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# CLINICAL SURVEY ON EQUINE LAMENSS IN THE PROVINCE OF MOSUL, IRAQ

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## SUMMERY

During the 100 yaers (358) horses were examined for detection of lameness. The result of detailed investigation reveiled that (91) and (45) horses with fore and hind limb lameness respectively. Lameness were found to be originated from the fore limb were included shoulder, elbow, radius, carpal, metacarpal, fetlock, phalanx and hoof regions at (0.7%), (5.1%), (2.9%), (12.5%), (15.6%), (9.6), (7.3%) and (13.9%) respectively. While the hind limb lameness were included in thigh, stiffle, tibial, tarsal, metatarsal, fetlock, phalanx and hoof regions at (0.7%), (2.9%), (0.7%), (8%), (8.8%), (1.4%), and (3.3%), respectively.

## INTRODUCTION

Lameness is an impaired movement or deviation from normal gait caused by functional disorder of the musculokeletal system (1.2). A number of conditions which cause lameness in different regions have been described in literatures. Arthritis and joint degeneration were regarded problems and have been treated for many years by blistering, cautery or intra-articular cortisones or by sodium hyaluronate therapy combined with a period of convalescence of one to three months (4,4). The success of the equines long bone fracture repair depends largely on the initial

investigation and the swelling, oedema and damage of muscles and vessels which occurs rapidly in the fractured leg (5). The fracture of the carpal bones are commonly due to the injuries performed during speed. Most of these fractures are small chips involving the dorsal articular borders of the distal protion of the radius, proximal and distal procion of the radial and intermediate carpal bones as well as the proximal aspect of the third carpal bone (6). Lameness of shoulder region are due to the aseptic necrosis of humeral head in foals and secondary to degenerative joint diseases (7). The stifle joint injuries constitute an important cause of hide limb lameness in horse (8), while other studies (9,10) reported that the lameness of stifflejoint are due to gonitis or patellar fixation. Laminitis caused by a transitory inflammation followed by congestion of the sensitive laminia which occurs as an acute, subacute or chronic in all four feet, but very accasionally only in the nind feet or in a single foot (11). A radiography is a precise procedure, providing detailed information about an area to which attention has already been draw (12).

The purpose of this paper is to document limb lameness cases which diagnosed on the basis of clinical and radiological investigation referred to the clinical of veterinary surgery the past (10) years.

## MATERIAL AND METHODS

The case material consisted of (136) horses referred to the two clinical centers (Veterinary Hospital Clinical and College Clincal Teaching Center) of the College of Veterinary Medicine, Unversity of Mosul, between January 1983 and Desember 1992 for investigation of lameness problems. The diagnosis were depended on case history, clinical examination and radiography of the affected region. The clinical examination involved a physical examination for the lame limb(s) at rest and during exercise. The

tentative diagnosis for the involved region was carried out by regional nerve block, when necessory as well as by radiography.

## RESULTS

The total number of horses affected from lameness, originated from the fore or hind limb, were (91) and (45) animals, respectively. Consequently the different types of fore and hind limb lameness cases are summarized in Tables number (1) and (2), represented in Figures 1, 2, 3 and 4.

**Table 1 : Summary of the fore limb lameness for (91) animals.**

| Region | Diagnosis | Causes | No. of animals |
|---|---|---|---|
| Shoulder | soft tissue lesion | trauma by kick | 1 |
| elbow | fracture of olecranon | trauma by kick | 1 |
| | septic arthritis | fall down | 2 |
| | acute arthritis | fall down | 1 |
| | soft tissue lesion | sharp | 3 |
| radius and | fracture of radius and | accedint | 4 |
| ulna | ulna | | |
| ulna | fracture of carpal joint | fall down | 3 |
| carpal | osteoarthitis | trauma | 2 |
| | arthritis | trauma | 5 |
| | ankylosis | trauma | 1 |
| | soft tissue lesion | trauma | 6 |
| metacarpal | fracture of third | car accident | 1 |
| | metacarpal bone | contusion | 14 |
| | tendenitis and rupture of | contusion | 2 |
| | tendone | | |
| | excstosis | trauma | 3 |
| | soft tissue lesion | accident | 2 |

