All-Inside Arthroscopic Modified Broström-Gould Procedure with Single Double Loaded Suture Anchor for the Chronic Lateral Ankle Instability

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- Ankle sprains are among the most common injuries, comprising up to one-third of all sport injuries
  - Garrick JG et al . Clin Sports Med 1988
- After an inversion injury, most patients obtain satisfactory outcomes with conservative treatment and functional rehabilitation
  - Ferran NA et al . Sports Med Arthrosc Rev 2009
- 20~30 % of acute ankle sprains develop chronic symptoms resulting in chronic ankle instability.
  - Guillo S, Bauer T, Lee JW, et al.Orthop Traumatol Surg Res. 2013

- Hallmarks of chronic ankle instability
  - Persistent pain, recurrent sprains, and ankle giving way

  - Hertel et al , J Athl Train 2002

- Surgery should be considered for patients with symptomatic ankle instability and repeated ankle sprains
  - After appropriate conservative management for 3–6 months

  - SongY,LiH,SunC et al Orthop J Sports Med 2019

- The Broström-Gould procedure is considered the gold standard procedure for chronic lateral ankle instability
  - Repair of the ATFL combined with the transfer of the extensor retinaculum

  - ZengG,HuX,LiuW,QiuX et al . Foot Ankle Int 2020 41:44–49

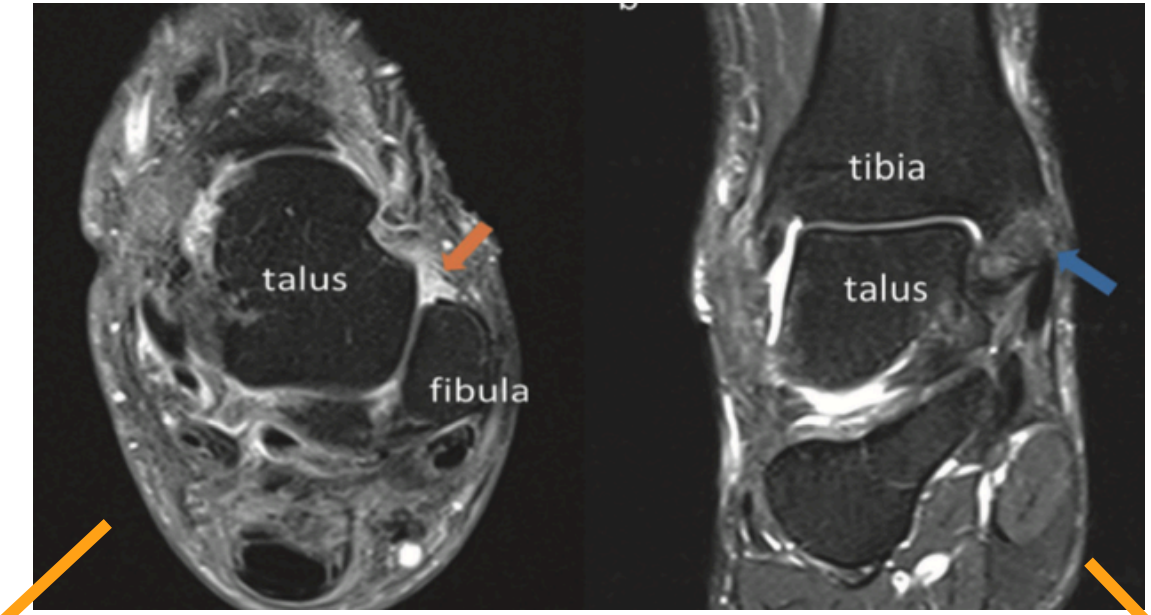
- The aim of the study was to determine the mid-term functional and image outcomes among patients who underwent the all-inside arthroscopic modified Broström operation with a single double loaded suture anchor for chronic ankle instability.

