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CLINICAL OBSERVATIONS ON HOOF DEFORMITIES IN DONKEYS

(With One Table and 8 Figures)

By

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(Received at 23/11/1988)

ملاحظات اكلينيكية على تشوهات الحافر في الحمير

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تمكن الباحث من خلال هذه الدراسة تتبع عدد ٧٩ حمارا تستعمل لانجاز الأعمال المزرعية في مراكز الانتاج الحيواني بالشرقية وقد وجد أن تشوهات الحافر في هذه الحيوانات بعضها لايصحبه أى مضاعفات تسبب أعراض العرج المزمن وقد تمثلت في الحافر الممتد حديثا خاصة في منطقة مقدم الحافر بينما التشوهات التي صاحبتها مضاعفات مزمنة كانت في الحافر الممتد للأعلى أو للخارج وكذلك الحافر الحلزوني في صورة حافر ملتوى مرة واحدة أو مرتين وكذلك الحافر المتضخم بالمادة القرنية وأيضا الحافر المتقلص . وقد وجد أن هذه التشوهات ترجع الى انعدام العناية بحوافر هذه الحيوانات وكذلك اهمالها وعدم استخدامها للعمل لعدة سنوات لوجود الميكنة الزراعية ؛كذلك ايواها في أماكن ضيقة وعدم تقليم حوافرها. وقد وجد أن أغلب هذه المضاعفات المزمنة قد تمثلت في الالتهاب المزمن بمفاصل السلاميات وكذلك الإوتار وبعض التغيرات المرضية المزمنة التي تؤدى الى تغيير في اتجاه سلاميات وشكل الحافر تغيرا حادا. وقد اعتمد الباحث في هذه الدراسة على الاعراض الإكلينيكية في تشخيص هذه الحالات .

SUMMARY

This study was done on 79 donkey collected from draught animals at the animal health centers in Sharkia province. These animals suffered from recent elongated hooves (uncomplicated form) old elongated hooves, spiral hooves in the form of single or double twist, large massive hooves and small contracted hooves. The said deformities were due to neglect of hoof care, chronic affections and bad hygenic measures. The complications in such chronic cases were clinically recorded including chronic deformed arthritis of the inter-phalangeal joints, chronic flexor tendinitis, beside abnormal angulation of the phalanges and hoof configuration.

INTRODUCTION

In Sharkia province the donkey still plays an important role in transport and riding. Neglection of trimming of the hooves and bad management offered to these species of animals always lead to some deformities in their hooves. In this respect. KHAMIS; AHMED, SOLIMAN ad EASA (1984) found that hoof deformities in donkeys lead to serious clinico-pathological changes as a result of disturbances in the dynamics of the digit. In the meantime the hygenic measures as well as the nutritional disturbances and climatic condition could be considered of importance in induction of hoof deformities in equines as stated by O, CONNOR (1960); ROONEY (1969); ADAM'S (1974) and EMERY; MILLER and HOOSEN (1977).

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In this paper, the author throughs light on certaine patterns of hoof deformities in donkeys at Sharkia province with special emphasis on their complications.

MATERIAL and METHOD

This work was carried on 79 donkeys aging (5-12 years). These animals were 62 males and 17 females. All animals were observed among draught animals used for services in the centers of massive animal production at Sharkia province.

The hooves of the affected donkeys were clinically examined and described in accordance to the lines of the normal hood configuration in donkeys (HIFNY and MISK, 1983).

The classification of these hoof deformities during this work was done as described by KHAMIS et al. (1984).

Trimming of the recent elongated hooves was done on 5 cases.

RESULTS

Clinical observations showed that, deformities of hooves in donkeys could be diagnosed among all limbs. Cases exhibiting hoof deformities could be classified into recent elongated hooves (uncomplicated, 5) and chronic complicated 74 as shwon in table (1).

