

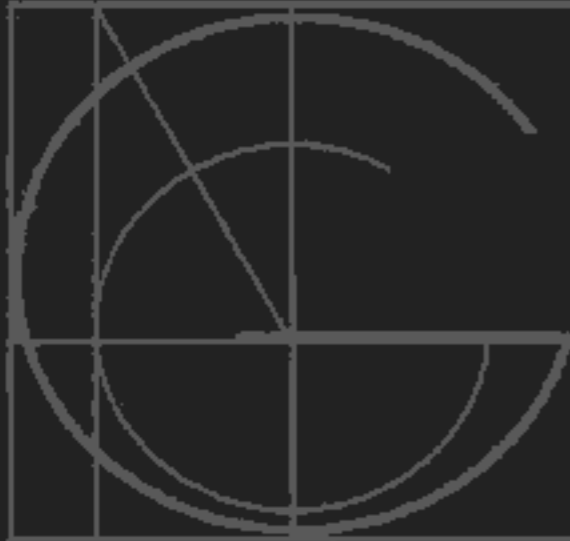
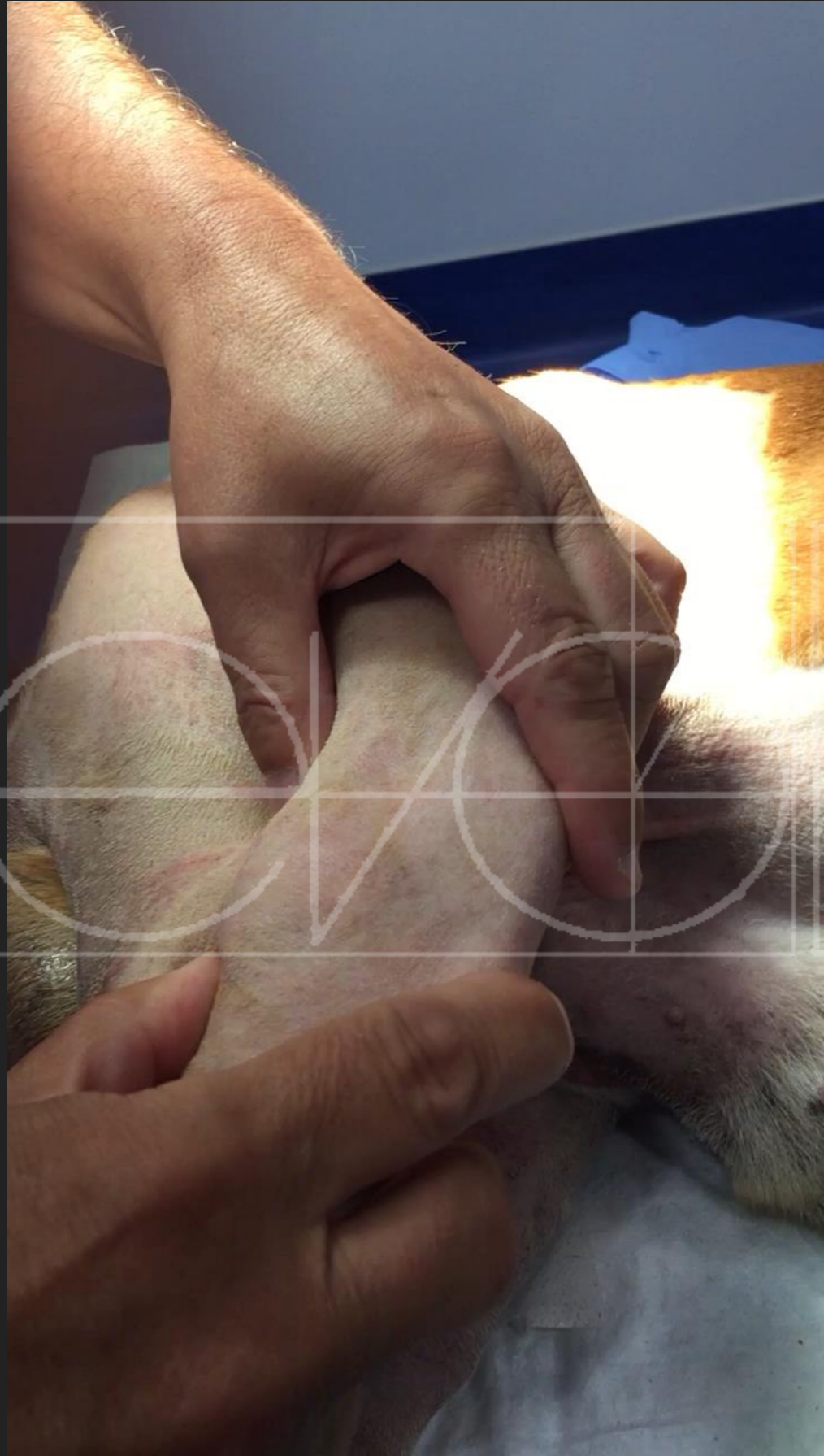