Symptoms and Stress radiography to confirmed chronic ankle instabiliy

≥ 10° or 5° side-to-side difference

≥ 10 mm or 5 mm side-to-side difference

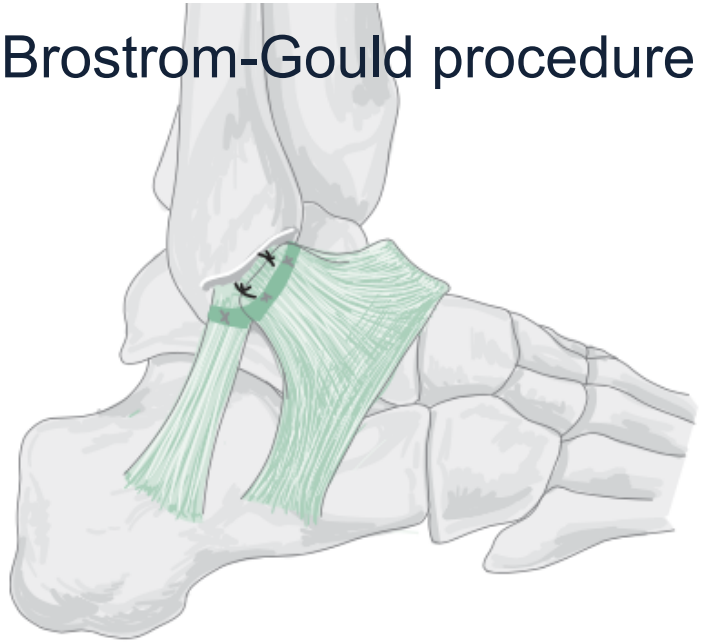
MRI for pre-op survey



Wavy contour, thinning or elongation of ligament

Absence of ligament

Brostrom-Gould procedure



Internal brace + Gould

Inclusion criteria

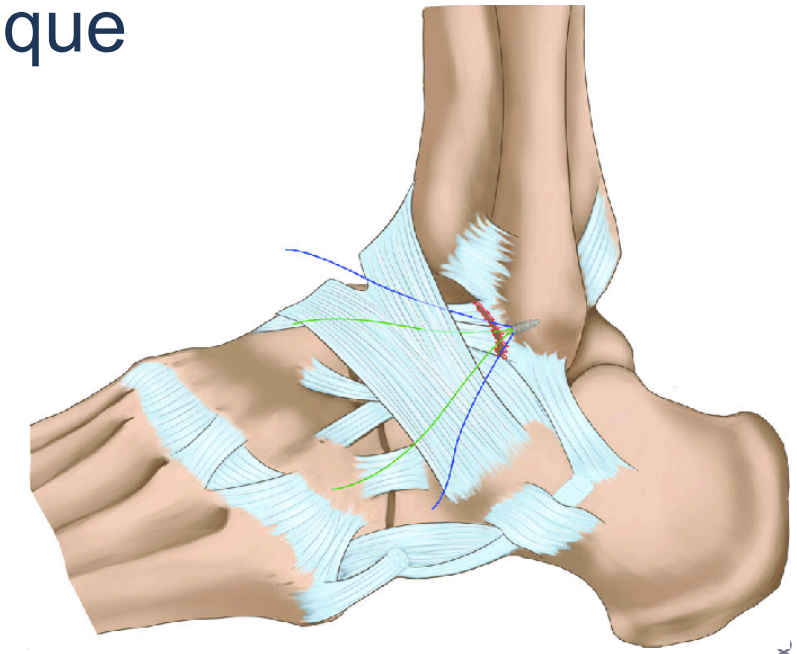
Retrospective case series study
2021.01 –2023.07

Patients with chronic lateral ankle instability underwent all-inside arthroscopic modified Broström operation by a single surgeon

