

Therapeutic Management Ofosselets in Horses

V. Devi Prasad, Mahesh R., Kamalakar G. and Prasanna Kumar A.V.
Department of Veterinary Surgery and Radiology, College of Veterinary Science, Proddatur

Available online at: www.isca.in, www.isca.me

Received 14th August 2014, revised 25th August 2014, accepted 18th September 2014

Abstract

Traumatic arthritis of metacarpo-phalangeal joint (osselets) is frequently seen in young horses put to hard work or hard. The symptoms recorded were pointing of toes, shortened anterior phase of stride, distended joint capsule with reduced performance. In protracted cases of osselets, in which routine treatment with non-steroidal anti-inflammatory drugs fail, intra articular injections of a combination of hyaluronic acid and methyl prednisolone can prevent progression of osteoarthritis and related untoward effects.

Keywords: Osselets, hyaluronic acid, methyl prednisolone, intra articular injection.

Introduction

Traumatic arthritis of metacarpo phalangeal joint (fetlock) is occasionally seen young horses which are used for hard work. This is technically known as Osselets. Many of the horses that are reared in rural areas do suffer from traumatic arthritis of mild to moderate degree and are not reported early, resulting in the development of osteoarthritis. The present report describes the successful management of osselets through medical management.

History and Clinical Observations

In certain areas of coastal Andhra Pradesh, horses are reared for pulling carts, for carrying bride grooms during marriage celebrations, schools imparting training in horse riding etc. As the remuneration given in these circumstances has been increasing, the fancy to keep a horse has also been increasing with time. However due to ignorance of facts regarding the principles of training, many young horses are given hard training or horses with minor locomotor disturbances are allowed for heavy work. This has been leading to lameness problems in horses.

Four horses in different occasions have been treated for lameness associated with heat, effusion and pain on flexion of the fetlock joints. This was seen in fore feet in three horses while in the other it was in hind feet. In all the cases it was unilateral. The periarticular soft tissue was found thickened with distended joint capsule (figure 1). Lesions were seen on the dorsal surface of the joint. When the horse was made to move, there were signs like shortened anterior phase of stride, pointing on toes etc (figure 2). Occasionally the horse showed a posture that was similar to a conformation defect “camped behind” (figure 3) in an effort to adjust the weight bearing. Vital signs like temperature, pulse, respiration etc. were noted to be in the normal physiological ranges. All the animals were

said to have gone down in their performance due to unbearable pain.



Figure-1
Note distended fetlock joint

Treatment and Discussion

Owners were advised to give extended rest for two weeks in all the cases. Ice packs are applied over the joint to alleviate pain. Flunixin meglumine was administered @ 1.1 mg per kg body weight intravenously. The response to the treatment was seen within 3-6 hours following treatment. The injection was repeated daily for 5 days. A pressure bandage was applied using elastoplast crepe bandage. The bandage was reapplied twice daily so as to adjust to the reduced swelling. In one case the animal showed response in the initial stages but showed recurrence of signs with an exaggerated intensity. Upon investigation, it was learnt that the animal was subjected to repeated trauma by resuming hard work. In the second episode,

the intensity of pain was much more. This was treated by phenyl butazone and salicylic acid injections for five days, vitamin AD₃E injection for one occasion. But the results were not successful and the weight bearing was partially present.

was repeated at weekly intervals for three occasions. The response in all the cases (figures 4-6) was encouraging after the second injection itself. The swelling was completely resolved and weight bearing was restored to normalcy.



Figure-2
Note pointing of toe



Figure-4
Before and after treatment



Figure-3
Note the symptom of camped behind



Fig-5
Before and after treatment

In four out of six refractory cases, keeping the value of the animal in mind, intra articular injections were given in to the fetlock joints. In case of fore limb a combination of hyaluronic acid (20 mg) and methyl prednisolone 80 mg (solution containing 20 mg/ml) were given in to the space between the suspensory ligament and the large metacarpus. In the hind limb the site was between the metatarsus and the suspensory ligament. The skin at the site was shaved and prepared for aseptic surgery. Local infiltration analgesia was achieved using two per cent lignocaine hydrochloride injection. A sterile hypodermic needle of 22 gauge was inserted in to the site and the entry of the needle was ascertained through the escape of synovial fluid. A little amount of synovial fluid was withdrawn before the intra articular injection was given. This procedure



Figure-6
Before and after treatment

Lameness in arthritis of fetlock joint is associated with distal sesamoiditis ranging from 2-5 on a 5-scale pain index system¹. Arthritis if not treated early and correctly that too, without giving proper rest, it can result in osteoarthritis. In animals, osteoarthritis is found affecting various synovial joints most frequently, leading to severe discomfort, disability and financial losses². In Veterinary practice, especially horses with chronic lameness due to osteoarthritis become liable to the owner. Musculoskeletal disorders in equines contribute to significant loss of performance and often pose a challenge to both the veterinarians and farm managers. Pain referable to joints is among the most common causes, and intra-articular injections remain a common and important means of addressing lameness referable to joints in horses³. In the treatment of traumatic arthritis and osteoarthritis in horses, Hyaluronic acid worked as disease modifying osteoarthritic drug and triamcinolone acetonide provided an immediate and potent anti-inflammatory effect⁴.

Triamcinolone acetonide @ 12 mg at 14 and 28 days interval was found beneficial in the treatment of arthritis in horses, when compared to methylprednisolone acetate 100 mg at 14 and 28 days interval⁵. However, contradictory findings were observed using methyl prednisolone acetate for experimentally induced osteoarthritis in horses, where in loss of palisading architecture, cellular necrosis were found in the articular cartilage⁶. Prompt relief was also obtained after giving single intra-articular injection of 20 or 40 mg of purified hyaluronic acid in experimentally induced osteoarthritis in horses.

Conclusion

Hence, it is concluded that, intra articular injections of hyaluronic acid and methyl prednisolone can help prevent progression of any joint pathologies to osteoarthritis.

References

1. Wisner E.R, O'Brien T.R and Pool R.R, Osteomyelitis of the axial border of the proximal sesamoid bones in seven horses, *Equine Vet J*, **23**, 383 (1991)
2. Anderson D.D, Chubinskaya S. and Guilak F, Post-traumatic osteoarthritis: improving understanding and opportunities for early intervention, *J Orthop Res*, **29**, 802–809 (2011)
3. Caron J.P, Intra-articular injections for joint disease in horses, *Vet clin north am equi pract*, **21(3)**, 559-73 (2005)
4. Frisbie D.D, Kawcak C.E, McIlwraith C.W. and Werp N.M., Evaluation of polysulfated glycosaminoglycan or sodium hyaluronan administered intra-articularly for treatment of horses with experimentally induced osteoarthritis, *Am J Vet Res*, **70**, 203–209 (2009)
5. McIlwraith C.W., The use of intra-articular corticosteroids in the horse: what is known on a scientific basis?, *Equine Vet J*, **42**, 563–571 (2010)
6. Shoemaker R.S, Bertone A.L, Martin G.S, McIlwraith C.W, Roberts E.D, Pechman R., Kearney M.T., Effects of intra-articular administration of methylprednisolone acetate on normal articular cartilage and on healing of experimentally induced osteochondral defects in horses, *Am j Vet Res*, **53(8)**, 1446-53 (1992)
7. Gingerich D.A, Auer J.A. and Fackelman G.E, Effect of exogenous hyaluronic acid on joint function in experimentally induced equine osteoarthritis: Dosage titration studies, *Res Vet Sci*, **30(2)**, 192-7 (1981)