and implant loosening. The minor complication rate for staged repair was 43% (6/14 stifles) due to three cases of patellar tendonitis, two of MPL recurrence and one of pin breakage. The major complication rate was 0%. No catastrophic complications were experienced. All stifles in the single session group and 12 stifles in the staged group had full function at final post-operative examination. The two remaining stifles had acceptable function.

STATEMENT (CONCLUSIONS)

Based on our study, single session bilateral MPL repair is feasible in dogs weighing 15 kilograms or more but led to an increased rate of major complications when compared with animals undergoing staged bilateral repair. These complications did not affect perioperative outcome with all animals in the single session group returning to full function at 6–12 weeks post-operatively.

Bilateral locking-compression plate fixation for stabilization of canine Y-T humeral fractures

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OBJECTIVES

To report the surgical management, complications and outcomes for dogs with humeral Y-T fractures stabilized with medial and lateral Locking Compression Plates (LCP).

METHODS

Medical records of 28 dogs presented with 29 consecutive Y-T fractures approached bilaterally, reduced and stabilized using a transcondylar and two or three LCP locking plates were reviewed. All dogs had at least six

weeks clinical follow-up and, for some, long-term owner's-based outcome with LOAD questionnaire was obtained.

RESULTS

Twenty-eight dogs (twenty-nine fractures) met the inclusion criteria. Most commonly affected breeds were French Bulldog (n = 7) and English Cocker Spaniel (n = 4). Age at presentation ranged from 4 months to 9.5 years (mean 43.53 months), seven dogs (25%) were considered skeletally immature. In twelve dogs, the fracture was consequence of a high-energy trauma and in sixteen dogs of gentle activity. Twenty-seven (96.4%) dogs were considered to have resolution of lameness at 6 weeks follow-up. Complications were registered in two cases; one major complication required surgical revision and one dog (3.5%) showed a catastrophic complication leading to amputation. Mid and Long-term follow-up was available for twenty-one cases (75%), mean of 798 days (range from 180 to 1582 days). Fourteen (71%) owners classified their dogs' mobility as very good and five owners (23%) found it good.

STATEMENT (CONCLUSIONS)

Based on our study, management of Y-T humeral fractures with bilateral LCP plates and transcondylar screw leads to low complication rate and good to excellent clinical outcome.

Current perceptions of minimally invasive osteosynthesis techniques in small animal orthopaedic practice

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OBJECTIVES

To report the current perceptions of minimally invasive osteosynthesis techniques in a population of veterinary orthopaedic surgeons.

METHODS

Two electronic questionnaires were created using the Bristol Online Survey tool. The first contained questions addressing multiple aspects of minimally invasive osteosynthesis (MIO) and the second specifically focussed on minimally invasive plate osteosynthesis (MIPO). This was circulated amongst members of the European College of Veterinary Surgeons (ECVS) and the Veterinary Orthopaedic Society (VOS). Responses were collected between February and May 2018.

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RESULTS

There were 257 and 238 respondents to the two surveys respectively. The most common canine fracture addressed with MIO techniques were tibial fractures. The most frequently stated advantages of MIO were faster healing time (26%) and less post-operative pain (20%). The most commonly stated disadvantages of MIO techniques were need for new equipment (27%) and challenges to achieving adequate fracture reduction (18%). When considering MIPO specifically 71% of respondents stated that they performed MIPO rarely or occasionally. 151 respondents (63%) were keen to perform more MIPO than their current level. The most common fracture

stabilised with MIPO in both cats and dogs were tibial fractures. MIPO was less commonly performed in cats than dogs (39% vs 15%). 24% of respondents stated that there were not enough MIPO training opportunities.

STATEMENT (CONCLUSIONS)

This study demonstrated recognition of the benefits of MIO and MIPO techniques amongst veterinary orthopaedic surgeons. Despite this there remains limitations to its application within clinical practice and the study has highlighted areas for further development to improve its use clinically.

“If it looks straight, it is straight?”—establishing the normal axes and joint angles in small breed dog

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OBJECTIVES

Angular limb deformities are difficult cases to manage. When animals are bilaterally affected having a normal reference value for joint axes and angles ensures optimal patient outcome through preoperative management. Although this has been established for medium-large breed dogs no such values exist in small dogs. The purpose of this study was to establish the normal anatomic axis of the canine radius in the frontal and sagittal planes, in a population of adult small breed dogs

METHODS

Radiographs of the antebrachium in skeletally mature small breed dogs were reviewed from the electronic database of the hospital. Radiographs were used to determine normal ranges of frontal and sagittal plane anatomic axes and relevant angles; aMPRA, aLDRA, aPCRA, aDCdRA, procurvatum and frontal plane angle.

RESULTS

28 dogs met the inclusion criteria. Mean $\pm$ SD reference ranges for these dogs were aMPRA $80.5^\circ \pm 2.7$, aLDRA $85.2^\circ \pm 2.1$, aPCRA $88.7^\circ \pm 2.9$, aDCdRA $82.8^\circ \pm 3.1$, Procurvatum $19.8^\circ \pm 5.2$.

STATEMENT (CONCLUSIONS)

Ranges for normal canine radial axis in small breed dogs are similar to those previously reported for Labradors and medium-large breed dogs. These reference ranges can be used for management and preoperative planning of small-breed dogs with antebrachial growth deformities, when a bilateral condition prevents the use of the opposite limb as a reference.

Abbreviations: aMPRA – anatomical edial proximal radial angle, aLDRA – anatomical lateral distal radial angle, aPCRA – anatomical proximal caudal radial angle, aDCdRA – anatomical distal caudal radial angle

Double locking plates and screw fixation after Tibial Plateau Leveling Osteotomy: effect on postoperative infection rate in dogs over 50 kg

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OBJECTIVES

To investigate and analysis the effect of double locking plates and screw fixation (DLP) in dogs >50 kg undergoing tibial plateau leveling osteotomy (TPLO) on postoperative infection rate.

METHODS

This is a retrospective study using medical records (January 2003–October 2017) from a single orthopaedic referral hospital. The inclusion criteria were body weight >50 kg and a DLP or standard locking plate and screw fixation (LP) or conventional non-locking plate and screw fixation (NLP) was used. Logistic regression analysis evaluated for associations with infection occurrence.