- Omar, M.; Abd-El-Maboud, M.; Hassanein, A.; Kamel, A. and Awad, M. (1985): Cryosurgery in animals: 1- Cryosurgical treatment of sarcoids in donkeys. Vet. Med. J., Vol. 33, No. 2, 55: 64.

LEGENDS

- Fig. (1): Transvers Hoof crack in a donkey.
- Fig. (2): Flexion of fetlock in a horse.
- Fig. (3): Flexion and ankylosis of fetlock in donkey.
- Fig. (4): X-ray film showed bony exostosis at fetlock.
- Fig. (5): Arthritis and tendinitis in a donkey.
- Fig. (6): Fracture of large metacarpal bone in a donkey.
- Fig. (7): Fibroma at the left thoracic limb.
- Fig. (8): The same limb after recovery.
- Fig. (9): Fibroma at the carpal region in both thoracic limb.
- Fig. (10): Larger sarcoid at the posterior aspect of fetlock.
- Fig. (11): Hypergranulation tissu at the post. aspect of fetlock.
- Fig. (12): Hypergranulation tissue at the medial aspect below the Knee joint.
- Fig. (13): Tumour at the medial aspect of the elbow.
- Fig. (14): The same after operation.
- Fig. (15): Hypergranulation tissue at the lateral aspect below the elbow.
- Fig. (16): The same after operation.



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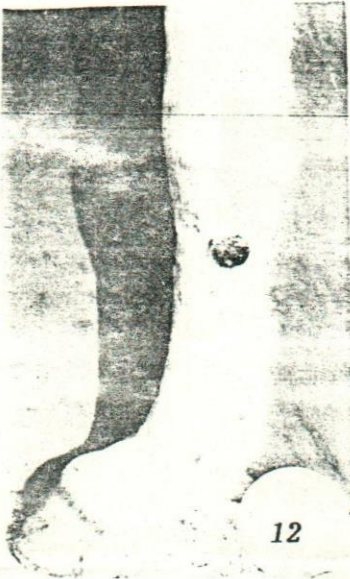
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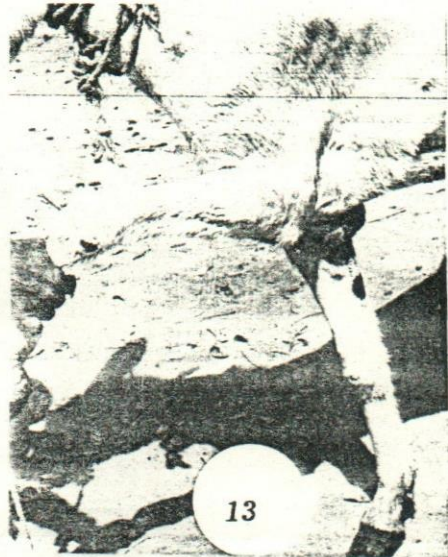
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