

Poster presentation

Ultrasonography (US) in juvenile idiopathic arthritis (JIA): diagnosis, treatment and follow-up of ankle involvement

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Introduction

The aim of this study was to evaluate the usefulness of US and Doppler-US of the ankle region in children with JIA, for diagnosis of inflammation, guidance of steroid injection and follow-up.

Materials and methods

15 ankle regions with clinical signs of arthritis were examined with US and Doppler-US in 12 children, 9 girls and 3 boys between 2 and 14 years (mean 6.5 years, median 5 years).

US demonstrated inflammation in 24 compartments: 12 talocrural-, 6 subtalar-, 1 talonavicular joint and 5 tendonsheaths, respectively. US-guided steroid injection was successfully performed and the effect on synovial hypertrophy, effusion and synovial hyperaemia was measured after 1 and 4 weeks.

Results

At start synovial hypertrophy was found in 24, effusion in 8 and synovial hyperaemia in 23 compartments (Table 1).

Conclusion

US is a valuable tool to determine the exact location of synovitis, in guiding steroid injections and for follow-up in JIA. In our preliminary study there was improvement of the inflammation in a majority of compartments. Further research of the application of US in the paediatric popula-

tion is needed before firm conclusions of its clinical value can be drawn.

Table 1: Results at follow-up with US and Doppler-US after US-guided steroid injection

	Synovial Hypertrophy (n = 24)		Effusion (n = 8)		Synovial Hyperaemia (n = 23)	
	week 1	week 4	week 1	week 4	week 1	week 4
Progression	-	3	-	-	-	2
Unchanged	4	1	1	-	1	-
Improved	20	20	7	8	22	21

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