| | | | |
|---|---|---|---|
| | fracture | trauma | 1 |
| | sublaxation | trauma | 1 |
| | osteoarthritis | contusion | 6 |
| | arthritis | contusion | 1 |
| | ankylosis | contusion | 1 |
| | tendenitis | sharp object | 1 |
| | soft tissue lesion | accident | 4 |
| phalanx | fracture | trauma | 2 |
| | ring bone | trauma | 3 |
| | arthritis | fall down | 1 |
| | soft tissue lesion | accident | 3 |
| foot | penetrated by nail | trauma | 2 |
| | sand crack | not trimming | 3 |
| | over growth of hoof | stone | 1 |
| | corn | bad hygeine | 2 |
| | quittor | trauma and penetrated forgien body | 3 |
| | laminitis | endotoxine and trauma be sharp object | 5 |

**Table 2 : Summary of the hind limb lameness for (45) animals**

| Region | Diagnosis | Causes | No. of animals |
|---|---|---|---|
| thigh | soft tissue lesion | bite | 1 |
| stifle | up ward fixation of patella | fall down | 2 |
| | soft tissue lesion | trauma | 2 |
| tibia | soft tissue lesion | fall down | 1 |

| | | | |
|---|---|---|---|
| tarsal | osteoarthitis | trauma | 1 |
| | arthritis | trauma | 4 |
| | exostosis | trauma | 2 |
| | suppurative arthritis | sharp object | 1 |
| | soft tissue lesion | fall down | 2 |
| metatarsal | splint | trauma | 1 |
| | fracture of third metatarsal bone | accident | 1 |
| | exostosis | trauma | 1 |
| | tendenitis | sharp object | 7 |
| | soft tissue lesion | trauma fall down | 1 |
| | | | 8 |
| fetlock | arthritis | trauma | 1 |
| | ankylosis | trauma by kick | 1 |
| | tendenitis | trauma | 2 |
| | soft tissue lesion | accident | 1 |
| phalanx | fractyre | trauma | 1 |
| | ring bone | trauma | 2 |
| foot | quittor | bad hygeine | 1 |
| | penetrated by nail | foreign body | 1 |

