

HALLUX ANGLE IN PRESCHOOL AGED CHILDREN

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Introduction

Juvenile Hallux Valgus is one of serious foot deformities seen in childhood. It needs a comprehensive medical intervention consist of physical therapy, orthotic treatment and even surgical correction [Timoty, 1994; Barouk, 2000]. However there is no consensus about physiological range of hallux angle in children although there is for adults [Christian, 2009]. Our aim was to assess hallux angle of healthy preschool children in order to get normative data that would be useful in clinical area.

Method

One thousand healthy preschool children, without any foot deformities participated in our study. We assessed hallux angle with a valid and reliable external method not radiography because of ethical reason [Christian, 2009]. Measurement was performed on footprint for dominant foot by the procedure used in other studies [Riddiford, 2000], [Figure1,2]. Research procedures were approved by the Hacettepe University, Clinical Research Ethics Committee and written informed consent was taken from parents for their children to participate in the study.



Figure 1: Measurement of hallux angle on footprint.



Figure 2: Taking of footprint by a standart pedograph.

Results

Mean age was $5,13 \pm 0,77$ for 1000 children. Hallux angle was 6,02 (95 % Confidence Interval 5,78-6,27). There was no difference in hallux angle between genders ($p > 0,05$). There was a tendency towards increase in hallux angle with age from 4 to 6 ages ($p < 0,05$).

Discussion

Data of this study may be useful in clinical assessment of growing foot in order to differ physiologic from pathologic. Also increasing of hallux angle with age makes us think again about the effect of environmental factors like wearing ill-fitting footwear etc. on development of hallux valgus.

References

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