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Echo Assisted Reconstruction Of The Medial Patellofemoral Ligament.

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Faculty Disclosure Information.

- CENTRO DE TRAUMATOLOGIA DEPORTIVA COCHABAMBA - BOLIVIA
- No conflict of interest with commercial houses or companies.

Summary.

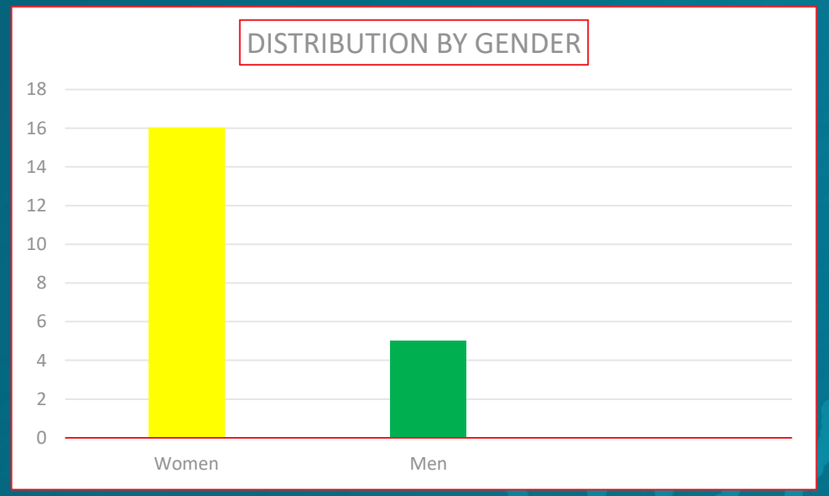
- The use of intra operative ultrasound allows us to determine anatomic points in the repair of injured tissues in this way echo assisted surgery of the medial femoral patello ligament is a precise, minimally invasive technique with satisfactory functional and anatomic results and a return to the early sports activity.

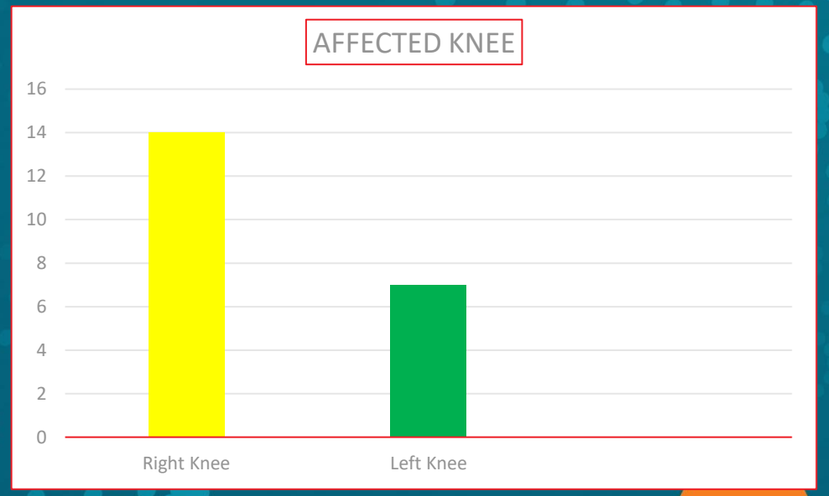
Introduction.

- Echo-assisted surgery in reconstruction of the patellofemoral ligament is a minimally invasive technique that allows rehabilitation and anatomical restitution as well as the biomechanics of the knee joint.

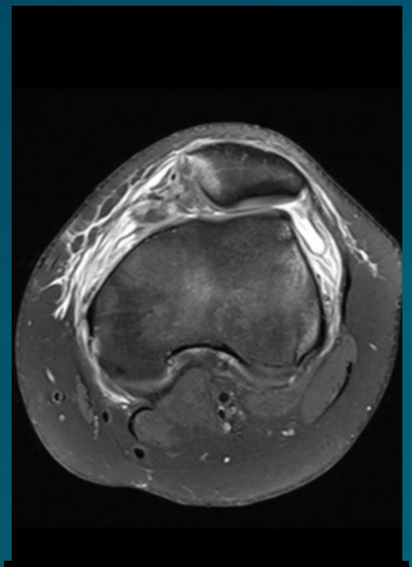
Material and Methodology.

