Efficacy of Arthroscopic Brostrom Procedure in Chronic Lateral Ankle Instability Patients with and without Generalized Joint Laxity:

A Prospective and Comparative Indian Study

Dr.Abhishek Kini, MD,DNB, Dip Sportsmedicine

Foot Ark Clinic, Advanced Orthopaedics, Mumbai, India

*Disclosures

*No Disclosures

*Background

* The evidence of clinical outcome of arthroscopic Brostrom is well established.

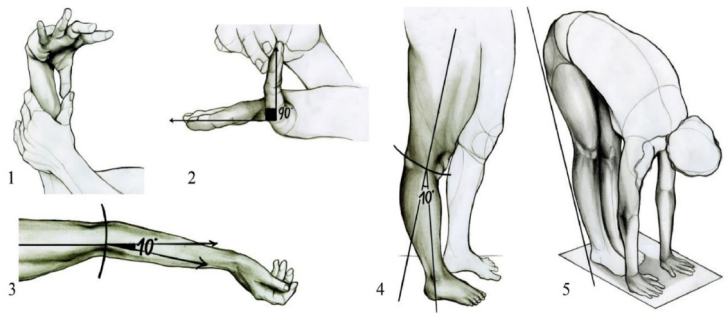
* With difference in the elasticity of tissues in patients with Generalized joint laxity (GJL) raises concern in the treatment modalities for these patients.

*Aim of Study

* To investigate the efficacy of arthroscopic brostrom in patients with Generalized joint laxity (GJL) diagnosed with chronic lateral ankle instability, which has very little evidence in the literature.

Specific joint laxity	YES		NO
1. Passive apposition of thumb to forearm	☐ Left	☐ Right	☐
2. Passive hyperextension of V-MCP > 90°	☐ Left	☐ Right	☐
3. Active hyperextension of elbow >10°	☐ Left	☐ Right	☐
4. Active hyperextension of knee >10°	☐ Left	☐ Right	☐
5. Ability to flex spine placing palms to floor without bending knees	☐		☐

*Each "YES" is 1 point. A score ≥ 4 out 9 is generally considered an indication of JH. (MCP: metacarpophalangeal).



*Methods

- This prospective study included 150 patients operated with Arthroscopic brostrom procedure from July 2016 to July 2021 by a single surgeon, recruiting patients from The Foot Ark clinic.
- All patients were assessed for GJL with help of Beighton score pre-operatively. Patients with Beighton score <4 were grouped under "no laxity" and Beighton score ≥4 were classified as GJL group.

*Methods

* All patients underwent an Arthroscopic Brostrom procedure.
* Patients were evaluated clinically according to American Orthopaedic Foot and Ankle Society (AOFAS) ankle hind foot scoring, Visual analogue scale (VAS) scoring and Karlsson Peterson (KP) ankle scoring before and after the surgery at 6 months, 1 year and 2 years follow-up.

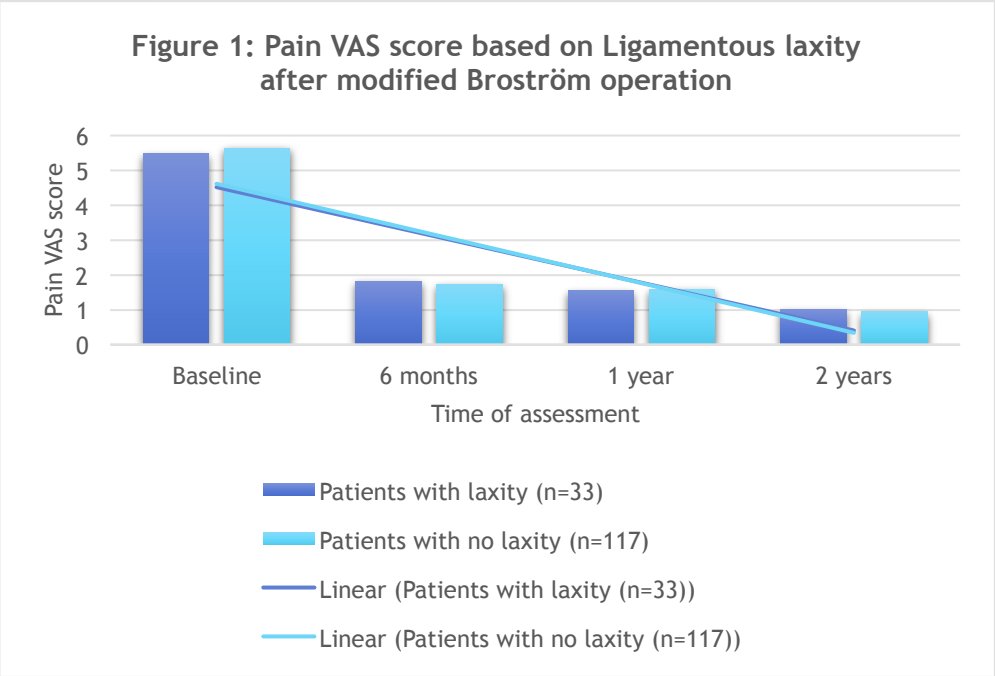
*Results

Table 1: Baseline characteristics for enrolled patients (n=150)			
Parameter assessed	*Patients with laxity (n=33)*	*Patients with no laxity (n=117)*	*P value*
Mean Beigton score at baseline	6.27 ± 1.84	1.38 ± 1.16	**0.001***
Mean age (years)	30.67 ± 9.83	31.02 ± 9.48	0.67
Median age with range (years)	29 (16-47)	29 (16-48)	-
Gender distribution			
Number of males (%)	14 (42.43%)	62 (52.99%)	0.38
Number of females (%)	19 (57.57%)	55 (47.01%)	

*P<0.05 considered significant by Unpaired t test for mean values and by Chi-square test for gender distribution.