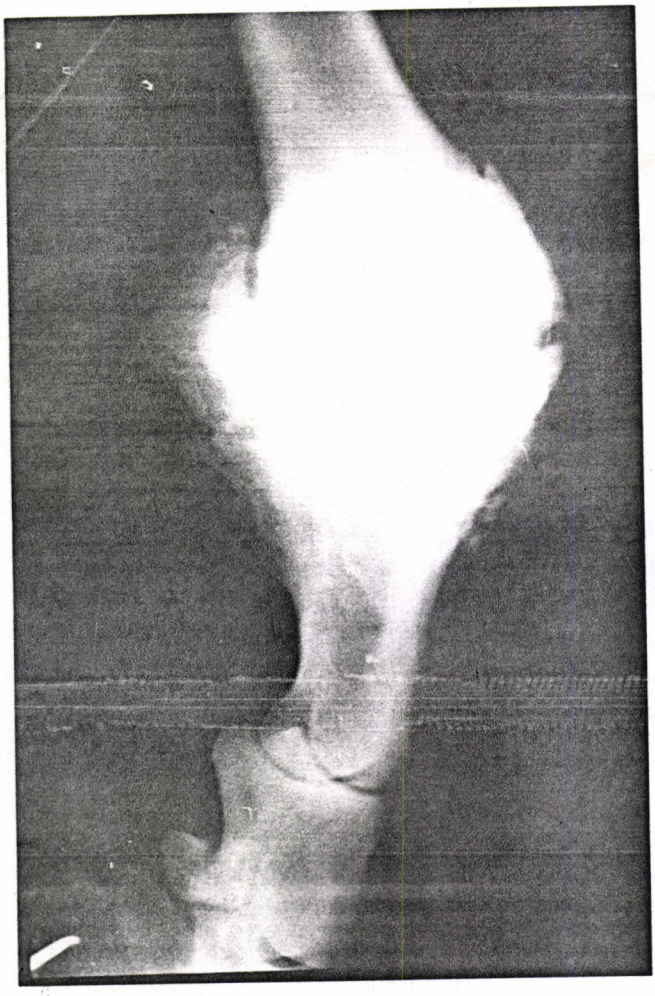

**Figure 1 : Osteoarthritis of fetlock joint with severe ankylosis**

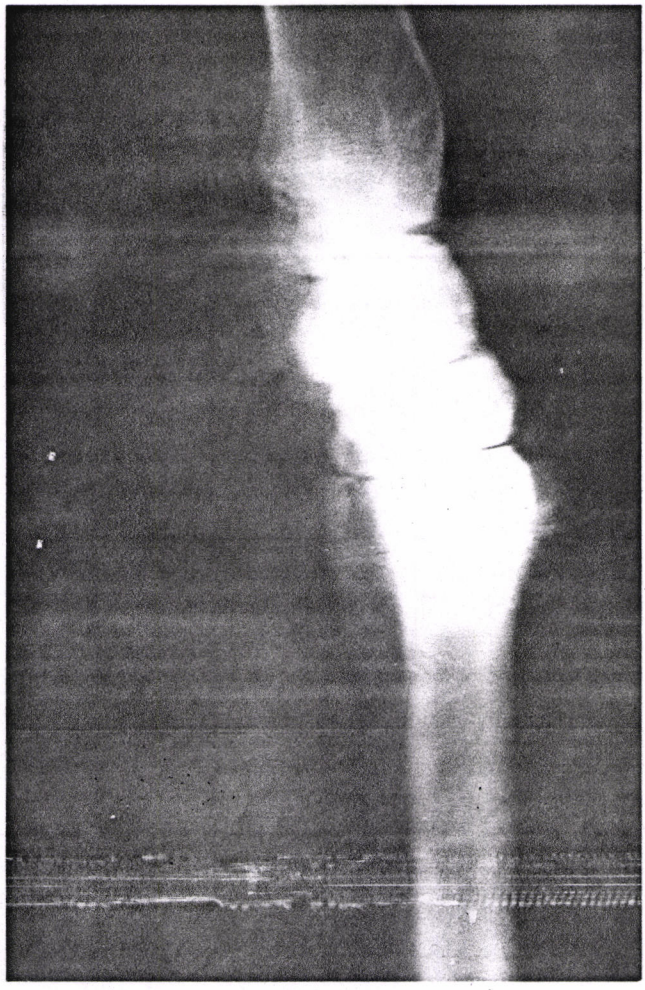

**Figure 2 : A third metacarpal priostitis 9sore shin).**

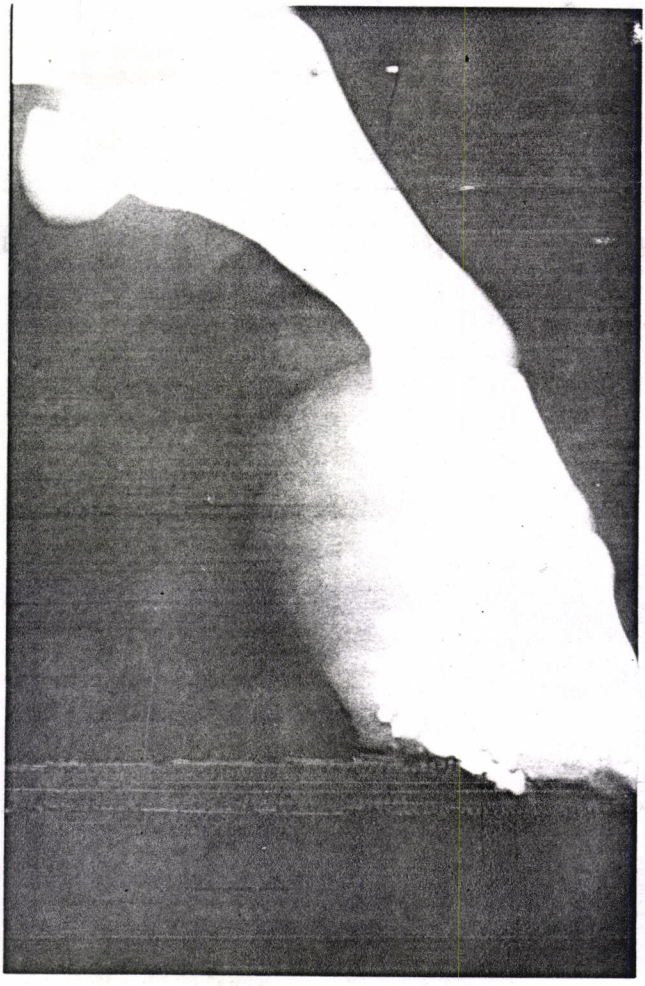

**Figure 3 : A radiograph of fetlock joint with subluzation**

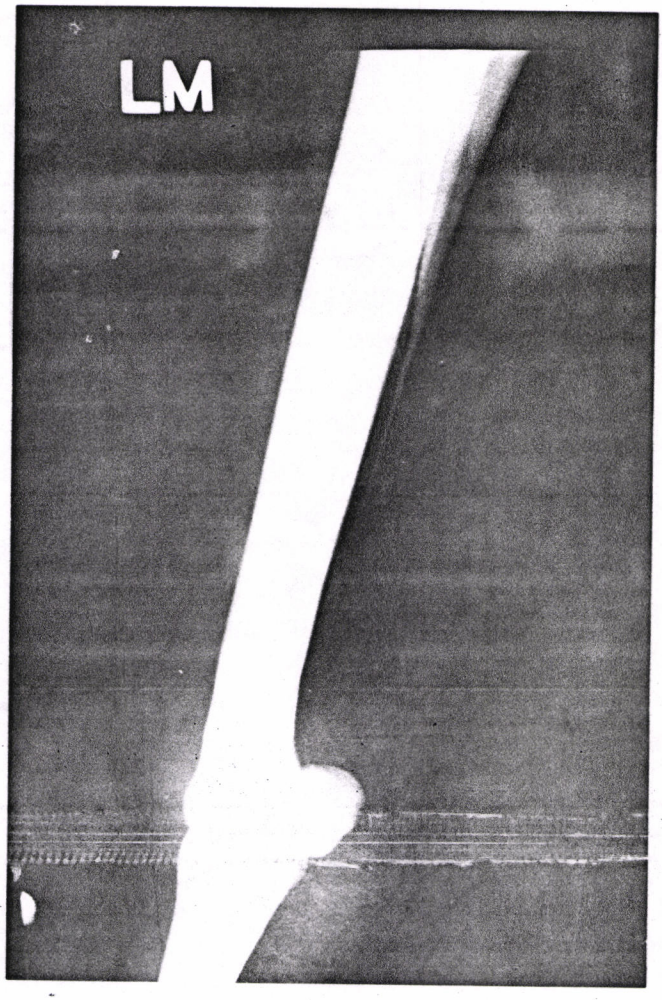


**Figure 4 : A radiograph of metacarpal region with tendenitis.**

## DISCUSSION

Approximately all animals refered for lameness problems in the present investigation were identified by case history, complete physical examiation together with radiological findings. The high incidence rate of soft tissue damage in both fore and hind limbs observed here indicated that the number of structures that become damaged with deep infected wound formation depends upon the nature of causative agent, agent, agreed with the observation showed by other workers (8, 12). The incidence of soft tissue damage was high and their prognosis mostly depended on the nature of penetration to the deep structures. If it is sever to joint or bone the prognosis was poor, that was agreed with the similar observation noted by (13, 14) which it was reported, that trauma on stifle joint usually not dangerous unless the joint is damaged. The increase incidence of structured bone at the distal extremities of both fore and hind limb below the carpal and tarsal joints reported here may be due to the bones of distal extremities are superficial when compared with the bone of the thigh and shoulder