The uncomplicated form was represented by abnormal elongated hooves especially at the toe region (Fig. 1). These appeared without signs of lameness and only trimming of the excessive horny material was sufficient for correction.

The complicated hoof deformities comprised different varities, that resulted in chronic deformed arthritis of the inter-phalangeal joints, the flexor tendinitis beside chronic deformity of the affected hooves. According to the morphology of the hoof deformities it could be classified into the following patterns.

1- Old elongated hooves (Fig. 2) was diagnosed in 7 animals with abnormal elongation of the wall, that get marked at the toe region. In this from the animal walks on th heels for long duration that resulted in a chronic deformed arthritis at the fetlock joint and horizontal situation of the 1st phalanx or in other words with upright pastern (Fig. 2, R.H. limb). On the contorary to that this elongation may urge the animal to bear weight on the toe region with subsequent raising of the heels and the tendons undergo gradual contraction which agine favours chronic deformed arthritis (Fig. 2, R.H. limb).

2- Deformed hooves (42), in which the distal part of the wall including the toe become concave and grow in upward (Fig. 3, R.F. limb) or and outward diriction (Fig. 4, R.H. limb). In this form the heels were found lowered and chronic tendinitis was the main complication.

3- Spiral deformed hooves (8) is shown in the form of overgrowth of the lateral aspect of the wall which is seen reflected on the solar surface in form of a twist (Fig. 5, L.H. limb) or double twist accompanied with a massive, voluminous

horny material (Fig. 6, L.H. limb). In this form, the animal bears weight on the lateral aspect of the hoof resulting in dislocation of th phalangeal joints.

4- Large hoove (boxy) are characterised by a massive horny secretion (16 case) involving the wall of the affected hoof (Fig. 7). In these cases, the animal usually stumbles during progression and walks as if bearing a heavey weight on the foot region.

5- Condtracted hoof was diagnosed in one case (Fig. 8), in which the animal walked as if going on nails with signs of chronic deformed arthritis and tendinitis at the digital region.

Table (1): Showing the frequency of hoof deformities in donkeys at Sharkia province.

Hoof Patterns	Fore-limb	Hind - limb
1- Recent elongated (without complications)	6	4
2- Old elongated (complicated)	8	6
3- Deformed		
a- upward-deformity	10	22
b- outward-deformity	14	36
4- Spiral form		
a- single twist	-	10
b- double twist	-	3
5- Large massive (boxy)	28	22
6- Contracted form	2	-

DISCUSSION

It had been found that hoof deformities in donkeys could be attributed to persistant standing of these animals in a confined housing without any work or even mild exercise, beside neglection of trimming of their hooves for several years. All these factors were a reflection of the replacement of these animals with motor cars used for transport in most animal health centers at Sharkia province. Moreover, variation in the offered ration to these animals may also play a role in causing these deformities. All these findings were nearly similar to the results of KHAMIS et al. (1984) in donkeys and to some extent aggrees with thestatments of O. CONNOR (1960), ROONEY (1969), ADAM'S (1974) and EMERY et al. (1977).

The present results also proved that not all patterns of hoof deformities are accompanied with complications. This fact could be supported by the recent elongated hoof deformity that requires regular trimming of the excessive horny material. Such hoof deformities represented in the recorded patterns are usually characterized by chronic lesions that affect the efficiency of the animal for work as the result of incurable alterations existing at the different tissue structures of the hoof.

KHAMIS et al. (1984) could diagnose certain patterns of hoof deformities in donkeys through the aid of radiological and histopathological means. In the present

study the diagnosis of the mentioned complications is based only on the clinical examination due to lack of radiological or histo pathological facilites. Naturally such collected cases, could be more investigated if the diagnostic means are available as described by KHAMIS et al. (1984).

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LEDUING OF FIGURES

Fig. (1): Recent elongated hooves (Uncomplicated).

Fig. (2): Old elongated hoof showing upright pastern with chronic deformed arthritis at the fetock joint of both limbs.

