Does the difference in traction table affect the surgical outcomes of hip arthroscopy?

Dokkyo Medical University Orthopedic Surgery

Kazuo Tomizawa MD, Kanako shiba MD,
Daisuke Tsuboyama MD, Yuji Yamaguchi MD,
Tadashi yamamoto MD, Tomoya Kanto MD,
Kazutaka Ozone MD,
Yumi chiba MD, Teppei tomaru MD,
Hiroshi taneichi MD



Introduction

 At our hospital, hip arthroscopy is performed using two types of traction tables, and we examined whether the difference in operative table affects surgery.



Hip Positioning System® SMITH &NEPHEW



HANA table® Mizuho

Material and methods

group C

• 30 patients recruited in the period between June 2015 and May 2017 for whom a special operative table for hip arthroscopy was used.



Hip Positioning System® SMITH &NEPHEW

group T

 30 patients recruited in the period between October 2017 and May 2019 for whom an operative table typically utilized for trauma surgery and total hip arthroplasty (THA) was used.



Material and methods

- All the surgeries were performed by the same surgeon
- Follow-up observation was performed for at least 6 months after surgery.
- No significant difference was observed between the two groups in gender, age at surgery, and BMI.

	Group C	Group T	р
Gender (M:F)	17:13	15:15	0.23
Age at surgery	35.2(17-60)	37.5(19-66)	0.33
BMI	23.4(16.0-30.5)	22.2(16.5-28.2)	0.26

Material and methods

	Group C (n=30)	Group T (n=30)
Femoroacetabular impingement (FAI)	26	25
Labrum injury	4	5

compared between the two groups

- ✓ Operative time (traction time)
- √ Harris Hip Score
- ✓ Complications

Operation	Group C	Group T
Labrum debridement	1	1
Labrum suture	7	6
Osteocondroplasty	1	0
Labrum suture + Osteocondroplasty	21	23

Results

	Group C	Group T	р
Operative time (min)	167 (105–211)	141 (91–220)	0.19
Traction time (min)	78.5 (30-95)	80.2 (45-90)	0.32
Harris Hip Score (pre op.→post op.)	60 → 86	64 → 88	0.11

Complications	Group C	Group T	р
Progression of osteoarthrosis	3 → THA 2	2 → THA 1	0.09
Reoperation (labral re-tear)	2	2	
Other	temporary femoral nerve palsy 1 *	temporary meralgia paraesthetica 1	

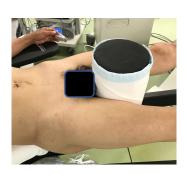
^{*} General joint laxity +

Discussion

Complication associated with hip arthroscopy

- ➤ Complication rate : Major 0.58%, Miner 7.5%
- ✓ Neurovascular traction injury
- ✓ Compression injury to the perineum
- ✓ Traction fixation devices
- ✓ Direct trauma to neurovascular structures
- ✓ Fluid extravasation
- ✓ Scope trauma
- ✓ Instrument breakage
- ✓ Vascular insult to the femoral head
- ✓ Heterotopic ossification
- ✓ Infection
- ✓ Thrombophlebitis
- ✓ soft tissue disorders

Traction table





Harris et al.: Arthroscopy 2013

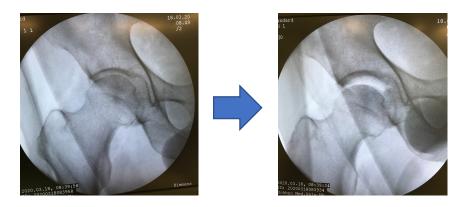
J.W. Thomas Byrd: Operative Hip Arthroscopy 2005

Discussion

 In hip arthroscopy using a traction table, intra-articular manipulations can be performed safely by creating a space between the femoral head and the acetabulum.

Flierl MA. Et al. J Am Acad Orth Surg. 2010





- Because traction is relatively strong, caution should be exercised with regard to complications resulting from tractions.
- The change of joint space dose not difference at both table

Discussion

	Hip Positioning System®		HANA table®
Adaptations	Hip arthroscopy	<	Hip arthroscopyTHATrauma
Cost	JY 4,660,000	>	JY 17,210,000
Operability	Flexion, Extention Abduction, Adduction Rotation	=	Flexion, Extention Abduction, Adduction Rotation

Conclusion

In the present study, the difference in traction table had no impact on the surgical outcomes of hip arthroscopy.