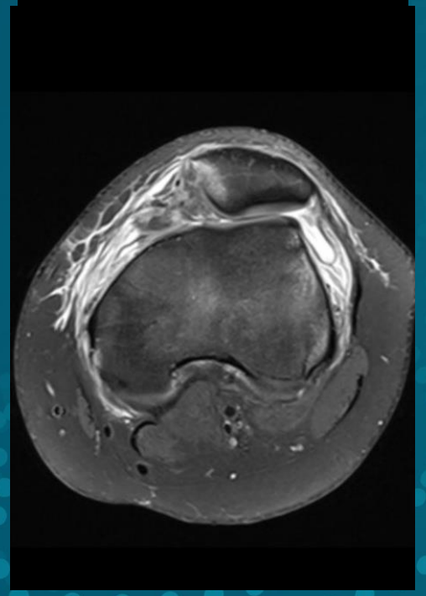
- Longitudinal, descriptive, prospective study. (21 patients)
- Patients whose femoral anteversion and external tibial torsion are within normal parameters are taken into account.
- Average age 22.6 years.
- Follow-up period January 2022-2024 (12 months).



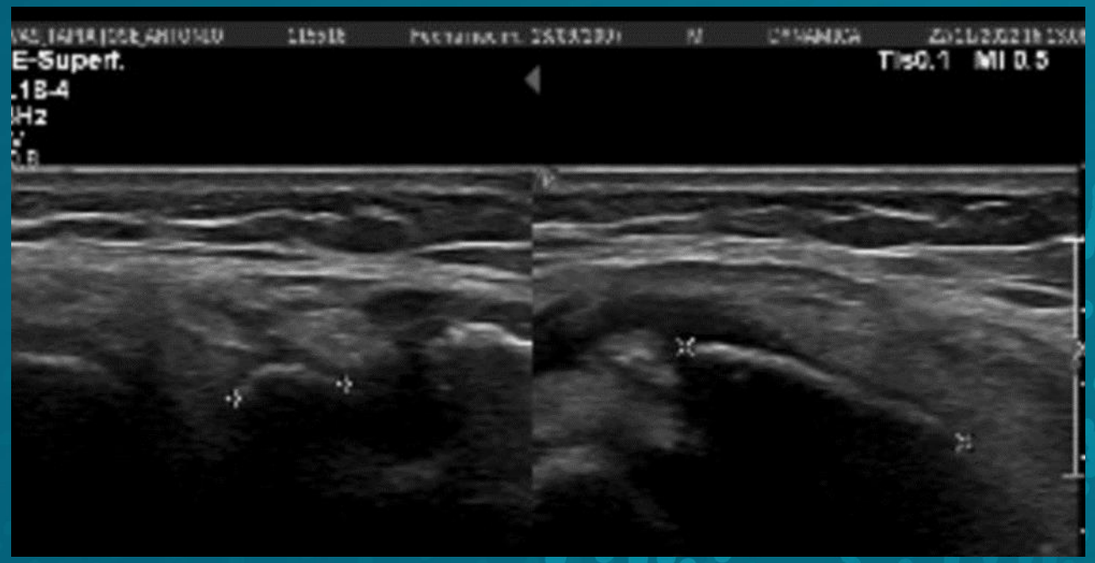


PREOPERATIVE RADIOLOGICAL TEST





PREOPERATIVE MAGNETIC RESONANCE



PREOPERATIVE ULTRASOUND

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PRE-SURGICAL CLINICAL EVALUATION

ARTHROSCOPY EVALUATION

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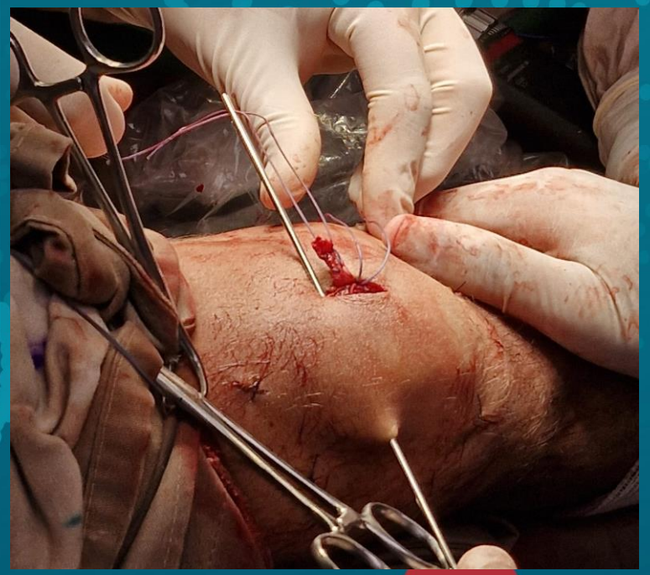
DETERMINING GRAFT INSERTION POINTS