FRACTURA DE FÉMUR DE EPI, LCCR Y COLATERAL LATERAL DE EPD

ANDRÉS SOMAZA. ACREDITADO AVEPA
TRAUMATOLOGÍA Y ORTOPEDIA

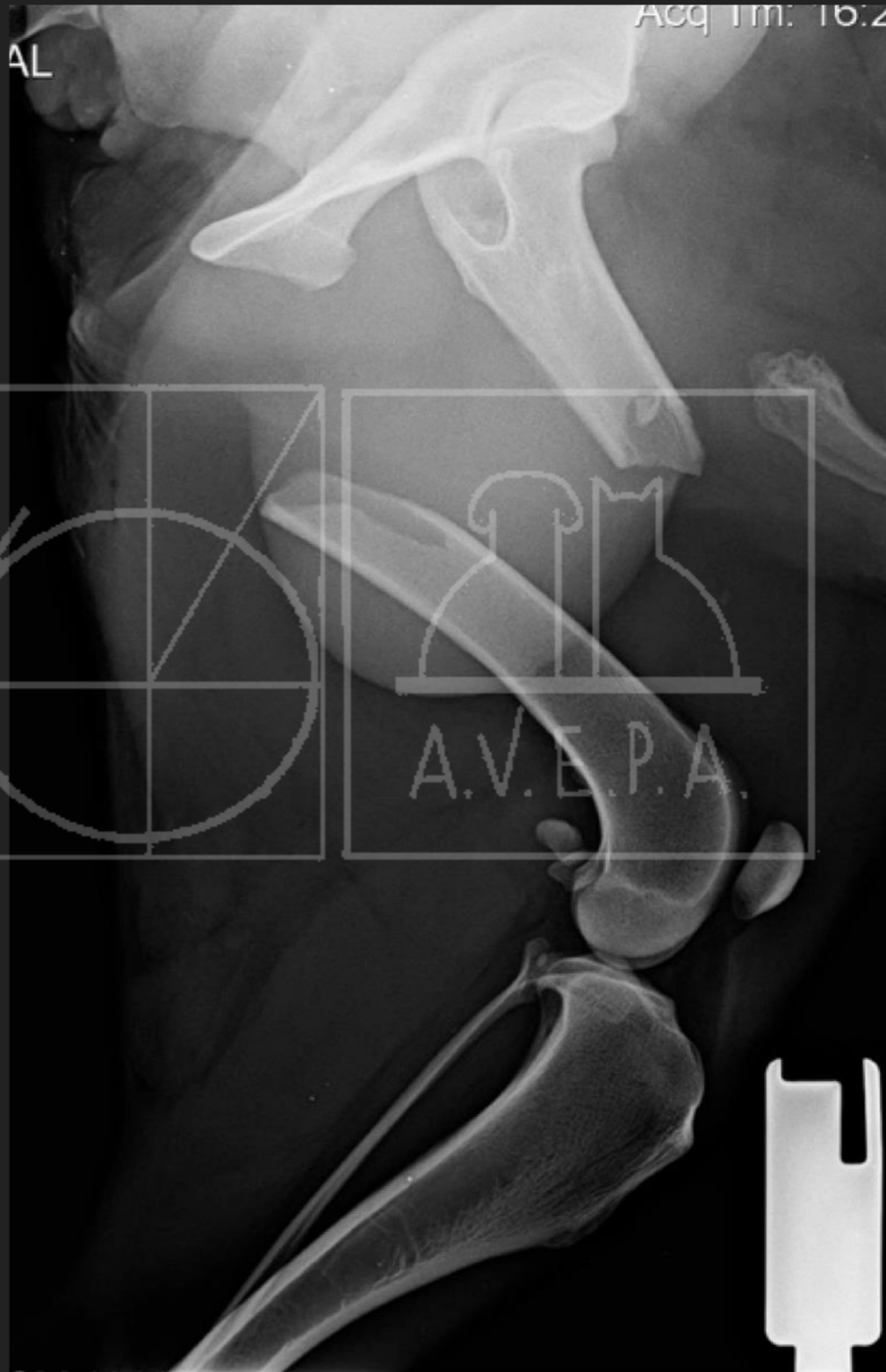


Caso Clínico: “BOBY” es un sabueso de 4 años de edad y 19 kg de peso, que ha sufrido un atropello. No se mantiene en la estación. Su exploración neurológica es normal. Tras una primera exploración se aprecia que tiene lesiones en ambas extremidades posteriores. Se procede a su anestesia, exploración y toma de vistas radiográficas, pudiendo diagnosticar una fractura de fémur, transversa, diafisaria, abierta grado I de la extremidad posterior izquierda. En la extremidad posterior derecha se diagnostica una rotura de ligamento cruzado craneal y una muy probable rotura del ligamento colateral lateral.



A.V.E.P.A.

RADIOGRAFÍAS



RADIOGRAFÍAS



Tratamiento: Para el tratamiento de la rotura de ligamento cruzado craneal se opta por realizar una TPLO con una hoja de 21mm y una rotación de 10.7mm.

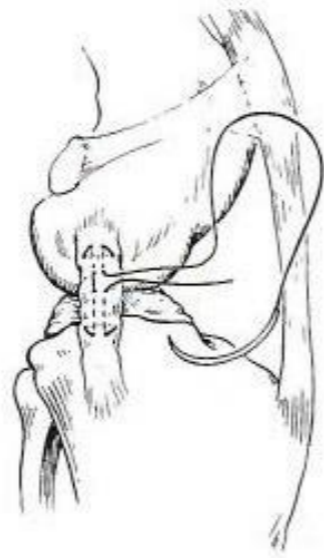
Posteriormente se realiza un abordaje lateral, identificando la rotura del ligamento colateral lateral que se sutura con un patrón de locking loop con pds de 2/0, se “envuelve” en fascia lata y se imbrica el defecto de la fascia lata para dar mayor estabilidad.

Por último, al existir cierto grado de rotación externa de la rodilla, se decide realizar una estabilización extra capsular fabelo tibial lateral.

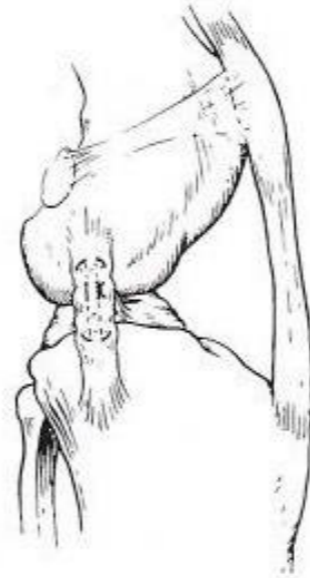
La extremidad derecha se inmoviliza con un vendaje tipo Robert Jones. Se prescribe cefalexina 10 días, tramadol 5 días y carprofeno