region which are covered by large masses of muscles. The prognosis of such cases depends upon location and configuration of the fracture, and also shows a close relationshipbetween the fracture morphology and the patteren of damage sustained by the periosteum and bone narrow structure (15).Perforated ounds in the joint mainly caused by sharp objects lead to swelling around and within the joint with suppurative or chronic inflammation depends on the severity of the condition. The response to treatment was poor. similar findings showed by other workers (2, 16), were reported in pigs and horses respectively. The osteoarthritis (figure 1)might be due to repeated tramua in the joint or from secondary joint degeneration (14, 17). The osteoarthritis could be primary when interinsic degeneration of the articular cartilage under lying the development of the disease or secondary when their were predisposing factor such as tramuma (18). The severe

osteoarthritis, infections arthritis or fracture with severe injury to articular cartilage causes a complete closure to the space of the joint, this called ankylosis (17). Stimulation of the periosteum and formation of a new bone is called ring bone when it occurred at the level of fetlock joint, but it is called exostosis (figure 2) or periostitis (19) when it occurs over the level of fetlock joint. Up ward luxation of the patella on the medial trochlea of the femur between the middle and medial patellar ligaments, which prevents flexion of the affected hind limb. The cause observed here was due to trauma caused by fall down as a result of over extended hind limb (19).

