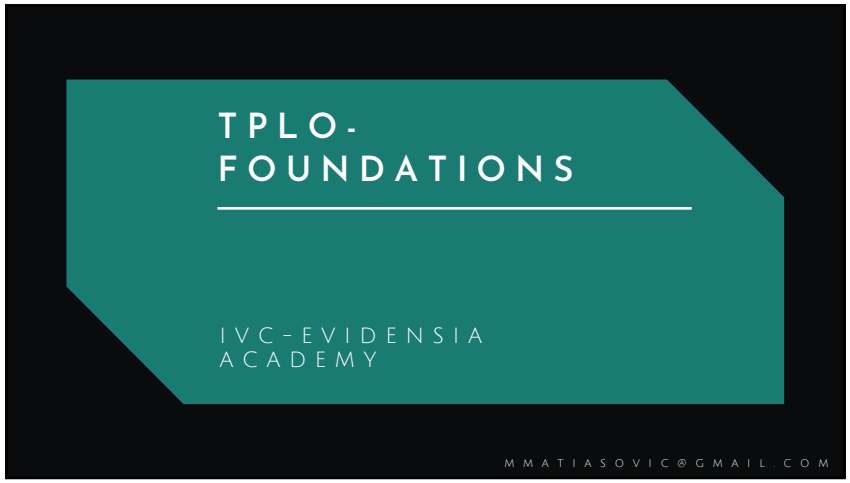

TPLO-
FOUNDATIONS
IVC-EVIDENSIA
ACADEMY
MMATIASOVIC@GMAIL.COM

1


TPLO-
FOUNDATIONS
INTRODUCTION
PLANNING
SX TECHNIQUE

2


TPLO-
FOUNDATIONS
INTRODUCTION
PLANNING
SX TECHNIQUE (JIGLESS)

3


INTRO
ANATOMY
KINEMATICS
MENISCUS

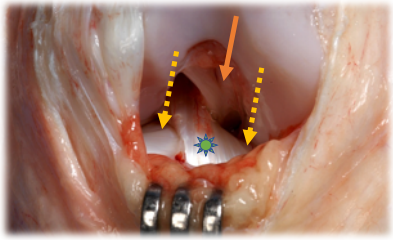
4

ANATOMY

CRUCIATE LIG.

- CRANIAL
- CAUDAL

MENISCI



5

KINEMATICS

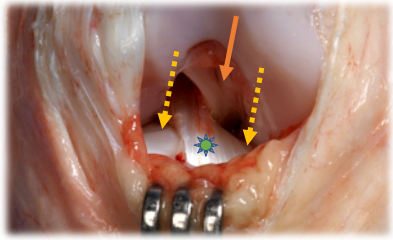
HINGE

ROTATORY TIBIAL MOTION

IN VIVO 40-57°/PASSIVE 140°

FLEXION – INT. TIB. ROT
– LOOSE LCL

EXTENSION – TAUT LCL

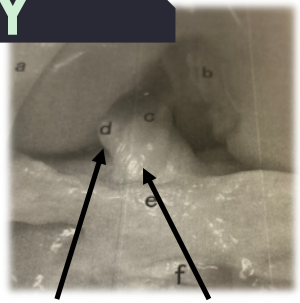


6

ANATOMY

CCL

- CRANIOMEDIAL
- CAUDOLATERAL



Bojrab

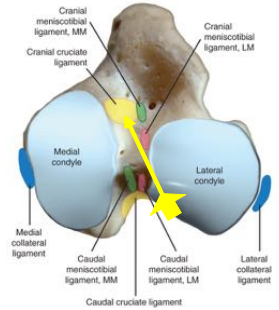
7

ANATOMY

CCL

- CRANIOMEDIAL
- CAUDOLATERAL

PREVENTS INT. TIB. ROT.



8

ANATOMY

CR. CRUCIATE LG. PATHOLOGY

DEGENERATION->TEAR

PARTIAL

- COMPETENT
- NON-COMPETENT

COMPLETE

9

ANATOMY

MENISCI

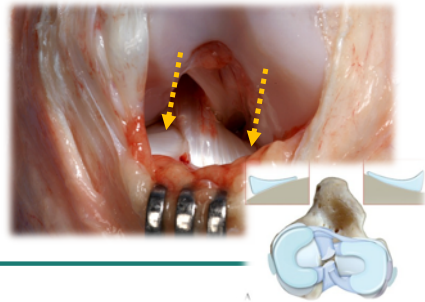
LOAD DISTRIBUTION

- 40-70% LOAD

CONGRUITY

WEDGE SHAPE

CCLDZ - STABILISER



10

ANATOMY

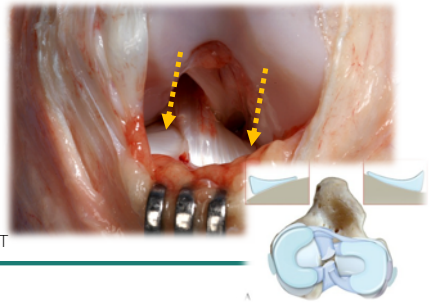
MENISCI

LATERAL

- CD HORN ATTACHED
- NO CAPSULE ATTACHM.

MEDIAL

- FIRM ATTACH. TO CAP+T



11

KINEMATICS

CCL RUPTURE – ABNORMAL DYNAMICS

CRANIAL TIB SUBLUX/ CAUDAL FEMORAL SLIPPAGE

12

KINEMATICS

CCL RUPTURE – ABNORMAL DYNAMICS

CRANIAL TIB SUBLUX/ CAUDAL FEMORAL SLIPPAGE

> Tierarztl Prax Ausg K Kleintiere Heimtiere. 2014;42(3):151-6.

Sagittal joint instability in the cranial cruciate ligament insufficient canine stifle. Caudal slippage of the femur and not cranial tibial subluxation

J Rey, M S Fischer, P Böttcher [1]

Affiliations + expand

PMID: 24920141

13

KINEMATICS

MATHEMATICAL MODELS OF INSTABILITY

SLOCUM – WEIGHT BEARING –> CRANIAL TIBIAL SHEAR FORCE

FORCE IS PARALLEL TO TIBIA AXIS (TIB. COMPRESSION TEST)

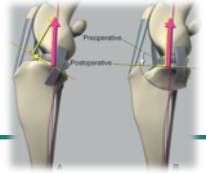
14

KINEMATICS

MATHEMATICAL MODELS OF INSTABILITY

SLOCUM – WEIGHT BEARING – CRANIAL TIBIAL SHEAR FORCE

FORCE IS PARALLEL TO TIBIA AXIS (TIB. COMPRESSION TEST)