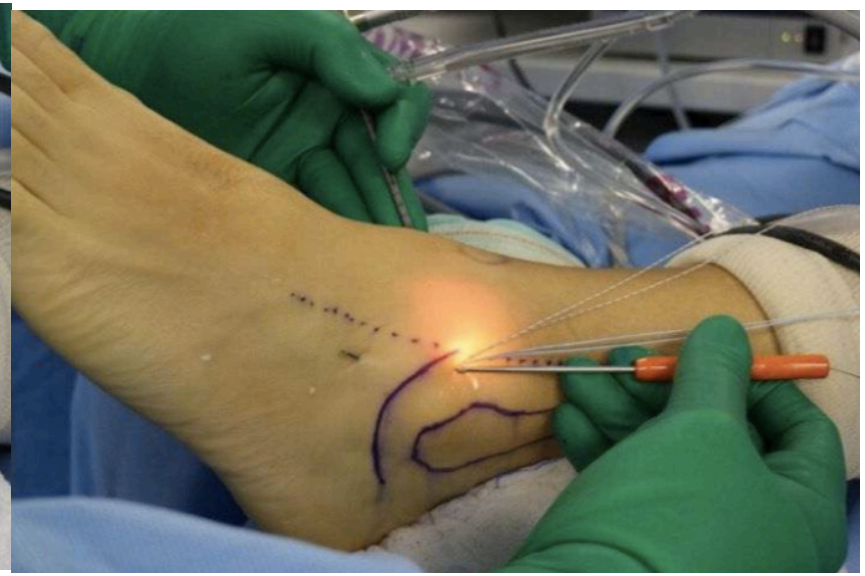
Outcome:
Visual Analogue Scale (VAS) scores
American Orthopedic Foot and Ankle Society (AOFAS) scores
Stress radiological evaluation

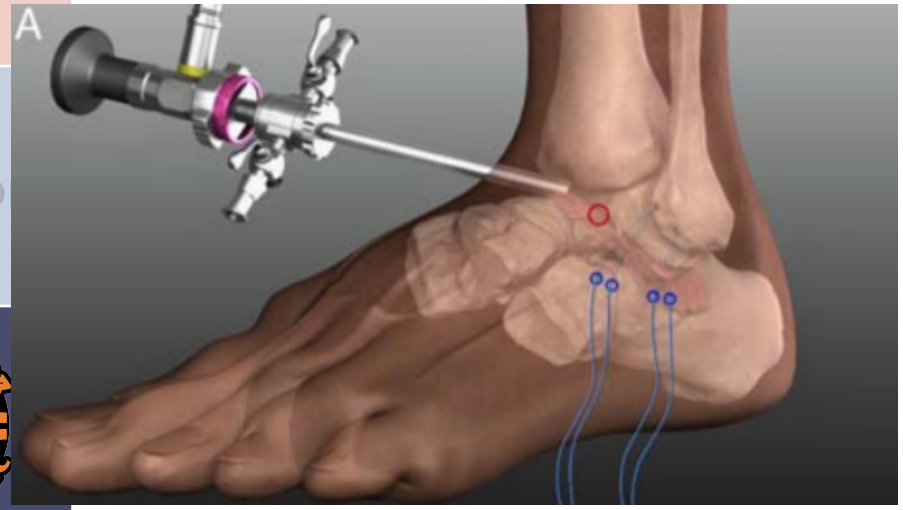
Surgical technique

One suture for Lasso-loop Stitch Technique



Inside-Out technique for Gould procedure





Post op rehabilitation

- Post-op non-weight bearing with short leg splint for 2 weeks , then partial weight bearing 2 weeks
- Full weight bearing after post-op 4 weeks
- Accelerated rehab program
  - Proprioceptive training, active ankle ROM control excercise and eversion resistance exercises
  - Jogging and straight running were commenced by week 8

- From 2021.01 to 2023.07
- 36 consecutive patients with chronic lateral ankle instability underwent all-inside arthroscopic modified Broström operation by a single surgeon.
  - 6 patients were lost to follow-up
- 30 patients were followed up for at least 12 months
  - Age : 35.6 ± 9.9 years old , 17 male , 13 female , BMI:23.8 ± 3.2

	Pre-op	Post-op 1 year	*p* value
Talar tilt angle (°)	12.4 ± 7.8	5.2± 4.8	< 0.05
Anterior talar translation (mm)	11.4± 4.7	4.2± 3.3	< 0.05
AOFAS Ankle-Hindfoot Score	68.8 ± 8.5	90.6 ± 4.6	< 0.001

There were no complications in any of the patients

- The all-inside arthroscopic modified Broström operation with a single suture anchor technique showed excellent functional and radiographic outcomes after one year of follow-up without any complications

- Limitation
  - Potential patient selection bias
  - Short term follow up

THANK YOU

References

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THANK YOU