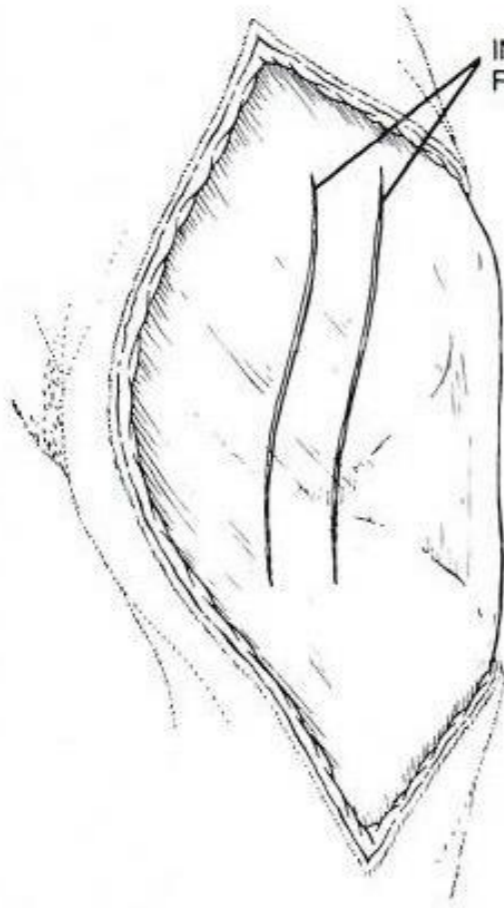
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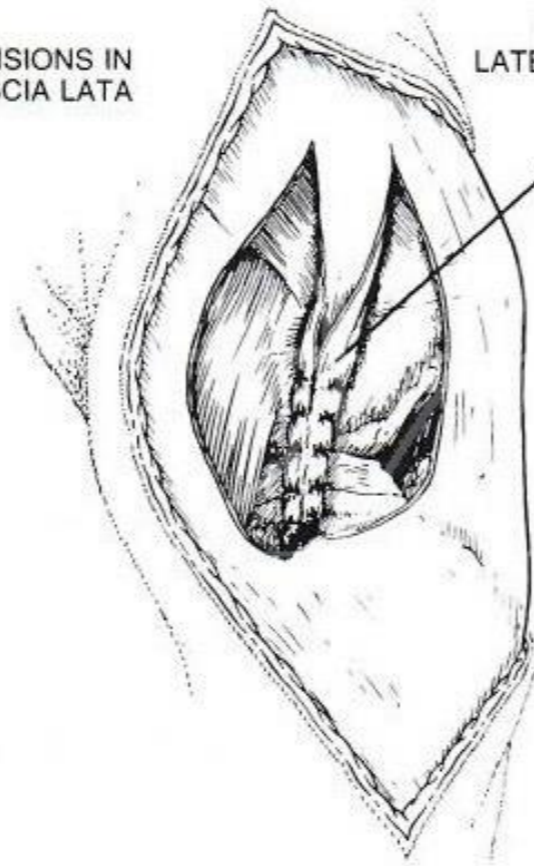