15

KINEMATICS

MATHEMATICAL MODELS OF INSTABILITY

TEPIC – TIBIAL SHEAR FORCE IS NOT IN LINE WITH TIB. AXIS

BUT WITH PATELLA LIGAMENT AXIS

ADVANCING THE PL TO A LEVEL PERPENDICULAR TO TIB. PLATEAU NEUTRALIZES CR. TIB. THRUST

16

KINEMATICS

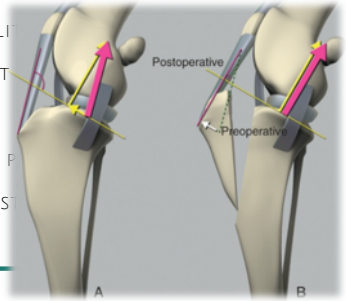
MATHEMATICAL MODELS OF INSTABILI

TEPIC – TIBIAL SHEAR FORCE IS NOT

BUT WITH PATELLA LIGAMENT AXIS

ADVANCING THE PL TO A LEVEL P

PLATEAU NEUTRALIZES CR. TIB. THRUST



17

TPLO/TTA

SHORT SUMMARY OF SCIENTIFIC DATA

- Growing numbers of prospective studies with objective measurements -> similar results -> TPLO is the only method achieving the same results as control groups
- Lower complications (2-7%) compared to TTA (3-26%)
- Lower postOP instabilitiy Force Plate + Fluo, (ECF highest)
- After TPLO 3x lower risk of meniscal tear vs TTA
- TTA -> improvement but not normal, often requiring advancement >14mm (to achieve 90° in 135° stance)
- TPLO technically more difficult (bad TTA also easy to create), equipment (oscilating saw), trouble shooting more complicated (ESF)

18

KINEMATICS

CCL DEFICIENCY – MENISCUS:

CAUDAL POLE – WEDGE – PRIMARY STABILIZER ROLE – RISK OF INJURY

DIRECT RELATIONSHIP - AMOUNT MENISCUS REMOVED – DJD

MENISCAL RELEASE – 50% DECREASE IN CONTACT AREA OF MENISC.

- 140% INCREASE IN PRESSURE ON MEDIAL COMP.

= PROGRESSION OF OA

19

MENISCUS

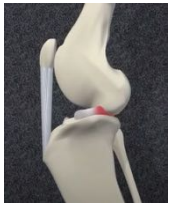
DATA

33-77% INCIDENCE OF INJURY IN CCL DZ

PROBING ENHANCES DETECTION OF PATHOLOGY

DISTRACTOR

PROVOKE TIBIAL SUBLUXATION



CAUDAL HORN SUSCEPTIBLE TO VERTICAL TEAR (BHT)

20

MENISCUS

DATA

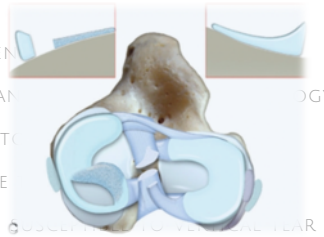
33-77% INCIDEN

PROBING ENHAN OGY

DISTRACT

PROVOKE

CAUDAL HORN R (BHT)



21

TIMING

TIME TO TREATMENT

CAN I START WITH REST AND NSAID/ CAN I WAIT?

22

TIMING

TIME TO TREATMENT

NSAID AND REST – YES

WAIT – NO

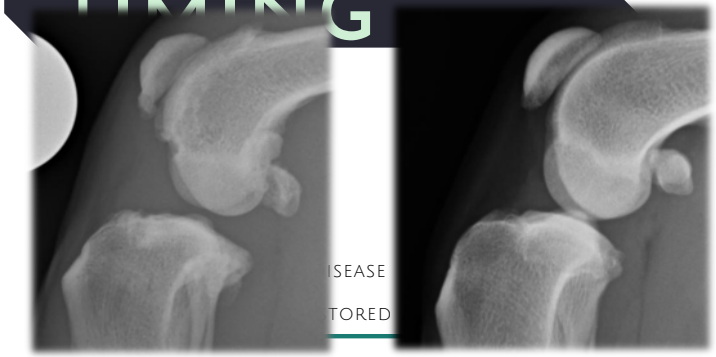
CCL DISEASE = SURGICAL DISEASE

STABILITY NEEDS TO BE RESTORED

23

LONG TERM OUTCOME POST TPLO?

TIMING



ISEASE

TORED

24

PLANNING

- RADIOGRAPHS
- TPA MEASUREMENT
- PREOP PLAN

25

PLANNING

DIAGNOSIS

- HISTORY
- GAIT EVALUATION
- EXAMINATION – ORTHO, STIFLES, CONSIOUS+SEDATED
- SPECIFIC TESTS – TCT, CD

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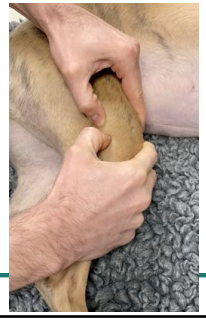
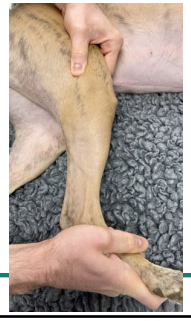
PLANNING

DIAGNOSIS





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PLANNING

RADIOGRAPHS

- MEDIOLATERAL
- CRANIOCAUDAL
- MEASUREMENT MARKER

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PLANNING

RADIOGRAPHS

MEDIOLATERAL

- 90-90 VIEW
- CONDYLE SUPERIMPOSITION

29

PLANNING

RADIOGRAPHS

CC

- CENTRAL PATELLA
- FABELLAE BISECTED
- DISTAL TIBIA TRUE CC

30

PLANNING

RADIOGRAPHS

RULE OUT OTHER CAUSES OF LAMENESS:

OCD, FABELLA, PATELLA, LDE TENDON, DEFORMITY, NEOPLASIA

31

PLANNING

AMENESS:

NDON, DEFORMITY, NEOPLASIA

8Y ROTTWEILER, ACUTE LAMENESS

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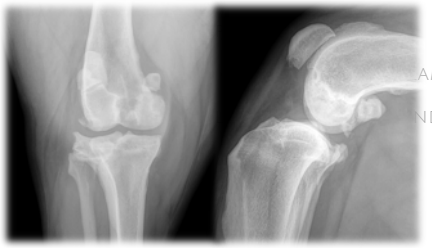
PLANNING



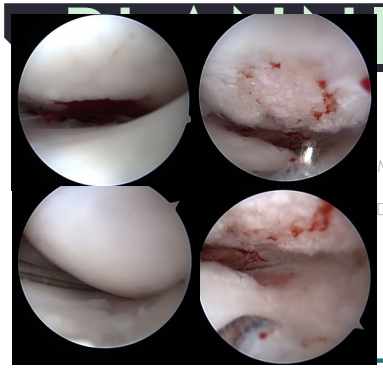
AMENESS:

NDON, DEFORMITY, NEOPLASIA

3.5Y CANE CORSO, INTERMITTENT PROG. LAMENESS

33

PLANNING



MENESS:

DON, DEFORMITY, NEOPLASIA

OCD WITH KISSING LESION

34

PLANNING

RADIOGRAPHS

MEASURE TPA

MECHANICAL TIB AXIS: INTERC. EMINENCES – CENTER OF TALUS

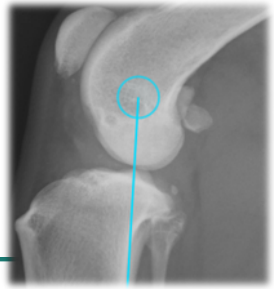
IDENTIFY TIBIAL PLATEAU: CR AND CAU EXTENT OF THE MEDIAL TIBIAL CONDYLE

OPPOSITE LIMB (OA)

35

PLANNING

BISECT INTERCONDYLAR EMINENCES



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PLANNING

CENTER OF TALUS

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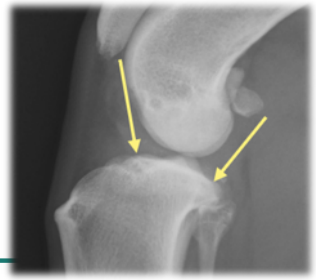
PLANNING

TIBIAL PLATEAU

CRANIAL EXTENT

CAUDAL EXTENT

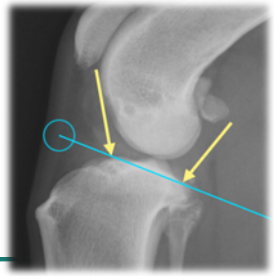


38

PLANNING

TIBIAL PLATEAU

CONNECT



39

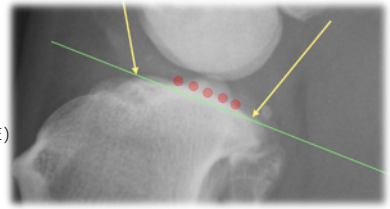
PLANNING

TIBIAL PLATEAU

CONNECT

'PLATEAU CONTOUR'

(NOT CONSISTENTLY THERE)



40

PLANNING

TIBIAL PLATEAU

- CONNECT
- 'PLATEAU CONTOUR'
- (NOT CONSISTENTLY THERE – DJD)
- ->OPPOSITE LIMB

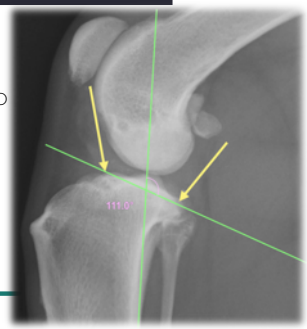
41

PLANNING

TIBIAL PLATEAU

- REFERENCED TO A LINE 90° TO MECHANICAL AXIS

111°-90 = 21°



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PLANNING

TPA MEASUREMENT

- INTRAOBSERVER VAR.: +/- 3.4°
- INTEROBSERVER VAR.: +/- 4.8-6.0°
- SIGN. DIFFERENCE BETWEEN OBSERVER EXPERIENCE
- CAUDAL TP OSTEOPHYTES

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PLANNING

TPA MEASUREMENT

- RE-MEASURE SEVERAL TIMES IF IN DOUBT
- ASK A COLLEAGUE IF IN DOUBT
- BAD MEASUREMENT WILL AFFECT EXECUTION/ OUTCOME

44

PRACTICAL

TPA MEASUREMENT

- SAW BONE
- MEASURE TPA ON YOUR LAPTOP – SAVE NUMBER
- MARKER 25MM

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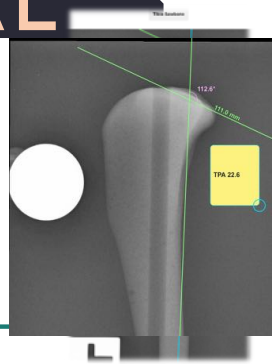
PRACTICAL

TPA MEASUREMENT

REMEMBER +/-3



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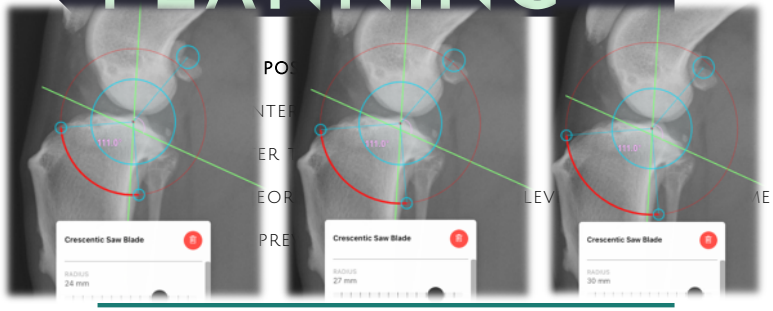
PLANNING

BLADE SIZE AND POSITION

- CENTERED ON INTERCONDYLAR EM.
- UNDERSIZE BETTER THAN OVERSIZE
- SAFE POINT THEORY – **BROAD BASE** AT LEVEL OF PT ATTACHMENT (10MM QUOTED PREVIOUSLY)
- CAUDAL CORTEX 90°

47

PLANNING



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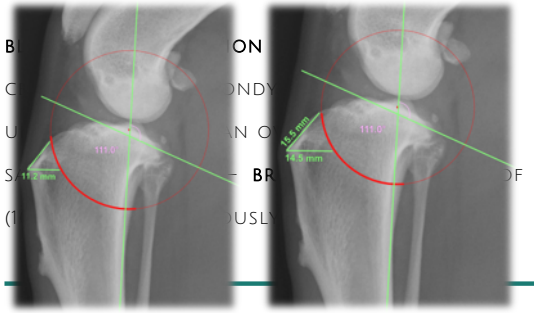
PLANNING



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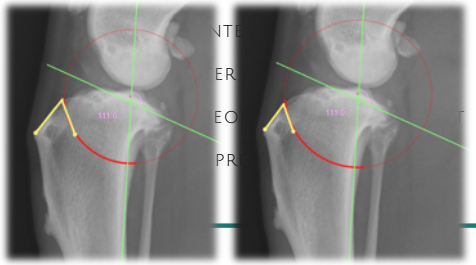
PLANNING

BROAD BASE?