OBTAINING AND PREPARING THE SEMIMEMBRANOSUS GRAFT

INTRAOPERATIVE ULTRASOUND



GRAFT FIXATION

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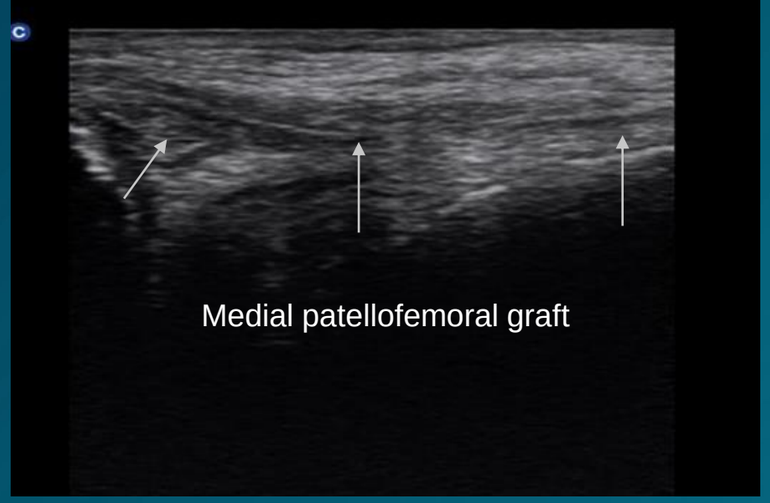
PREOPERATIVE X-RAY



POSTOPERATIVE X-RAY

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Surgical control and ultrasound-guided results

Results.

- The score on the Kujala assessment scale is 94.5 points on average.
- 2 patients presented residual pain located at the level of the external facet, they presented traumatic chondral injury secondary to patellar dislocation.
- The return to sports activities was approximately 86.5 days.
- In the postoperative radiological evaluation we used FICAT projections (30°) and we measured the lateral patellofemoral angle of Laurin, lateral deviation of Sasaki and Yagi and the angle of congruence of Merchant.
- The intraclass correlation coefficient (ICC) was performed. In our study, for the three types of angles we obtained a high value of the ICC, in all of them the angle of congruence was good.

Conclusions

- Echo-assisted surgery for reconstruction of the patellofemoral ligament is a good alternative, with less damage to soft tissues, faster recovery and fewer post-surgical complications.
- The rehabilitation of the affected joint is practically immediate, which will allow us to adapt more quickly to daily life.
- The use of intra operative ultrasound allows us to determine anatomic points in the repair of injured tissues in this way echo assisted surgery of the medial femoral patello ligament is a precise, minimally invasive technique with satisfactory functional and anatomic results and a return to the early sports activity.

References

1.Warren LF, Marshall JL. The supporting structures and layers on the medial side of the knee: an anatomical analysis. The Journal of bone and Joint surgery. 1979; 61:56-62.

2.Desio SM, Burks RT, Bachus KN. Soft tissue restraints to lateral patellar translation in the human knee. Am J Sports Med. 1998 Jan-Feb;26(1):59-65

3.Conlan T, Garth WP Jr, Lemons JE: Evaluation of the medial soft tissue restraints of the extensor mechanism of the knee. J Bone Joint Surg Am 75:682-693, 1993.

4.Hautamaa PV, Fithian DC, Kaufman KR, et al: Medial soft tissue restraints in lateral patellar instability and repair. Clin Orthop Relat Res 349:174-182, 1998.

5.Hautamaa PV, Fithian DC, Kaufman KR, Daniel DM, Pohlmeyer AMMedial soft tissue restraints in lateral patellar instability and repair. Clin Orthop Relat Res.1998;349:174–182.

6.Palmer I.On injuries to the ligaments of the ankle joint: a clinical study. Acta Chir Scand.1938;53(suppl):1–282.

7.Sandmeier RH, Burks RT, Bachus KN, Billings A.The effect of reconstruction of the medial patellofemoral ligament on patellar tracking. Am J Sports Med.2000;28:345–349.

8.Tuxoe JI, Teir M., Winge S., Nielsen PLThe medial patellofemoral ligament: a dissection study. Knee Surg Sports Traumatol Arthrosc. 2002;10:138–140.

9.Aglietti P., Buzzi R., Giron F., Simeone AJ, Zaccherotti G.Arthroscopic-assisted anterior cruciate ligament reconstruction with the central third patellar tendon: a 5-8-year follow-up. Knee Surg Sports Traumatol Arthrosc. 1997;5:138–144.

10. Eiki Nomura and Motoyasu Inoue. “Hybrid Medial Patellofemoral

Ligament Reconstruction Using the semitendinous Tendon for Recurrent Patellar Dislocation: Minimun 3 Years’ Follow-up”. Arthroscopy, 2006. Vol 22, No7 (July): pp 787-793