Subluxation of fetlock joint reported in this dtudy (figure 3) was a sequelae to a severe trauma lead to a damage to joint capsule and the surrounding ligaments and the radiography was used to confirm the degree of the the subluxation or luxation and the associated fracture if it is present (20). The cases of tendenitis observed in this study (figure 4) were either acute or chronic and were recognized and treated by the methods described previously (19, 21). The foot affections recorded here classified into : foreign body penetration of the sole, frog, bar, coronary band hoof wall cracks and affection of sensitive laminae of the hoof.

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## دراسة سريرية لحالات العرج للخيول في منطقة الموصل

بهجت طيفور عباس ، محمد جواد عيسى ، اياد عبد الجبار أمين

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الخـــلاصة

خلال عشرة سنوات فحصت ٣٥٨ حصاناً ، وقد اظهرت النتائج بان ٥٤,٩١ حصانا مصابا بالعراج في الطرف الامامي والخلفي على التوالي. وتبين بان الاصابة في الطرف الامامي تتركز في مناطق الكتف ، المرفق ، الكعبرة ، الرسغ، المشط، المعقم، السلاميات ومنطقة الحافر بنسبة ٠,٧ ٪، ٥,١ ٪، ٢١,٥ ٪، ١٥,٦، ٩,٦ ٪، ٧,٣ ٪، ١٣,٩ ٪ على التوالي بينما اصابت الطرف الخلفي كانت في مناطق الفخذ، الركبة، القصبة، العرقوب، المشط القدمي، المعقم، السلاميات ومنطقة الحافر بنسبة ٠,٧ ٪، ٢,٩ ٪، ٠,٧ ٪، ٨ ٪، ٨,٨ ٪، ٨,٨ ٪، ١,٤ ٪، ٣,٣ ٪ على التوالي. وقد اعتمد تشخيص هذه الحالات على الاشعة والفحص السريري للحيوان.