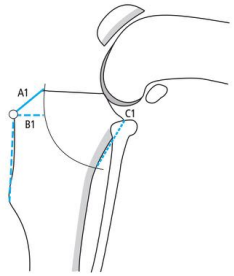
50

PLANNING

MEASUREMENTS – PLANNING

A, B, C MEASUREMENTS

JOINT MEASUREMENT



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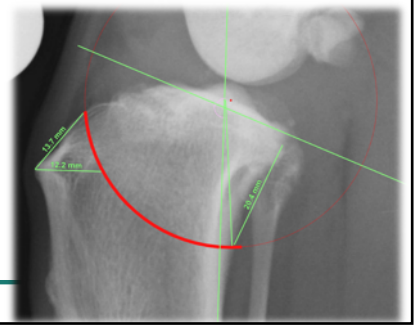
PLANNING

MEASUREMENTS – PLANNING

A, B, C MEASUREMENTS

JOINT MEASUREMENT



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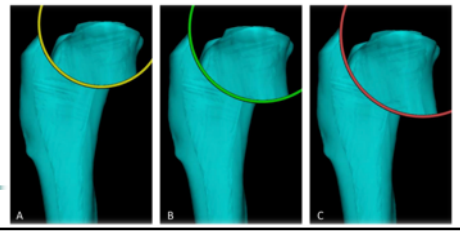
PLANNING

CUT VARIATIONS

ELIMINATE

DOWNWARD CUT

NON-CENTERED CUT



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PRACTICAL

APPLY SAWBLADE – SAVE A, B, C, J MEASUREMENTS

TOOLS – CRESCENTIC SAW

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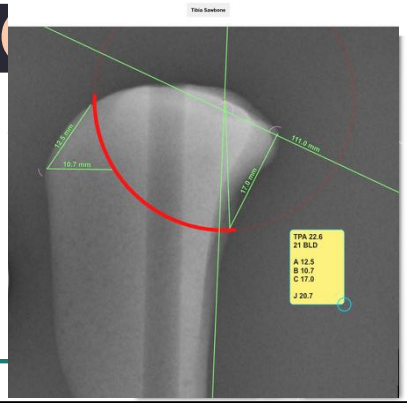
PRACTI

APPLY SAWBLADE – SAVE A, B, C,

*XRAY ORIENTATION?



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PLANNING

SIMULATE ROTATION

APPLY IMPLANT

ENOUGH ROOM?

IMPLANT POSITION IN RELATION TO LANDMARKS?

CLEARLY NOTE ALL PLANNED DISTANCES

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PLANNING

TPLO Rotation Guide

Correct TP to 3°

TPA	Desired Post-op Angle	Correction Angle	Saw Blade Radius (in mm)									
			8	10	12	15	18	21	24	27	30	33
15	3°	12°	1.67	2.09	2.51	3.14	3.76	4.39	5.02	5.64	6.27	6.9
16	3°	13°	1.81	2.26	2.72	3.40	4.08	4.75	5.43	6.11	6.79	7.47
17	3°	14°	1.95	2.44	2.92	3.66	4.39	5.12	5.85	6.58	7.31	8.04
18	3°	15°	2.09	2.61	3.13	3.92	4.70	5.48	6.27	7.05	7.83	8.61
19	3°	16°	2.23	2.78	3.34	4.18	5.01	5.85	6.68	7.52	8.35	9.19
20	3°	17°	2.36	2.96	3.55	4.43	5.32	6.21	7.09	7.98	8.87	9.76
21	3°	18°	2.50	3.13	3.75	4.69	5.63	6.57	7.51	8.45	9.39	10.32
22	3°	19°	2.64	3.30	3.96	4.95	5.94	6.93	7.92	8.91	9.90	10.89
23	3°	20°	2.78	3.47	4.17	5.21	6.25	7.29	8.34	9.38	10.42	11.46

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PLANNING

WHY ROTATE TO 3?

- LESS LOAD ON MENISCUS (IN VITRO)
- LESS INSTABILITY

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PLANNING

SIMULATE ROTATION

PLATE POSITION

IN LINE WITH TIBIA AXIS

TILTED – MORE RISKS, 'ROCKBACK'

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PLANNING

ABSTRACT

EFFECT OF OSTEOTOMY AND PLATE ORIENTATION ON TIBIAL PLATEAU ROCK-BACK FOLLOWING TPLO USING A TIBIAL GAP MODEL

By

Edyta Bula

This study provides evidence to support the hypothesis that rock-back is amplified with a plate placed at an inclination to the caudal tibial cortex, and thus the tibial mechanical axis. On the contrary, osteotomy orientation has less of an effect on rock-back in this TPLO gap model.

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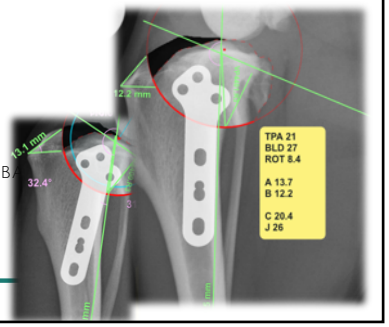
PLANNING

SIMULATE ROTATION

PLATE POSITION

IN LINE WITH TIBIA AXIS

TILTED – MORE RISKS, 'ROCKBA



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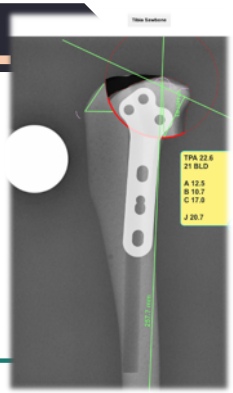
PRACTICAL

ROTATE AND APPLY PLATE

ROTATE TO 3-5°

3.5MM STANDARD PLATE



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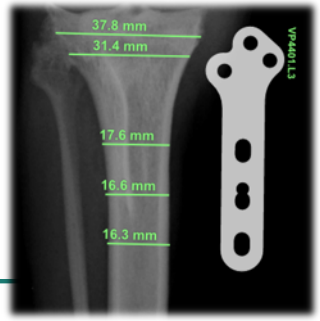
PLANNING

CC X-RAY

MEASURE TIBIA WIDTH

SCREW LENGTH



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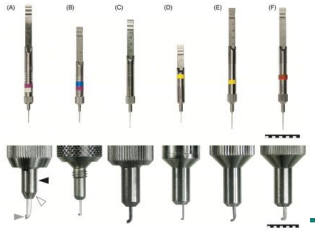
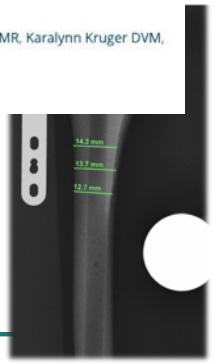
Evaluation of depth gauge accuracy in a canine tibial plateau leveling osteotomy model

