Conclusions:
This study contributes to a better understanding of the extended long-term follow-up after selective dorsal rhizotomy (SDR) in CP. The procedure has proven effective at reducing spasticity, however, this does not result in improved gross motor function nor improved mobility. Neither is contractures development prevented. The reduced muscle tone can possibly affect pain positively - the number of individuals that conveyed pain in this study corresponds to earlier pain prevalence studies in CP, however the reported intensity was low.

Results summary:
The effect of normalized muscle tone in lower extremities after SDR was sustained after a median of 17 years. The best gross motor function capacity, according to the GMFM-88 score, was seen at the three-year follow-up, thereafter a gradual decline followed. Half of the individuals reported pain, however of low intensity and interference. Compared to a norm sample the physical health component of SF-36v2 was slightly lower and the mental health component slightly higher.

Pain:
Overall ; Pain was present in 9/18 individuals. Bodily Pain domain of SF-36v2; the norm based score was 49.21 (Norm reference; 50±10).
The Brief Pain Inventory (BPI); Median pain severity 1.4 (25th-75th percentile: 1.1-3.7), Median Pain interference 1.3 (25th-75th percentile: 0.6-3.8). A composite score of 1-4 is considered as being "mild".

Wilson Mobility Scale
1. Functional walking without aid in all surroundings.
2. Functional walking without aid in secluded surroundings.
3. Functional walking with crutches in all surroundings.
4. Walking with crutches in secluded surroundings.
5. Functional walking with key-walker in all surroundings.
6. Walking with key-walker in secluded surroundings.
7. Reciprocal crawling with arms and legs.
8. Any other form of locomotion, describe...........
9. Sitting with support and no mobility.

Participants & setting
All but one individual (n = 18) that underwent SDR at the Karolinska Hospital, a tertiary referral center, during 1993-1997 were included, assessed and interviewed. All had bilateral spastic CP and the mean age at the time of surgery was 4.6 years (SD=1.6).

Assessments
Assessments included neurology assessment, joint range of motion in lower extremities (ROM), the modified Ashworth scale for spasticity, the Gross Motor Function Measure (GMFM-88) and the Wilson mobility scale (Illinois-St Louis). Measurements at baseline and after SDR at: 18m, 3yrs, 10yrs, 17yrs were included.

In addition at 17 yrs., SF36v2 was used for HRQoL. The Saitin Grimsby scale for physical activity and the Brief Pain Inventory (BPI) for pain evaluation.

GMFM-88, at baseline, 18m, 3yr, 10yr and 17 yr

Changes in Gross Motor Function

Wilson, Median (25th-75th), at baseline, 18m, 3yr, 10yr and 17 yr

Gross motor function

Results, Mobility

Design
A prospective open cohort study.

Objectives
To evaluate the long-term effects (>15 yrs) of SDR, performed in childhood, for young adults with CP. Focusing on the effect on spasticity, gross motor function, mobility and pain.
In addition, to evaluate the level of current physical activity, Health Related Quality of Life (HRQoL) and the amount of orthopedic surgery executed after the SDR.

Participants & setting
All but one individual (n = 18) that underwent SDR at the Karolinska Hospital, a tertiary referral center, during 1993-1997 were included, assessed and interviewed. All had bilateral spastic CP and the mean age at the time of surgery was 4.6 years (SD=1.6).

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