INCISIONS IN FASCIA LATA

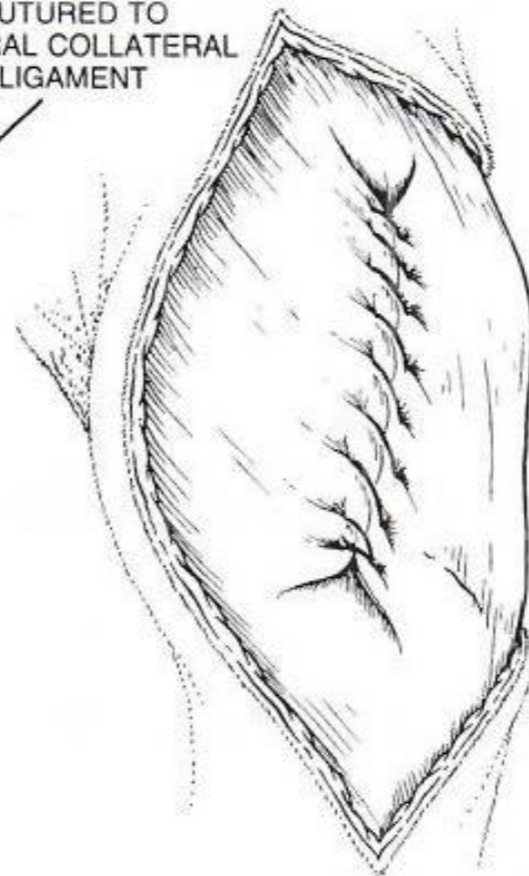


I

FASCIA LATA SUTURED TO LATERAL COLLATERAL LIGAMENT

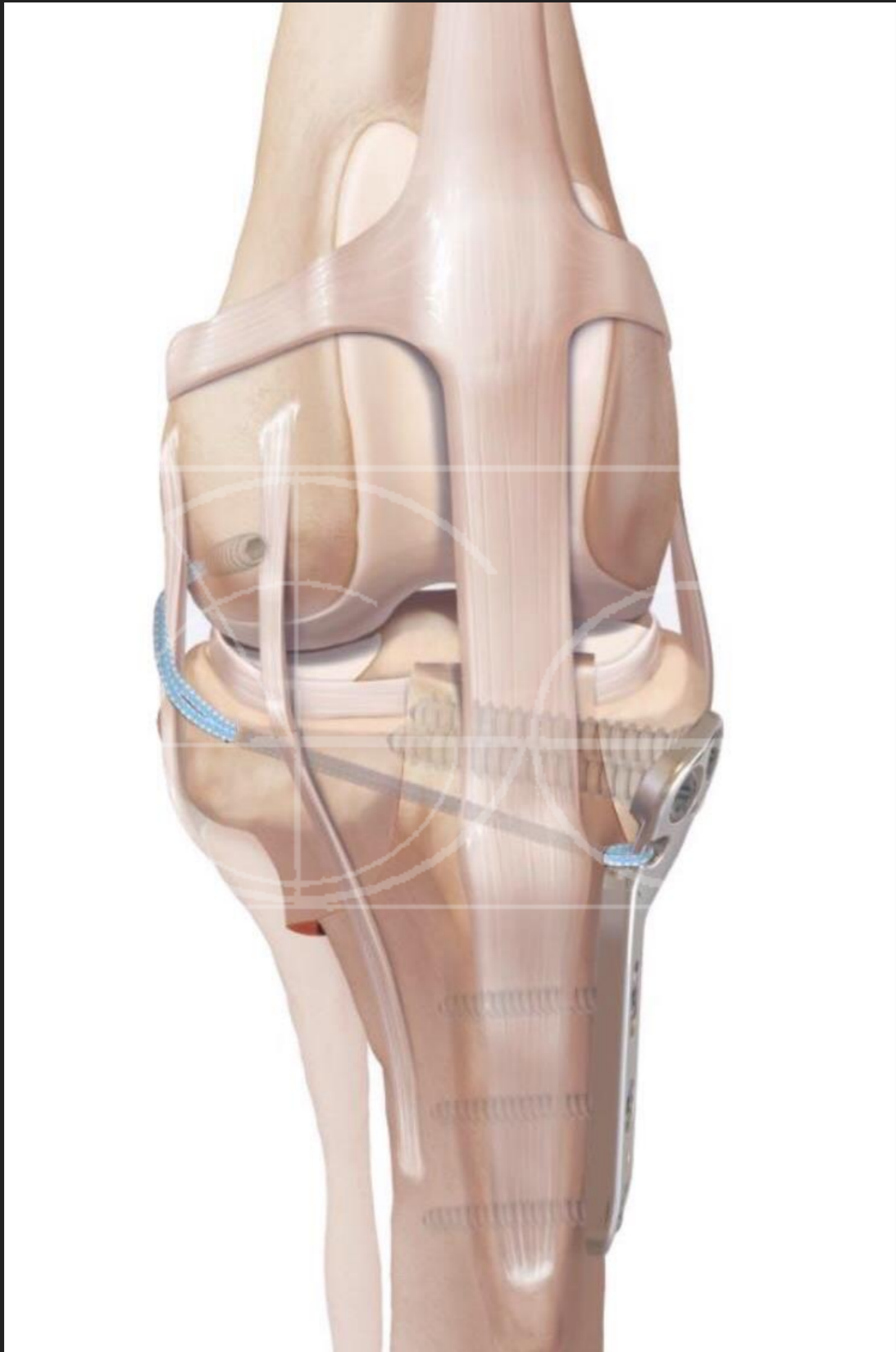


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F. Gradinge



PAPER

Combined tibial plateau levelling osteotomy and lateral fabellotibial suture for cranial cruciate ligament rupture with severe rotational instability in dogs

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OBJECTIVE: To report the use of tibial plateau levelling osteotomy and lateral fabellotibial suture in combination for treatment of severe internal tibial rotational stifle instability in cranial cruciate-deficient stifles.

METHODS: Twenty-three stifles in 19 dogs were diagnosed with cranial cruciate ligament rupture with severe stifle instability, characterised by marked cranial tibial translation and internal tibial rotation that was evident during orthopaedic examination. A combined tibial plateau levelling osteotomy and lateral fabellotibial suture procedure were performed to stabilise the stifle joint. The surgical complications, short-term lameness scores and owner satisfaction were evaluated.

RESULTS: The postoperative complication rate was 21.7% with one minor (4.3%) and four major (17.4%) complications. At short-term follow-up one dog had an intermittent low-grade lameness and two dogs had mild tibial internal rotational instability present on palpation without lameness. Owner's overall satisfaction with the operation and recovery was good (21.4%) to excellent (78.6%).

CLINICAL SIGNIFICANCE: The use of lateral fabellotibial suture in combination with tibial plateau levelling osteotomy was an effective technique for managing cranial cruciate ligament rupture with severe internal tibial rotational stifle instability.

Retrospective study of 476 tibial plateau levelling osteotomy procedures

Rate of subsequent 'pivot shift', meniscal tear and other complications

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Keywords

Pivot shift, complication, meniscal tear, tibial plateau levelling osteotomy, stifle, canine

Summary

Objective: To determine the rate of subsequent 'pivot shift', meniscal tear and risk factors associated with complications of tibial plateau levelling osteotomy (TPLO) and to assess clinical and owner perception outcome.

