

Reference

Atalar, H., Gunay, C., Komurcu, M.

Department of Orthopaedic Surgery and Traumatology, Gazi University School of Medicine, Ankara, Turkey.

Functional treatment of developmental hip dysplasia with the Tübingen hip flexion splint

Hip International 2014, 24 (3): 295-301.

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Products

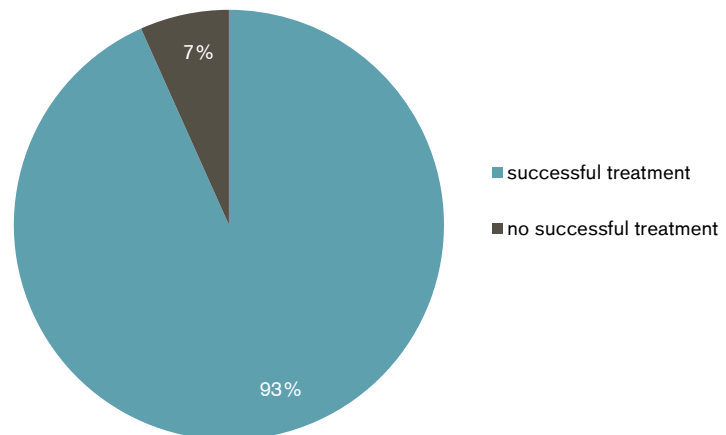
Tübingen hip flexion splint

Major Findings

With Tübingen hip flexion splint:

→ **93% of the examined hips were successfully treated**
(Graf type 1 and no acetabular dysplasia)

Amount of successful treatment of hip dysplasia with the Tübingen hip flexion splint



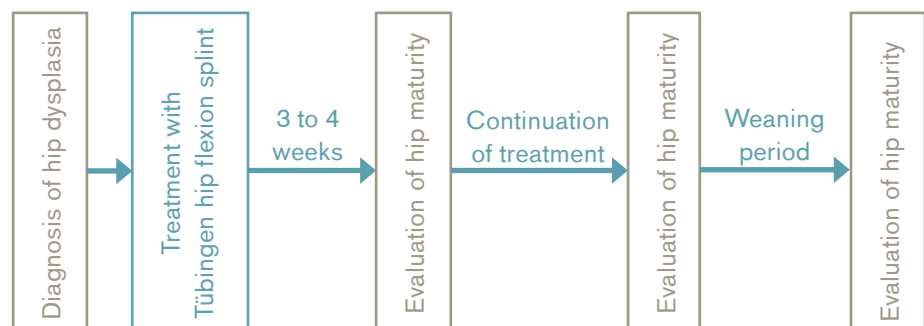
Population

Subjects: 49 children with 60 hips requiring treatment
45 female, 4 male

Inclusion criteria: diagnosis of hip dysplasia

Study Design

Retrospective study:



Hip maturity was assessed after 3 to 4 weeks of wearing the orthosis. If an improvement in hip maturity was observed treatment was continued with regular follow-ups. After acetabular maturation the weaning period was started where the splint was removed for a specific (growing) period of time per day.

Results

Functions and Activities						Participation
Biomechanics – Static measures	Biomechanics – Gait analysis	X-Ray	EMG	Functional tests	Clinical effects	Satisfaction

Category	Outcomes	Results for Tübingen hip flexion splint	Sig.*
Clinical effects	Classification of Graf	93.3% of hips were successfully treated	n.a.
		6.7% of hips could not be treated successfully	n.a.
		Successfully treated hips did not differ from unsuccessfully treated hips with respect to initial hip stability findings (stable vs. others), Graf type (type 2b vs. others) or number of hips involved (bilateral vs. unilateral)	0
	Median age at start of therapy	18 weeks	n.a.
		Successfully treated hips did not differ from unsuccessfully treated hips with respect to age at start of treatment	0
	Median duration of treatment (without weaning period)	8 weeks	n.a.
	Median duration of weaning period	8 weeks	n.a.
	Median total treatment time	17 weeks	n.a.
Median duration of follow up	13.5 months	n.a.	
	No avascular necrosis, femoral nerve dysfunction or skin lesions related to the splint were observed	n.a.	

* no difference (0), positive trend (+), negative trend (-), significant (++/-), not applicable (n.a.)

Author's Conclusion

“The Tübingen splint provides abduction, but due to its different design it offers the advantages of preventing hip adduction and leaving the knee and ankle joints free. Our findings suggest that in infants with DDH, the Tübingen hip flexion splint is an effective form of treatment.” (Atalar et al. 2014)

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