David McChesney DVM, Anke Langenbach Dr. med. vet., DACVS, DECVS, DACVSMR, Karalynn Kruger DVM, Tanya C. Garcia MS, Denis J. Marcellin-Little DEDV, DACVS, DACVSMR

First published: 04 August 2021 | https://doi.org/10.1111/vsu.13694





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SURGERY

- APPROACH
- ARTHROTOMY
- TPLO

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SURGERY

POSITIONING

DORSAL RECUMBENCY

LIMB CAN BE VERTICAL OR HORIZONTAL FOR APPROACH/CUT/PLATING

IF HORIZONTAL LIMB – IDEAL TO PLACE ON TABLE

ASSISTANT

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SU

POSITIONIN

DORSAL REC

LIMB CAN BE

OACH/CUT/PLATING

IF HORIZON

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SURGERY

LANDMARKS

PATELLA LIGAMENT

MEDIAL COLLATERAL LIGAMENT

INSERTION OF THE PATELLA LIGAMENT

PROXIMAL EXTENT OF MEDIAL TIBIA

FIBULAR HEAD

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SURGERY

APPROACH

1. MINI MEDIAL ARTHROTOMY
2. APPROACH TO PROXIMAL TIBIA

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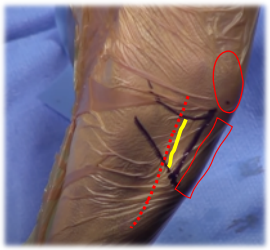
SURGERY

APPROACH

SKIN INCISION – DISTAL PATELLA POLE TO DISTAL ASPECT OF TT



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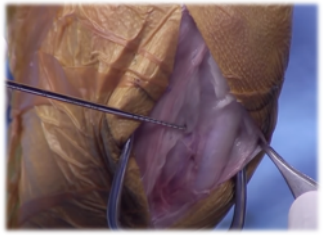
SURGERY

APPROACH

SUBCUT DISSECTION – FIND PATELLA TENDON TIP – BRUSH WITH SWAB



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SURGERY

APPROACH

MEDIAL MINI AT – PALPATE JOINT

DISTRACT 2 DIRECTIONS (CARE MMENISCUS)

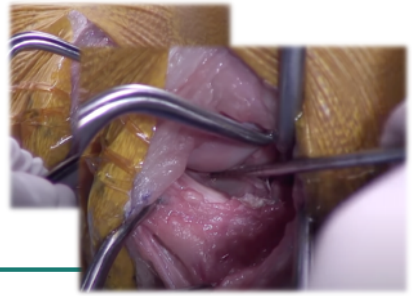
72

SURGERY

APPROACH

INSPECT JOINT - TIPS

- LIGHTING
- DISTRACTION
- PROVOKE SUBLUX.
- FLEXION/ EXT
- PALPATION



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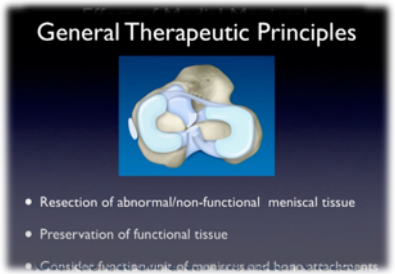
SURGERY

APPROACH

RESECT CCL?

MENISCAL RELEASE?



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SURGERY

ARTHROTOMY - CLOSURE

LAVAGE

1-2 CRUCIATE SUTURES PDS

CARE PATELLA TENDON

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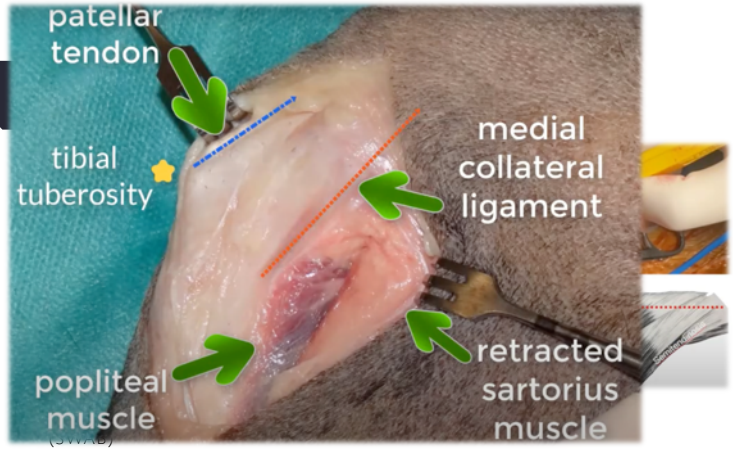

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Potential Iatrogenic Medial Meniscal Damage During Tibial Plateau Leveling Osteotom

CHAD S. O'BRIEN, DVM and STEVEN A. MARTIN

Results—*Twenty-gauge group:* 65% of stifles had minor MM damage with M pared with 35% of stifles with SZ insertion ($P = .0049$). Severe MM damage stifles with MCL insertion compared with 0% of stifles with SZ insertion ($P =$ *gauge group:* 85% of stifles had minor MM damage with MCL insertion compa SZ insertion ($P = .0011$); however, no severe MM injury was noted.
Conclusions—HN insertion though the MCL can produce iatrogenic damage tc 25 G HN and SZ site for insertion reduced the frequency and severity of MM
Clinical Relevance—HN insertion into the medial aspect of the femorotibial join cause gross iatrogenic MM damage, which may contribute to the incidence a latent MM injuries after TPLO.
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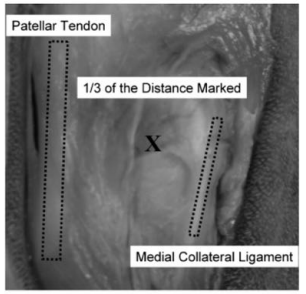

Fig 1. Photograph of proximomedial right tibia after surgical approach for tibial plateau leveling osteotomy in a cadaver specimen. Safe zone needle insertion site (X). The safe zone is defined as 1/3 the distance from the cranial border of the medial collateral ligament to the medial edge of the patellar tendon.

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SUR

Accuracy evaluation of a two-wire technique for osteotomy positioning in the tibial plateau levelling procedure

N. Woodbridge[1,2]; A. Knuchel-Takano[1,2]; H. Brissot[3]; P. Nelissen[1,2]; M. Bush[1,2]; M. Owen[1,2]
[1]University of Nottingham, Department of Small Animal Surgery, Nottingham, UK; [2]Dick White Referrals, Station Farm, Cambridgeshire, UK; [3]Pride Veterinary Centre, Derby, Derbyshire, UK

Results: On average the least variable measurement was B2 (5%) followed by C2 (7%) and then A2 (13%). The maximum mean difference between the intended position and achieved position was 1.5 mm.
Clinical significance: Despite there being a significant difference between the intended and the actual position of the osteotomy, the variation between the intended and actual tibial tuberosity width was small (5%). None of the cases suffered a tibial tuberosity fracture, which also supports the clinical value of this technique. Care must be taken to avoid inadvertent cutting of the Kirschner guide wires.