Study design: Retrospective study.

Sample population: Three hundred and forty-eight dogs that had undergone TPLO surgical procedures (n = 476 stifles).

Methods: Medical records were reviewed for the retrieval of information on breed, sex, age, body weight, clinical history, radiograph findings, pre- and postoperative tibial plateau angle, limb alignment, unilateral versus bilateral disease, condition of cranial cruciate ligament (CCL) and menisci, implant material, healing time and complications. Clinical and owner-assessed questionnaire outcomes were also recorded.

Results: Forty-six (9.7%) postoperative complications were reported. Twenty (4.2%) were classified as major complications requiring an additional surgical intervention, and 26 (5.5%) as minor complications. No risk factors associated with postoperative complications were identified. Ten (2.1%) subsequent me-

niscal injuries in the stifles with normal unaltered menisci at time of TPLO were reported with a median postoperative time of 9.5 months. Signs of postoperative 'pivot shift' were reported in 15 (3.1%) stifles. All stifles with a 'pivot shift' had a complete CCL rupture or a debrided partial CCL rupture; a medial meniscectomy was identified as a risk factor for a 'pivot shift' (p = 0.02). Dogs with intact medial meniscus had a significantly higher activity level (p < 0.0001) and a shorter time to peak function (p = 0.02) than dogs that underwent meniscectomy according to an owner questionnaire.

Conclusions: Dogs with TPLO and intact meniscus seemed to have a better and faster recovery than dogs with TPLO and meniscectomy based on owner questionnaires. 'Pivot shift' was infrequent after TPLO surgery. All dogs with a 'pivot shift' had a complete CCL rupture or a debrided partial CCL rupture and meniscectomy was identified as a risk factor for its occurrence.

Clinical relevance: Considering the relatively low rate of subsequent meniscal injury after TPLO, systematic medial meniscal release with TPLO may be unnecessary. The 'pivot shift' deserved further investigation to completely understand its mechanism, to identify its anatomic components and potential consequences on the stifle joint.

Effect of Cranial Cruciate Ligament Deficiency, Tibial Plateau Leveling Osteotomy, and Tibial Tuberosity Advancement on Contact Mechanics and Alignment of the Stifle in Flexion

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Objective: To assess contact mechanics and 3-dimensional (3-D) joint alignment in cranial cruciate ligament (CCL)-deficient stifles before and after tibial plateau leveling osteotomy (TPLO) and tibial tuberosity advancement (TTA) with the stifle in 90° of flexion.

Study Design: In vitro biomechanical study.

Sample Population: Cadaveric pelvic limb pairs (n = 8) from dogs weighing 28–35 kg.

Methods: Contralateral limbs were assigned to receive TPLO or TTA. Digital pressure sensors were used to measure femorotibial contact area, peak and mean contact pressure, and peak pressure location with the limb under a load of 30% body weight and stifle flexion angle of 90°. 3-D poses were obtained using a Microscribe digitizer. Specimens were tested under normal, CCL deficient, and treatment conditions.

Results: Significant disturbances in alignment were not observed after CCL transection, although medial contact area was 10% smaller than normal (P = .003). There were no significant differences in contact mechanics or alignment between normal and TTA conditions; TPLO induced 6° varus angulation (P < .001), 26% decrease in lateral peak pressure (P = .027), and 18% increase in medial mean pressure (P = .008) when compared with normal.

Conclusion: Cranial tibial subluxation is nominal in CCL-deficient stifles loaded in flexion. Stifle alignment and contact mechanics are not altered by TTA, whereas TPLO causes mild varus and a subsequent increase in medial compartment loading.

Clinical Relevance: Cranial tibial subluxation of CCL-deficient stifles may not occur during postures that load the stifle in flexion. The significance of minor changes in loading patterns after TPLO is unknown.

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Surgical management of pivot-shift phenomenon in a dog.

[Knight RC](#), [Thomson DG](#), [Danielski A](#).

