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## Therapeutic management of overriding spinous processes (Kissing spine) in race horse: Case report

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### Abstract

A 4-year-old thoroughbred race horse was presented to Madras Race Club Equine Hospital with the history of back pain, poor riding performance, inconsistent shifting lameness only apparent under saddle. A radiographic imaging technique of the thoracolumbar vertebrae was performed to analyze this condition. The lateral view radiographic findings established the overriding spinous process (Kissing Spine) in the race horse. A therapeutic regimen combining analgesics, neurotonics and interspinous space injection with corticosteroid resulted in successful recovery.

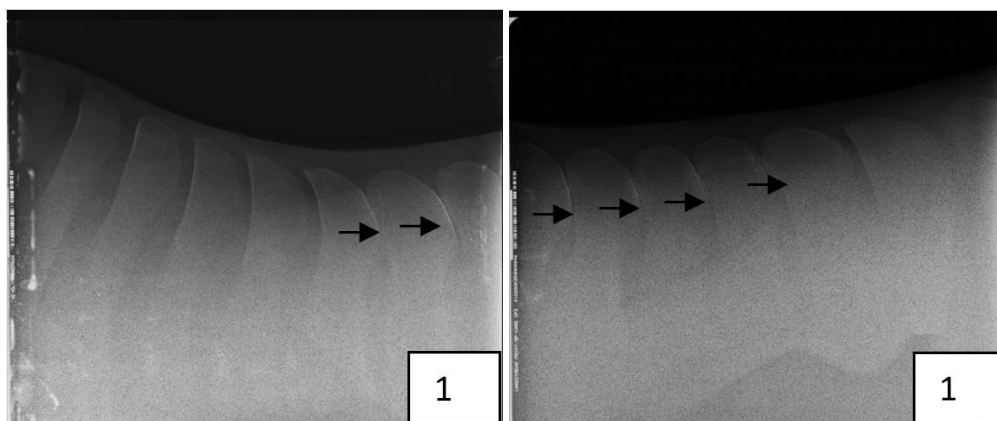
**Keywords:** Kissing spine, interspinous space, race horse, back pain

### Introduction

Diseases of the back in the horses are mainly due to congenital cause, soft tissue and spinal injuries. Overriding spinous processes (Kissing Spine) is the important disorder in race horse in case of spinal injuries (Jeffcott, 2005) [6]. Equine back pain or back sore is the sign exhibited by the race horse affected with kissing spine condition. It makes the horse to have back pain 3 times more and it is associated with clinical problems in Thoroughbreds, 5 years of age or less, and horses with 5 vertebrae involved (Turner, 2011) [9]. Horses of any age can be affected with kissing spine syndrome. Some horses may develop signs of kissing spines when they enter into the training, or when they are affected by increased work load. The cause of kissing spine is multietiological and making it very difficult to diagnose initially (Butler *et al.*, 2008) [1]. The aim of this study was to describe the radiological diagnosis and therapeutic management of kissing spine syndrome in race horse.

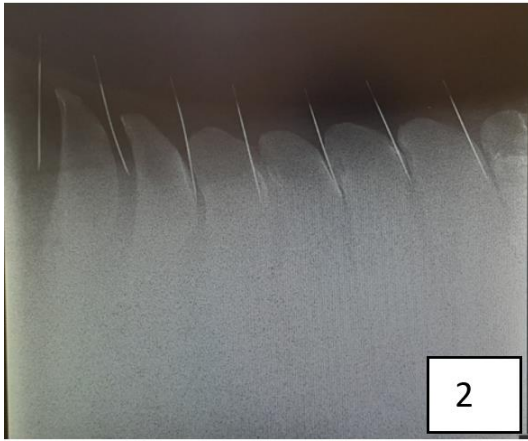
### Case History and Clinical Observation

A 4-year-old thoroughbred race horse was presented to Madras Race Club Equine Hospital, Guindy, Chennai-32 with the history of back pain, poor riding performance, inconsistent shifting lameness during saddle. Animal was found to be active and alert with normal vital parameters. On clinical examination, there was a pain on palpation at lumbar region and radiographical examination was carried out to analyze the condition. The lateral view radiographic findings established the overriding spinous process (Kissing Spine) at thoraco lumbar region in T13 to L1 vertebrae (Fig. 1) as described by (Turner, 2011) [9].



**Fig 1:** Radiographical image of kissing spines (Arrows)

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**Fig 2:** Corticosteroid injection in the intralesional interspinous space

### Treatment

The horse was initially sedated with xylazine (1.1 mg / kg) with butorphanol (0.01 mg/kg) as a standing sedation. To avoid contamination, the thoraco lumbar region was scrubbed with betadine solution followed by surgical spirit. After applying the muzzle twitch, 4mL of dexamethazone and 1 mL of neurobion were taken into a 5ml syringe and a 21 G needle is inserted into the spaces between the kissing processes (T13 to L1) and the aspirated medicine was deposited on intralesional interspinous space under the ultrasound guidance (Fig. 2). Post operatively, the animal was administered intravenously with Inj. Artizone 4.4 mg/kg, Inj. Tonophosphan 20 mL, Inj. Neurobion forte 20 mL for a period of seven days. There was no further reoccurrence and the animal had an uneventful recovery after one month.

### Discussion

In previous studies, an incidence of kissing spine syndrome was 0.9% and 68% reported (Henson & Kidd, 2009; Turner, 2011) [3, 9], respectively. The equine back problems were more common in male horses especially in geldings (60.77%). Thoroughbred horses are recorded the most equine back problems among breeds because the tips of their spinous processes are close to each other (Mayaki *et al.*, 2019) [8].

Back injuries have great risk factor on the horse's performance and they are usually associated with a complex etiological condition (Jeffcott, 2010) [7]. The clinical signs of back pain are highly undiagnosed and could not be used to differentiate with the other etiological factors. Hence, the clinical diagnosis of kissing spines was considered mostly challengeable. In many conditions, back pain is caused as a secondary sign of other major problems. Especially with axial skeleton lesions, lameness of either hindlimbs, forelimbs often bilateral and this leads to major problems in the performance/gait of the horse with secondary pain in the back, pelvic region. (Henson, 2014) [4].

Medical treatment is necessary to rectify the clinical signs, and reduce the pain and discomfort associated with this syndrome. In the present case, corticosteroid was injected in the form of intra-lesional injection which is in accordance with the report of Jacklin, (2014) [5] and coomer *et al.* (2012) [2] who explained that intra-lesional injection causing effective anti-inflammatory activity and alleviate the pain and stiffness between the joints.

### Conclusion

Based in this report, it was concluded that equine back problem

like kissing spine syndrome is a radiographic diagnosis, not a clinical diagnosis and it is considered as an emergency musculo skeletal disorder condition where the overriding spinous process is more prone for disc herniation and other complications. So, early treatment with corticosteroids especially in the intralesional interspinous space led to uneventful recovery of back soreness.

### Acknowledgements

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