Poster presentations

it was tested a synthetic bone graft (Bonelike®) which is a glass-reinforced hydroxyapatite composite with osteoinductive and osteoconductive proprieties. Bonelike® consists in the incorporation of P₂O₅-CaO glass-based system within a hyaluronic acid (HA) matrix of spherical pellets with 250-500 µm of diameter. These osteoinductive and osteoconductive proprieties have been confirmed in experimental models of bone regeneration in sheep and recently its application in orthopedic and stomatological pathologies is being tested in small animal clinics. These clinical studies included one case of mandibular fracture in a 4 y.o. cat, a non-union after a comminutive femoral fracture in a 7 month dog and 2 cases of alveolar filling with this synthetic bone graft together with a mucosal flap in a 12 y.o dog and a 6 y.o. cat after maxillary teeth removal. In all the clinical cases, Bonelike® was used to enhance bone healing, fulfil critical defects and complement the recommended surgical techniques. In case#1 the maxillary fracture was reduced with external fixation and the fracture consolidation was confirmed 6 weeks after, through

radiographic examination. In case#2 Bonelike® was added to the femoral non-union in a third surgical procedure after both an initial external fixation and subsequent plate fixation failures. Both case#3 and case#4 were accomplished by filling the alveolar defect created after canine maxillary dental removal, before closing with a mucosal flap in order to prevent oronasal fistulae. Radiologic evaluation and physical clinical examination were performed in the follow-up periods in order to assess the efficacy of the surgical treatments. It can be concluded that Bonelike® spherical granules of 250-500 µm is an appropriate synthetic bone graft substitute with osteoconductive and osteoinductive properties to be used in small animal clinics, as void space filler and in association with standard orthopedic procedures of stabilization, promoting a faster bone fusion without any local or systemic adverse reaction. This procedure improves the small animals' quality of life, decreasing the pain and increasing the bone stability with positive clinical outcome and decreasing the post-operative period recovery.

Bilateral talar ridge replacement for management of bilateral talar osteochondritis dissecans

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INTRODUCTION

Osteochondrosis is an abnormality of articular cartilage caused by disturbances in endochondral ossification. Abnormal cartilage becomes thickened causing chondrocytes to receive inadequate nourishment leading to necrosis. Osteochondritis dissecans (OCD) is a consequence of physiological mechanical stress on these necrotic areas causing chondral or osteochondral 'flaps'. The tarso-crural joint accounts for 9% of all OCD cases and the medial trochlear ridge is affected in 74%, with bilateral involvement in 75%.

OBJECTIVE

To document outcome in a dog affected by bilateral talar OCD treated with talar ridge replacement (TRR).

MATERIALS AND METHODS

An eight-month female neutered Border Collie dog was presented to XXXX with a four-month history of bilateral pelvic limb lameness. On presentation, the dog had an abnormal pelvic limb gait with extended hocks, moderate muscle atrophy of the pelvic limbs and periarticular swelling of the tarso-crural joints. The tarso-crural joints were stable but painful

on flexion. CT and radiographic interrogation evidenced OCD of the medial talar trochlear ridges bilaterally. CT scans were used as a template for 3D printing of customised ridge prostheses in cobalt chromium.

Medial malleolar osteotomy facilitated access to the joint. The osteochondral fragment was removed and a high speed burr was employed to sculpt the medial talar ridge as directed by a custom implant guide. The guide was appropriately aligned relative to the talar defect and a 1.8 mm peg hole was drilled. The implant was seated via a central peg coated in hydroxyapatite. The joint was reduced and manipulated to confirm appropriate implant placement. The osteotomised medial malleolar fragment was reduced and stabilised with an Acumed® tension band pin system and 1.25 mm diameter orthopaedic wire. rhBMP-2 (TruScient™) was placed over the osteotomy site before closing routinely. The procedure was identical bilaterally.

RESULTS

Re-examination was performed at 6, 12, 16 and 52 weeks. CT scan Imaging with metal artefact reduction confirmed satisfactory healing of the osteotomy bilaterally, correct implant position and minimal progression of osteoarthritis. At 52 weeks post-operatively the patient is capable of intense and long-lasting exercise without manifestation of discomfort or lameness. Both tarso-crural joints were stable, comfortable with no crepitus and with normal flexion capability.

CONCLUSION

TRR has provided encouraging results in this single patient to one year. The treatment may prove superior to debridement alone for talar ridge OCD and warrants further investigation.

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