Abstract

CASE DESCRIPTION A 6.8-year-old neutered male Labrador Retriever-Poodle mix was evaluated because of continued left pelvic limb lameness unresponsive to conservative management 1 year after undergoing tibial plateau leveling osteotomy (TPLO). **CLINICAL FINDINGS** A jerking lateral movement of the left stifle joint was detected during walking. Orthopedic examination revealed a pivot-shift phenomenon (PSP). Palpation elicited no signs of discomfort over the TPLO plate or caudomedial aspect of the stifle joint. Radiography revealed complete bone fusion at the osteotomy site and only mild joint effusion. **TREATMENT AND OUTCOME** Arthrotomy was performed at the medial aspect of the stifle joint, revealing no meniscal tears. The previously applied plate was removed, and an extracapsular, synthetic, ligament-like biomaterial was placed to counteract internal tibial rotation, thereby eliminating the PSP. Six weeks later, lameness had improved considerably with no evidence of PSP; 8 weeks after surgery, the dog was assessed for sudden-onset lameness in the right pelvic limb. Cranial cruciate ligament rupture was suspected, and TPLO was performed. The PSP was identified intraoperatively, so an extracapsular implant was placed. Six weeks later, the dog had only mild lameness and no evidence of PSP in either pelvic limb. In a follow-up telephone conversation 1 year later, the owner reported no obvious lameness or gait abnormalities. **CLINICAL RELEVANCE** Use of an extracapsular implant effectively eliminated the PSP following TPLO in the dog of this report and can be considered as an intra- or postoperative option for dogs with PSP that responds poorly to conservative management.

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[Indexed for MEDLINE]

Tratamiento: Mediante un abordaje lateral al fémur, tras incidir piel, subcutáneo y fascia lata, por retracción del bíceps hacia caudal y del vasto lateral hacia craneal, abordamos el foco de fractura. Aplicamos un clavo de 2,5 mm de forma normógrada para ayudarnos en la reducción y con intención de localizarlo hacia la cortical medial y de no extraerlo. Posteriormente se aplica una placa de bloqueo, titanio, multiorificio y mono axial. Los tornillos 1,2,3 se colocan mono corticales por chocar con el IM. El 4 es un tornillo de titanio no bloqueado aplicado en la parte de no bloqueo para poder dirigirlo. Posteriormente se retira, pre corta, reintroduce y corta el clavo IM

