

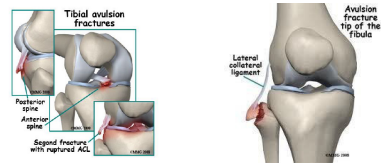
Segond fractures, Diagnosis and treatment



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Hypothesis

- Avulsion lesions are a possible goal for refixing important lateral structures.
- The same approach we have for lateral fibula and tibial spine avulsion fractures



Primary injury / plain X ray information



Ultrasound imaging

MRI 3- 6 % Reference 1
 X ray 9 % Ref 2
 Ultrasound 28 % ref 3

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Segond fractuur

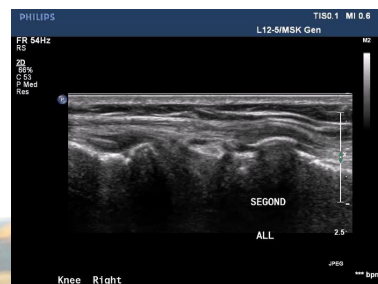


Ultrasound imaging

- 88 patients with ACL #
- 25 Segond lesions
- 70 Impaction # lateral FC



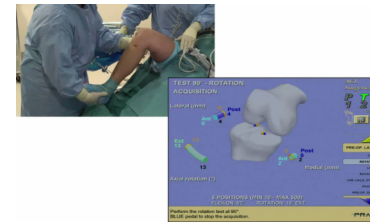
US ALL ligament and



Imaging Segond avulsion

- Incidence in MRI 3 % Resnick USA 6 % AUS
- Incidence in X ray CORR Hess D 9 %
- Incidence ultrasound 28 % (ICONE)
- Higher velocity trauma ?
- Refixation / Feagin :

Rotation measurement with Navigation



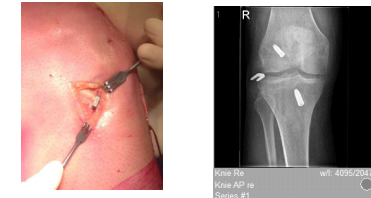
Peroperative imaging lift off lateral meniscus



DATA

- 18 patients / knees .
- Segond fracture with intra operative signs of displacement .
- Preoperative marking # on the skin .
- Staple fixation .
- 5 cases with navigation .

Case Report : Refixing ALL / Segond # Checking the pivot on the table is pulling the staple off / prove of importance in stability ?



Refixing Segond or reconstruction AL complex ?



CONCLUSION

- Validation study
- Importance of diagnosis (5>9>28 %)
- Ultrasound imaging (increases 5x incidence)
- Distal avulsion lesions refixation in stead of reconstruction ?
- Clinical outcome ?

Reference

Reference 1 Resnick; Pathogenesis of the Segond fracture: anatomic and MR imaging evidence of an iliotibial tract or anterior oblique band avulsion. Radiology. 2001 May;219(2):381-6
 Reference 2 Hess; Lateral tibial avulsion fractures and disruptions to the anterior cruciate ligament. A clinical study of their incidence and correlation. Clin Orthop Relat Res. 1994 Jun;(303):193-7.
 Reference 3 Klos; Diagnosis and treatment of lateral segond avulsions in knee ligament injury (NVA abstract poster 2015)