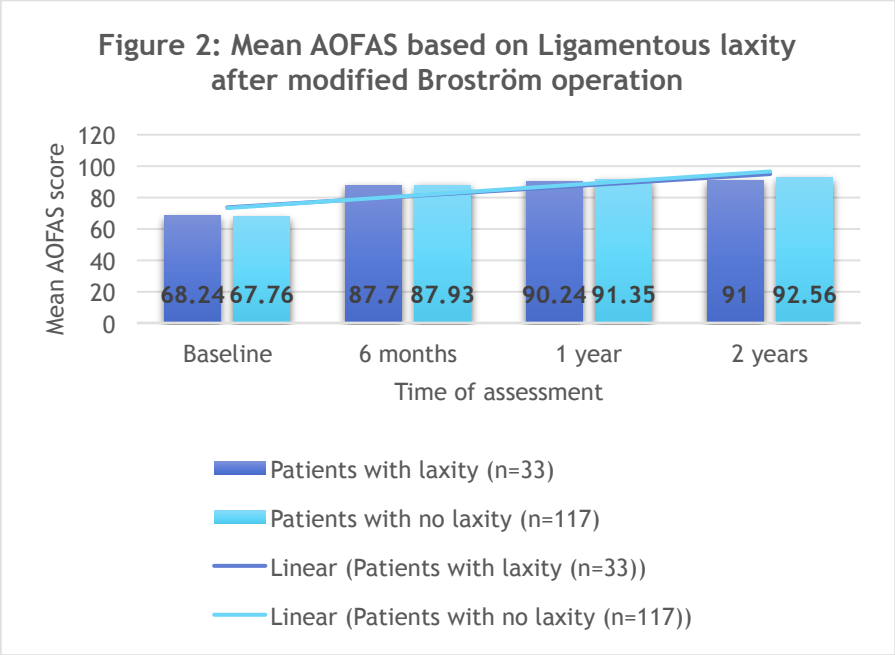
* In 150 patients who were included in the study, 33 patients had Beighton score ≥4 classified as patients with GJL.
* The mean age and gender distribution were noted to be statistically comparable between the groups of patients with and without laxity (p>0.05).

*Results



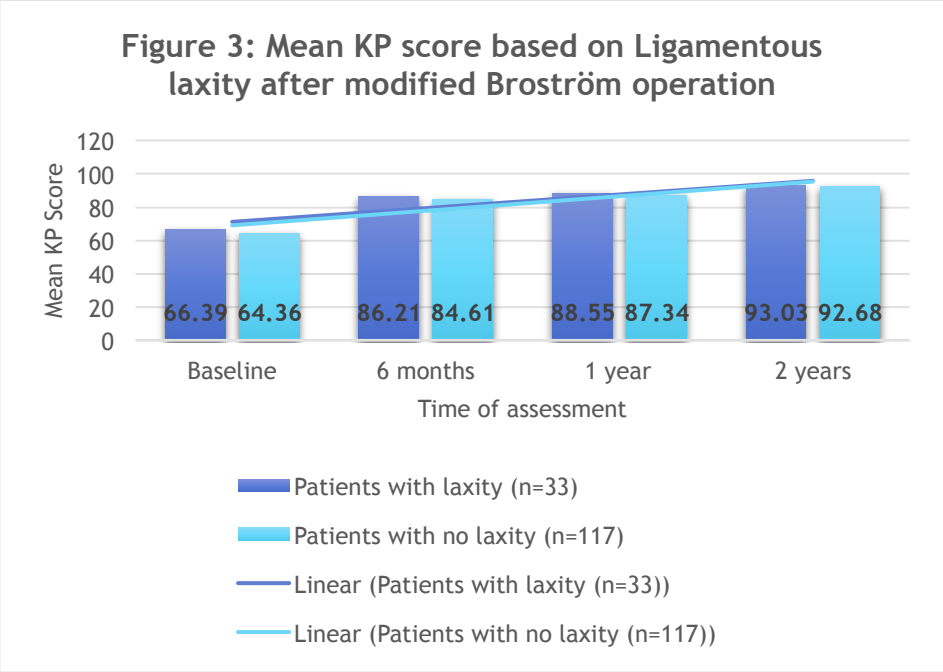
* The mean Δ Score with 95% CI and p values showed no significant difference ($p>0.05$) between groups for any of the outcome parameters, at all time-points of assessment.

*Results



* The mean Δ Score with 95% CI and p values showed no significant difference (p>0.05) between groups for any of the outcome parameters, at all time-points of assessment.

*Results



* The mean Δ Score with 95% CI and p values showed no significant difference (p>0.05) between groups for any of the outcome parameters, at all time-points of assessment.

*Conclusion

* This study with a 2-year follow-up and clinical analysis of AOFAS, VAS, and KP scores concludes that arthroscopic Brostrom procedure gives excellent clinical results in patients with GJL, like that of a normal individual.
* There is no higher complication rate in patients with GJL as compared to normal individuals

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