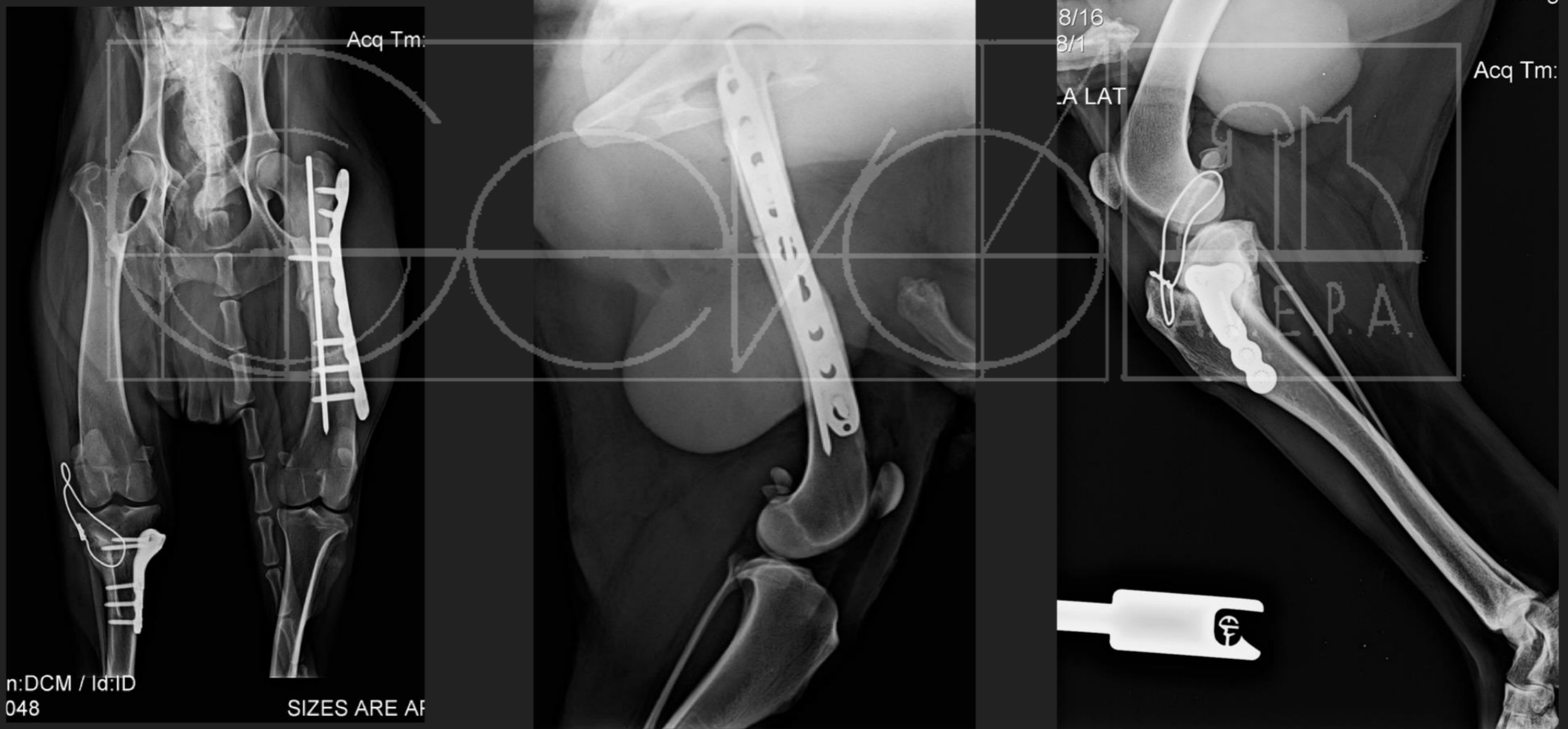


Seguimiento:

10 días: Se retira el vendaje y los puntos. El apoyo es correcto y con cojera II/V. No hay inflamación. Se sigue recomendando reposo. La fisioterapeuta indica ejercicios pasivos en domicilio

30 días: Se inicia el trabajo por parte de la fisioterapeuta. La rodilla derecha es estable en su exploración

3 meses: Se realizan radiografías de control. La curación radiográfica se aprecia en ambas extremidades. El apoyo es prácticamente normal en la extremidad izquierda, con buena musculación etc y en la extremidad derecha hay una leve falta de carga, pero la función articular, el ROM es normal



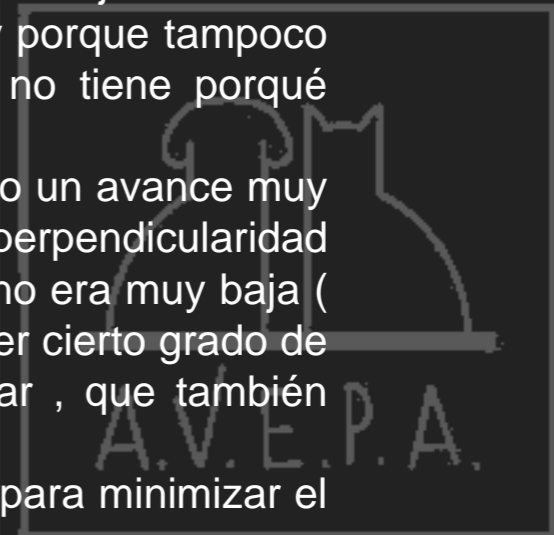
Comentarios:

Elección de los implantes: aunque la fractura de fémur se trataba de una fractura abierta grado I, creemos que con un buen manejo del acto quirúrgico y con la elección de implantes en titanio, no habría sido una buena elección el realizar otra técnica de osteosíntesis. Por otra parte se opta por dejar el clavo intramedular y no plantearnos el retirarlo por los inconvenientes de la segunda cirugía y porque tampoco vemos gran inconveniente en dejarlo, máxime con una aplicación normógrada que no tiene por qué aflojarse. Sí se intenta aplicarlo lo más próximo posible a la cortical medial.

Optamos por realizar TPLO por el TPA de 35° . Con éste ángulo podría haber sido necesario un avance muy pronunciado en caso de optar por TTA, y aún así quizá no hubiéramos conseguido la perpendicularidad entre el rotuliano y la meseta tibial. Aunque la inserción del rotuliano en la cresta tibial no era muy baja (otro criterio para elegir TTA&TPLO). Al tratarse de una rodilla muy inestable y permanecer cierto grado de rotación y traslación de la tibia optamos por efectuar una estabilización extra capsular, que también creímos oportuno para colaborar en la cicatrización del colateral lateral.

Realizamos vendajes tipo Robert Jones en todas las cirugías de cruzado, durante 6-8 días para minimizar el seroma postquirúrgico.

En este caso las cirugías se realizaron en dos tiempos diferentes.





A.V.E.P.A.

GRACIAS