USED TO – PARALLEL PLACEMENT IMPORTANT

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Evaluation of vascular trauma after tibial plateau levelling osteotomy with or without gauze protection

A cadaveric angiographic study

A. Pozzi[1,4]; V. Samii[2]; M. B. Horodyski[3,4]
[1]University of Florida, Veterinary Medical Center, Small Animal Clinical Sciences, Gainesville, Florida, United States; [2]Ohio State University, Columbus, Ohio, United States; [3]University of Florida, Department of Orthopedics and Rehabilitation. Gainesville. Florida. United States; [4]Universitv of Florida, Comparative Orthopedics and Biomechanical Lab-

An important advantage of a less invasive TPLO technique is the preservation of the popliteus insertion and its function. The popliteal muscle is considered to be an important contributor to active rotational stability and propioception in the human and dog knee (22). In a cadaveric human study it was found that transection of the popliteal muscle caused an increased rotational laxity of the knee (23). On this basis it could be hypothesized that this loss

difference between the Protection group and the No Protection group, more contrast extravasation was observed in three specimens that underwent TPLO with dissection than in the specimens of the group of TPLO without dissection. Pre-

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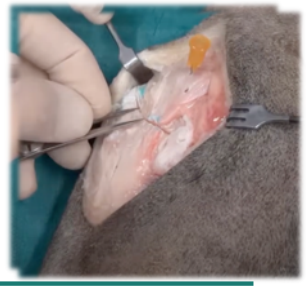
SURGERY

MARK

- OSTEOTOME
- CRANIAL PORTION



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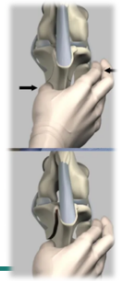
SURGERY

FINISH CUT

- DEPTH
- CAUDAL BLADE EXIT
- STOP LAVAGE
- FIRM PRESSURE ON PROX. SEGMENT
- STOP IMMEDIATELY



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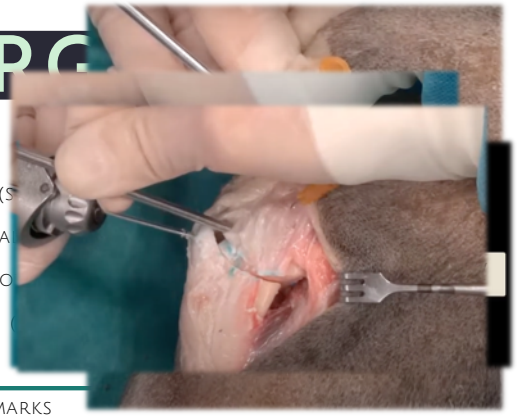
SURG

ROTATE

- BE READY (S
- ROTATIONA
- +/- OVERRO
- PIN AT PTI (
- COMPRESS
- OBSERVE MARKS



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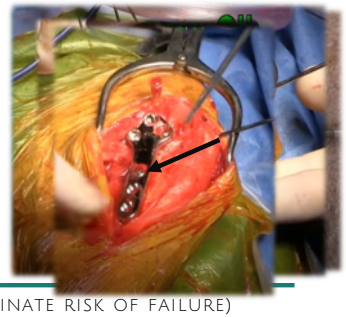
SURGERY

PLATE

- REMOVE ROTATION PIN
- SCREW N4 (5)
  - DRILL GUIDE
- PROXIMAL SCREW/S
- COMPRESS
  - (DIRECT HEALING: ELIMINATE RISK OF FAILURE)



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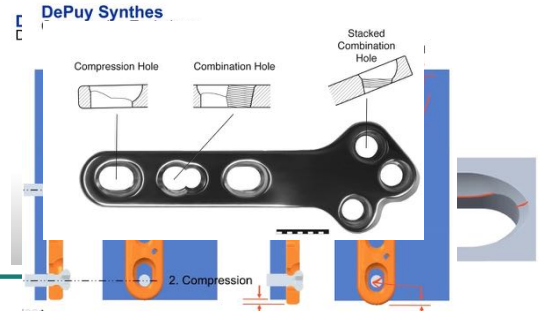
SURGERY

COMPRESSION



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SURGERY

CLOSURE – PROX TIBIA

LAVAGE THOROUGHLY

PES ANSERINUS – GOOD BITES (PDS) – COMBO OF INTERRUPTED/ CONT.

GOOD SUBCUTANEOUS CLOSURE (MONOCRYL)

DERMAL CLOSURE (ID/ SKIN)

86

PRACTICAL

SAWBONE – TRANSFER VPOP PLAN ONTO SAWBONE

87

PRACTICAL

SAWBONE – TRANSFER VPOP PLAN ONTO SAWBONE

MONITOR POSITION OF SAW

PERFORM PARTIAL CUT

MAKE MARKINGS WITH PEN

88

PRACTICAL

FINISH CUT

APPLY ROTATIONAL PIN

ROTATE

PLACE HOLDING PIN +/- COMPRESSION FORCEPS

89

PRACTICAL

APPLY PLATE

PLACE SCREWS IN SPECIFIC ORDER – STARTING WITH N4

REMOVE PLATE/ HARDWARE

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PRACTICAL

CADAVER

POSITIONING + APPROACH

IDENTIFY LANDMARKS – PATELLA, PT, JOINT SPACE

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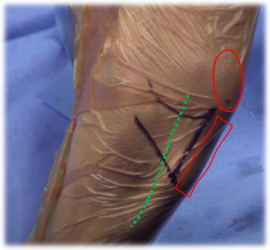
PRACTICAL

CADAVER

POSITIONING + APPROACH

INCISE – DISTAL PATELLA POLE TO DISTAL TT



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PRACTICAL

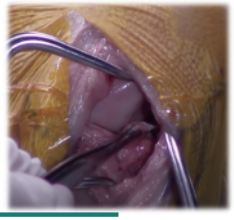
MEDIAL MINI-ARTHROTOMY + IDENTIFY JOINT STRUCTURES

DISTRACT

RESECT CCL

TEST BEHAVIOUR OF STIFLE

FIND MENISCI



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PRACTICAL

IDENTIFY LANDMARKS

PATELLA LIGAMENT

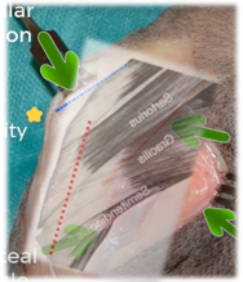
PES ANSERINUS

INSERTION OF THE PATELLA LIGAMENT

PROXIMAL EXTENT OF MEDIAL TIBIA

MEDIAL COLLATERAL LIG.