Fig. (3): Deformed hoof up-turned (R.F. limb) showing concave wall and the animal walks on the heels.

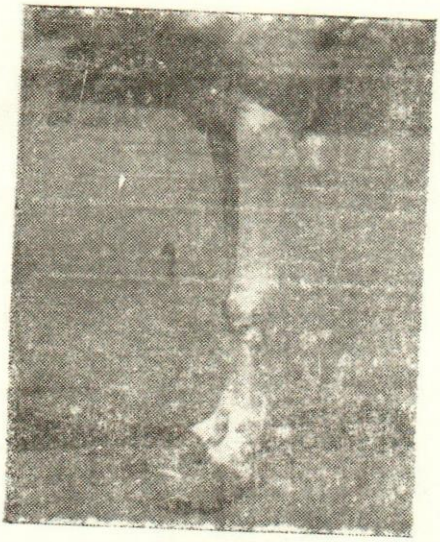
Fig. (4): Deformed hoof turned-out (R.H. limb).

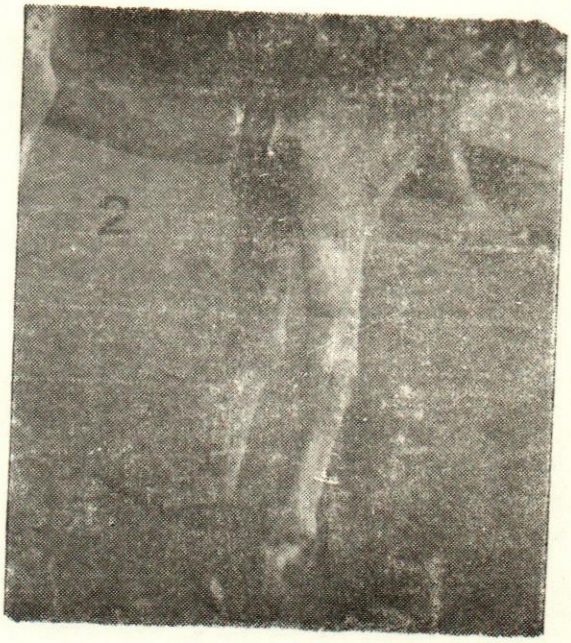
Fig. (5): Spiral hoof (single twist) L.H. limb.

Fig. (6): Spiral hoof (double twist).

Fig. (7): Large massive hoof (boxy) (for-limbs).

Fig. (8): Contracted hoof (fore-limbs).

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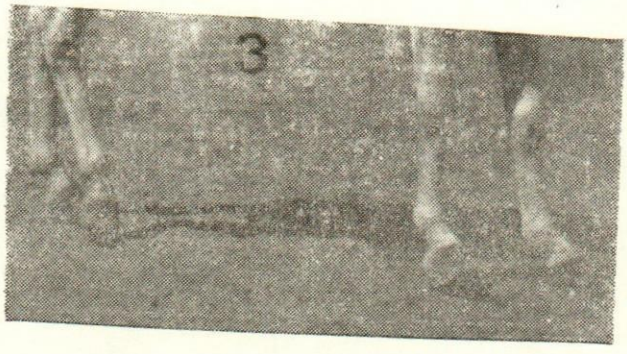
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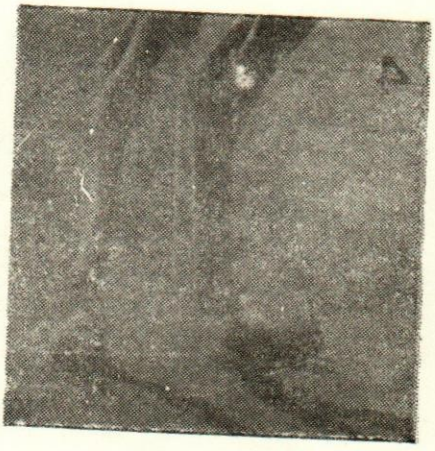
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