manually verified for case inclusion and further data extraction on clinical management. Multivariable logistic regression was used for risk factor evaluation.

The study population comprised 210,824 dogs attending 119 clinics. Verification of 31.5% of the candidate cases identified 854 PL cases overall, yielding a 1.30% (95% confidence interval (CI) 1.22-1.39) prevalence overall. Breeds with the highest prevalence included the Pomeranian (6.4%, 95% CI 5.0-8.1), Yorkshire terrier (5.3%, 95% CI 4.8-5.8) and Chihuahua (4.8%, 95% CI 4.2-5.4). The crossbred prevalence was 1.2% (95% CI 1.1-1.3).

Of the 751 incident cases first diagnosed during the study period, 28/751 (3.7%) were referred for further case management. Medical management was used in 293/751 (39.0%). Surgical intervention was recorded in 99/751 (13.2%). The median age at the first recorded surgery was 2.9 years (interquartile range [IQR] 1.5-5.6, range 0.4-13.1).

Multivariable logistic regression analysis identified the

Pomeranian (odds ratio [OR] 6.7, 95% CI 4.1-10.9, $P < 0.001$), Chihuahua (OR 6.0, 95% CI 4.5-8.1, $P < 0.001$) and Yorkshire terrier (OR 5.5, 95% CI 4.3-7.1, $P < 0.001$) at increased odds of a PL diagnosis compared with crossbred dogs. Animals weighing $<$ mean breed bodyweight had 1.4 times the odds (95% CI 1.2-1.6, $P < 0.001$) of PL compared with dogs weighing $\geq$ mean breed bodyweight. Females had 1.2 times the odds (95% CI 1.1-1.4, $P = 0.003$) of PL compared with males. Insured dogs had 1.9 times the odds (95% CI 1.6-2.2, $P < 0.001$) of PL compared with uninsured dogs. Neutered individuals had 2.3 times the odds (95% CI 1.7-3.0, $P < 0.001$) of PL compared with uninsured dogs.

These results identify some breeds with substantial PL prevalence, suggesting an opportunity to reduce the frequency of PL by improved breeding programmes. The proportions of affected dogs receiving medical and surgical management confirm that PL can have substantial welfare as well as financial implications.

Palatability and chewing time evaluation of a vegetable dental chew (VeggieDent®) designed for plaque and tartar control in dogs

Gwendoline Chaix, Fanny Lloret

Virbac, Carros, France

Periodontal disease is one of the most common problems in veterinary practice. It begins with the formation of dental plaque, which then mineralises to form calculus. VeggieDent® is a vegetable dental chew that has proven effective in the mechanical prevention of dental plaque and calculus in dogs. An important point to ensure proper owner compliance is the sufficient palatability of the dental chew. Long chewing times are necessary for the mechanical action required to clear food debris from the oral cavity. The first objective of this study was to assess the palatability of VeggieDent® in dogs. The second objective was to measure chewing times.

Two trials, A and B, were conducted in an independent research centre experienced in palatability trial performance. 38 and 35 healthy adult dogs of various breeds,

both males and females, were included in trial A and B, respectively. In trial A, mean body weight (BW) of dogs was 6.0kg [2.6–7.9] and each dog received one VeggieDent® XSmall. In trial B, dogs received Small, Medium or Large sizes of VeggieDent® if they weighed from 3 to 9.9kg (mean BW=6.4kg), 5.9 to 36kg (mean BW=19.3kg) and 17.8 to 39.5kg (mean BW=31.79kg), respectively. Two criteria were used to assess palatability: prehension and total consumption. Prehension was defined as the act of taking the product spontaneously into the mouth, independently of whether it was then consumed. Total consumption was defined as the act of swallowing more than 95% of the quantity of product offered. Chewing time was defined as the time during which the dog chewed the product.

Prehension was noted in all dogs (38/38, 35/35), regardless of chew size. Total consumption was recorded for most animals, in all sizes (84%, 100%, 73% and 90% for XSmall, Small, Medium and Large sizes, respectively). Chewing times (excluding atypical dogs with an overly long chewing time) were between 4 and 5, 8 and 9, 5 and 6, and 6 and 7 minutes for XSmall, Small, Medium and Large sizes, respectively.

The excellent prehension rate and the high total consumption rate observed in these studies indicate that all sizes of VeggieDent® chews are highly palatable for dogs. The long chewing times measured ensure the sustained mechanical action that makes VeggieDent® chews effective in the prevention of plaque and tartar.

Use of a glass-reinforced hydroxyapatite synthetic bone in small animal clinical cases

José Miguel Campos^{1,3}, Pedro Olivério Pinto^{1,3}, Jorge Ribeiro^{2,3}, Miguel Lacueva França^{2,3}, Ana Rita Caseiro^{2,3}, Carla Mendonça^{2,3}, Tiago Pereira^{2,3}, José Domingos Santos⁴, Luís Atayde^{2,3}, Ana Colette Maurício^{2,3}

- 1 Escola Universitária Vasco da Gama (EUVG), Hospital Veterinário Universitário de Coimbra (HVUC), Coimbra, Portugal
- 2 Departamento de Clínicas Veterinárias, Instituto de Ciências Biomédicas de Abel Salazar (ICBAS), Universidade do Porto (UP), Porto, Portugal
- 3 Centro de Estudos de Ciência Animal (CECA), Instituto de Ciências, Tecnologias e Ambiente da Universidade do Porto (ICETA), Porto, Portugal
- 4 CEMUC, Departamento de Engenharia Metalúrgica e Materiais, Universidade do Porto, Porto, Portugal

Autologous bone graft remains the gold standard grafting substrate available in bone fusions, for small gaps and in critical defects. Significant morbidity however is associated with the harvesting of autologous bone graft and alternative bone graft substitutes have been developed. In the present work,

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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

Noel Fitzpatrick, Pablo Pérez López

Fitzpatrick Referrals, Surrey, UK

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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