FIBULAR HEAD



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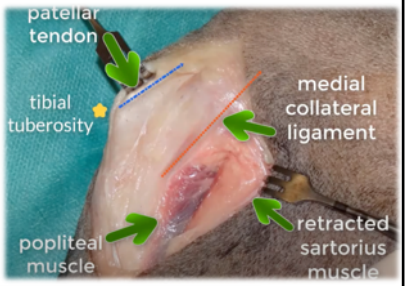
PRACTICAL

PREPARE PROXIMAL TIBIA FOR MEASUREMENTS + OSTEOTOMY

- ELEVATE PES
- OPEN IP BURSA
- RETRACT
- MAP OUT JOINT
- FAMILIARIZE W/ ANATOMY



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COMPLICATIONS

- INTRAOPERATIVE
- POSTOPERATIVE

96

Sx COMPLICATIONS

- Haemorrhage
- implant placement related
- cut related
- reduction related

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Sx COMPLICATIONS

- Bleed – cr. tib. artery, bone – pin/ metaphysis/ diaphysis
- implant placement – misplacement (articular 1-2%)
- cut – position, iatrogenic injury
- reduction – inability, failure to maintain

98

Sx COMPLICATIONS

- Haemorrhage – 0.7% (n=869)
- prevention
  - no packing
  - minimal popliteus elev.
  - lateral to medial pressure on PF
  - stop as soon as cut done
  - limited caudal tibial saw exit

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Sx COMPLICATIONS

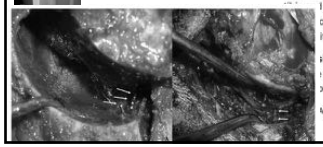
HAE

MAN

Control of hemorrhage through the osteotomy gap during tibial plateau leveling osteotomy: 9 cases

Luis Matres-Lorenzo, Ldo Med Vet[1] | Aidan McAlinden, MVB, Diplomate ECVS[2] | Antoine Bernardé, DMV, MS, Diplomate ECVS[1] | Fabrice Bernard, DMV, Diplomate ECVS[1]

Conclusion: Arterial hemorrhage during the radial osteotomy of a TPLO can be controlled by occlusion of the compromised artery through distraction of the osteotomy gap. This technique was not associated with long-term complications.



l the popliteal musculature. Rotation and compression of the proximal tibia followed by of the pes anserinus successfully controlled arterial bleeding during TPLO in nine clinical ithout the need for direct ligation.

ion: Continuing the usual steps of a TPLO can successfully control intraoperative bleeding CTA with no long-term complications. This technique should be considered in cases of leeding during TPLO before direct ligation.

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POSTOP

EXAM

TIBIAL COMPRESSION TEST?

X-RAYS

SAME VIEWS

4A'S – ALIGNMENT (TPA), APPOSITION, APPARATUS, (ACTIVITY)

TT SHAPE

IDENTIFY ANY MISTAKES (LOOK FOR THEM!)

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KAHOOT

SURGICAL COMPLICATIONS (MISTAKES)

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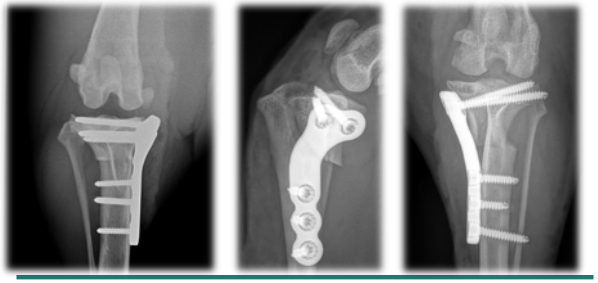
MISTAKES



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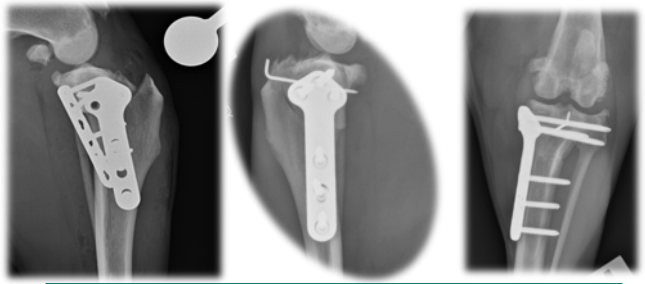
MISTAKES



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MISTAKES

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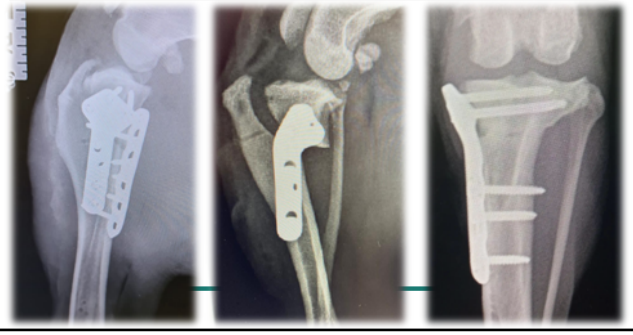
MISTAKES



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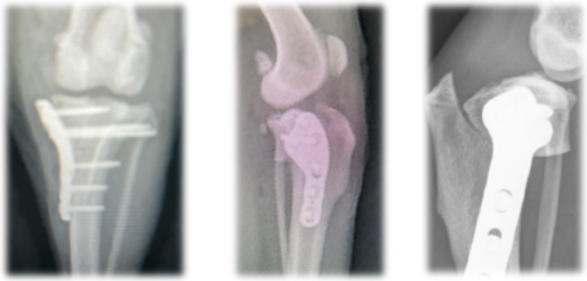
MISTAKES



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PLAN

COVER WOUND

MEDICATION

NSAID 10–14D

PARACETAMOL 20-30MG TID 5D

REST

CAGE/ ENCLOSED AREA/ ROOM

NO RUNNING/ JUMPING/ STAIRS/ SLIDING

108

PLAN

EXERCISE

TOILET ONLY 4WKS (LEASH)

INCREASE LEASH WALKS OVER WKS 5-6-7: UP TO 15MIN TID

REVIEW
- EXAM (/VIDEO)
- NEED FOR MEDICATION
- OWNER PERCEPTION
- XRAYS → RECOMMENDATIONS

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ANTIBIOTIC

EVIDENCE CONTROVERSIAL

ANTIBIOTIC RESISTANCE

110

ANTIBIOTIC

ORIGINAL ARTICLE

Protocol changes to reduce implant-associated infection rate after tibial plateau leveling osteotomy: 703 dogs, 811 TPLO (2006-2014)

