Proceedings of the 11th International Congress of the World Equine Veterinary Association

24 – 27 September 2009
Guarujá, SP, Brazil

Next Meeting:
Nov. 2 -6, 2011 - Hyderabad, India

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TREATMENT OF MEDIAL TROCHLEAR RIDGE OSTEOCHONDROSIS IN
THE EQUINE TARSUS USING MULTIPLE OSTEOCHONDRAL
AUTOGRRAFTS

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Introduction: Osteochondral defects in the equine tarsus are commonly encountered in
the form of osteochondrosis (OC), subchondral bone cysts, and traumatic lesions. In
general, treatment of proximal medial trochlear ridge (MTR) osteochondrosis in horses
yields a guarded prognosis for athleticism because the osteochondral defect is in a
weightbearing location. Case Description: A 5-year-old Quarter Horse stallion used for
reining was examined for hindlimb lameness attributable to a large osteochondral lesion
along the proximal aspect of the MTR of the talus. The Osteoarticular Transfer System
(OATS; Arthrex, Naples, FL) was used to perform osteochondral grafting with multiple
grafts with the goal of re-establishing the load bearing cartilage surface and supporting
bone to improve joint function, decrease pain, and return the horse to athleticism.
Osteochondral autografts were harvested from the distal aspect of the lateral trochlear
ridge of the talus using a 6 mm diameter donor trephine. Without curettage or
debridement of the osteochondral lesion, the three osteochondral autografts were press-
fit into the recipient beds that were pre-drilled to a depth of 15 mm with the OATS
cannulated 5.5 mm bit in the proximal aspect of the MTR of the talus. Immediate
postoperative radiographs indicated excellent filling of the osteochondral defect and graft-articular surface congruency. No complications were encountered after surgery. A
graduated increase in the level of exercise was recommended. The horse re-entered
reining training ten months after surgery, and the horse continued to be sound and
performing two years after surgery. Radiographs two years after surgery indicated
excellent donor and recipient site filling and graft-articular surface congruency.

Discussion: Osteochondral autografting deserves consideration and further evaluation
as a primary treatment option for proximal MTR of the talus OC in horses. Conclusion:
Based on the outcome of this case, multiple OATS appears to be a valuable and realistic
option for treating proximal MTR OC in equine athletes.

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Acknowledgement: OATS equipment provided by Arthrex, Inc, Naples, FL