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تقرير علمى لحالة علاج كسر بالسلامية الأولى
فى حمـسـأر

يسرى خميس ، عادل حسنين

التقرير تسجيل لحالة نادرة لكسر مشطوف النوع بالسلامية الأولى فى حمار نتيجة
لحادثة حركة

فُحصت على الفور بواسطة الأشعة السينية ثم أُجريت عملية جراحية لاستئصال
الجزء المشطوف من العظمة . وتم الالتئام بصورة جيدة واستأنف الحيوان
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A CASE REPORT ON
TREATMENT OF CHIP FRACTURE IN THE FIRST PHALANX OF ADONKEY
(WITH 2 FIGURES)

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Fracture of the first phalanx occupies about 15% among fractured extremities of equines admitted to the Surgery Clinic, Faculty of Vet. Med., Cairo University (FOUAD ET AL., 1981). According to ADAMS (1974), chip fractures of the proximal end of the first phalanx are relatively common in the forelimb of the horse. Most fractures of this type involve the anterior surface of the proximal end, just medial or lateral to the common digital extensor tendon.

The surgical interference for treatment this type of fracture in Egypt is still limited up till now, owing to the possible complications. In this report, surgical treatment of recent chip fracture in the first phalanx of a donkey was tried.

Anamnesis:

A 5 years old male donkey was presented on 18/2/1981 to our clinic, with a history of sudden lameness in the left forelimb due to accidental trauma by a motor-car.

Clinical Examination:

On clinical examination, the animal showed severe lameness and was hesitating to put any weight on the affected limb. Slight swelling was observed on the pastern area. Passive movement and rotation of the fetlock joint revealed severe reemarkable pain. Crepitation was absent.

The radiological examination (Dorsopalmar view) revealed the presence of a small chip fracture at the anterior lateral aspect of the proximal end of the first phalanx. The fracture segment was completely separated and placed inside the fetlock joint (Fig. 1).

It was decided to remove this bony fragment surgically.

Anaesthesia:

Deep narcosis was applied using chloral hydrate in a dose of 5 gm/50 Kg body weight, 10% aqueous solution, intravenously.

Operation:

The site of the operation was prepared for aseptic surgery after application of a tourniquet on the forearm. A longitudinal incision about 6 cm long was made between the common and lateral digital extensors at the level of the fetlock joint. The incision continued through the fascia and the volar annular ligament of the fetlock exposing the joint capsule. The capsule was then severed. The joint was slightly flexed to have a better orientation of the different structures. With a dissecting forceps, the bone fragment was caught and separated cautiously from the surrounding tissues using a curved scissor. The joint capsule was closely approximated with simple interrupted suture using 00 plain catgut and a round needle No. 9. Before complete closure of the capsule, one million i.u. of penicillin G. sodium dissolved in 5 ml aqua bidistillata, was instilled into the joint cavity. The subcutaneous fascia was approximated with 0 plain catgut using a simple interrupted suture pattern. The skin was closed with silk using Halsted suture. A supportive bandage reaching the middle of the carpus, including hoof, was applied.

Post-operative Care:

The animal received a prophylactic dose of antitetanic serum (1500 i.u./s.c.) as well as a systemic course of antibiotic (2 million i.u. procaine penicillin + 2.5 gm streptomycin) intramuscularly for 4 successive days. The sutures were removed on the tenth day after operation.

RESULTS

The healing of the operative wound passed without complications. The lameness disappeared completely after 10 days and the animal regained its normal gait. The radiological findings, 3 weeks post-operatively (Fig. 2), showed absence of the separated bony fragment as well as absence of any pathological reaction at the articular surface. The donkey resumed normal work within one month after operation.

DISCUSSION

Chip fracture of the proximal extremity of the first phalanx are frequent metwith in horses (PEZZOLI, 1972; FACKELMAN, 1973; ADAMS, 1974; DIETZ ET AL., 1974; OEHME and PRIER, 1974; JOHNSTON, 1975 and LEMMER, 1976). Regarding the etiology of this special type of splintered fracture, it seems that overextension of the joint especially during galloping, constitutes an extreme stress over the anterior aspect of the proximal end of the first phalanx which is naturally pressed against the third metacarpal bone. Undoubtedly, limb fatigue is a predisposing factor in overextension of the metacarpophalangeal joint (ADAMS, 1974).

On the contrary to the presented case, the medial side of the proximal extremity of the first phalanx is usually more affected than the lateral side (ADAMS, 1974; OEHME and PRIER, 1974 and JOHNSTON, 1975). This could be explained, that the animals of the mentioned authors were race horses, whereas the discussed case was due to accidental trauma from outside.

Several radiographic views are necessary to reach an accurate diagnosis and a precise localisation of the fragment. As in the presented case, the fragment was only seen from the dorsopalmar view.

The prognosis of such condition depends mainly on the degree of damage reflecting on the articular cartilage. Moreover, the timing of the operation is decisive, as it is necessary to operate as recent as possible to avoid the expected joint ankylosis due to callus formation.

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Fig. 1: Chip fracture at the lateral side of the proximal end of the first phalanx.
(Dorsopalmar view)

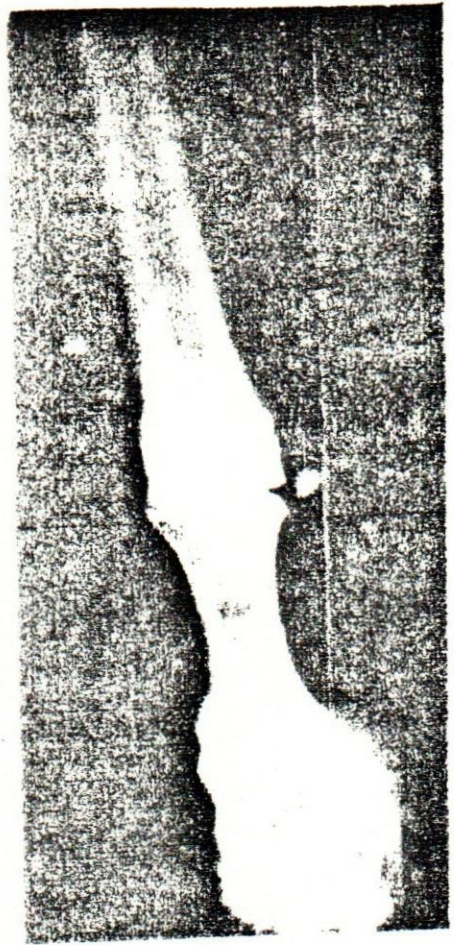


Fig. 2: Radiograph, 3 weeks post-operation.
(Dorsopalmar view)