Samantha L. Stine DVM[1] | Susan M. Odum PhD[2] | W. Daniel Mertens DVM, Diplomate ACVS[1]

Methods: Medical records (2006-2014) of dogs with TPLO with a ≥18-month follow-up were reviewed. An established TPLO protocol was altered to include an iodophore-impregnated adhesive drape, cefazolin administration every 90 minutes intraoperatively and then every 4 hours until hospital discharge, orthopedic surgical gloves, triclosan-coated intradermal sutures (instead of staples), soft-padded bandage with mupirocin ointment, use of single-use gloves while handling treated dogs, and placement of an Elizabethan collar. Signalment, affected limb, protocol changes, IAI,

Surgical Site Infection Rate after Hemilaminectomy and Laminectomy in Dogs without Perioperative Antibiotic Therapy

Barbara A.R. Dyall[1] | Hugo G. Schmökel[1]

Results Of 221 consecutive hemilaminectomy and laminectomy procedures, 154 were included in this research study. One superficial wound infection was recorded and treated with antimicrobials. Overall, the SSI rate was 0.6%, while the expected SSI rate in clean operative wounds in dogs and cats is 2.0 to 4.8%. The SSI rate in human spinal surgery is 0.7 to 4.3%.

Clinical Significance Considering the low incidence of SSI in our study group, the routine use of perioperative antibiotic prophylaxis in dogs undergoing laminectomy procedures should be reconsidered to help address the global problem of bacterial resistance.

REVIEW

Efficacy of postoperative antibiotic use after tibial plateau leveling osteotomy in dogs: A systematic review

Steven C. Budsberg DVM, MS, DACVS[1,2] | Bryan T. Torres DVM, PhD, DACVS-SA, DACVSMR[3] | Gabriella S. Sandberg BS[1]

Conclusion: We found little evidence to support the use of postoperative antibiotics to reduce the risk of surgical site infections in dogs after TPLO. The

ORIGINAL ARTICLE

Influence of administration of antimicrobial medications after tibial plateau leveling osteotomy on surgical site infections: A retrospective study of 308 dogs

Andrea C. Clark DVM[1] | Justin J. Greco DVM, DACVS[2]

Conclusion: Previously reported predisposing factors for infection were confirmed, but postoperative administration of antimicrobial medications was not protective against SSI nor did it predispose to antibiotic resistance in our clinical setting.

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ANTIBIOTIC

World Health Organization | Health Topics | Countries | Newsroom | Emergencies

Antibiotic resistance

31 July 2020

Key facts

- Antibiotic resistance is one of the biggest threats to global health, food security, and development today.
- Antibiotic resistance can affect anyone, of any age, in any country.
- Antibiotic resistance occurs naturally, but misuse of antibiotics in humans and animals is accelerating the process.
- A growing number of infections – such as pneumonia, tuberculosis, gonorrhoea, and salmonellosis – are becoming harder to treat as the antibiotics used to treat them become less effective.
- Antibiotic resistance leads to longer hospital stays, higher medical costs and increased mortality.

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COMPLICATIONS

Infection - can be problematic

Mechanical failure

new meniscal tear

Patella tendon thickening

patella tendinosis

113

COMPLICATIONS

Infection - wound 7.8% (N=5883) - multifactorial

– deep SSI and implant removal - 3% (N=4800)

Mechanical failure - TT fracture – 2.3% (N=7965)

- others

new meniscal tear - 2.8% (N=4696)

Patella tendon thickening – 80-100%

patella tendinosis – 2-7%

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BEGINNERS GUIDE

1. Low risk breeds (eg. non obese border collie/ labrador
2. non-extreme TPA
3. no complicating conditions – deformity, MPL, synostosis, etc.
4. have all instrumentation – ideally locking implants
5. critique each postop x-ray and learn from mistakes

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RISK-PRONE CASES

1. disproportionate dogs – obese, small bone/big dog
2. extreme TPA
3. miniature dog
4. bilateral single session
5. concurrent MPL
6. bone deformity

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COMPLICATIONS

KAHOOT 2

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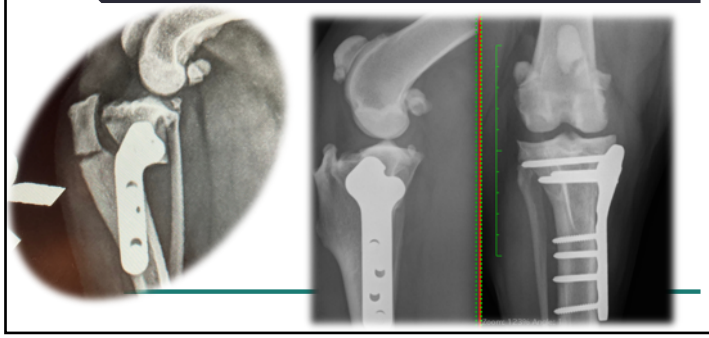
COMPLICATIONS



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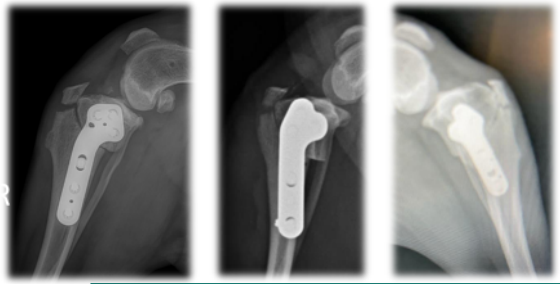
COMPLICATIONS



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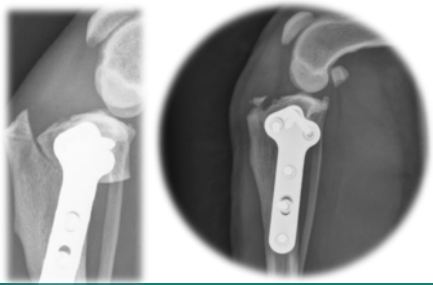
COMPLICATIONS



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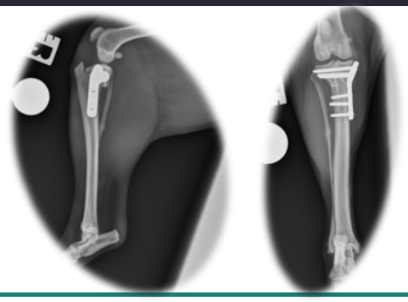
COMPLICATIONS



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PRACTICAL

MEASURE – MARK

START CUT

MARK ROTATION

ROTATE

COMPRESS

APPLY PLATE

CLOSURE

122

PRACTICAL

X-RAYS (?)

123