

**Table III.** Linear mixed models analyses at primary end-point (12 weeks)

Linear mixed models analyses baseline – 12 week comparison	BoNT-A+CR base	BoNT-A+CR 12 weeks	Only-CR base	Only-CR 12 weeks	Estimated difference in effect <sup>b</sup>	95% CI	p-value	Number of observations <sup>c</sup>	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)				Baseline	12 weeks
<i>Pain</i>									
Current CP related pain intensity assessed by child (5-point emoticon faces VAS scale)	1.8 (1.1)	1.7 (1.0)	1.3 (0.6)	1.5 (0.9)	-0.28	[-0.89–0.33]	0.358	65	65
<i>Muscle strength</i>									
Functional muscle strength legs (maximum number of sit-to-stands in 30 s) <sup>a</sup>	12.9 (4.0)	14.6 (4.0)	13.0 (3.4)	13.7 (3.6)	-1.01	[-2.5–0.53]	0.194	65	65
<i>Passive range of motion (absolute degrees as measured)</i>									
Hip adduction <sup>a</sup>	15 (6)	14 (6)	14 (4)	14 (5)	1.0	[-2.3–4.3]	0.562	89	89
Hip abduction in flexion <sup>a</sup>	42 (9)	40 (8)	42 (10)	40 (10)	0.3	[-3.9–4.5]	0.879	89	88
Hip extension while prone <sup>a</sup>	18 (9)	16 (11)	13 (7)	14 (8)	3.0	[-3.7–9.7]	0.365	47	47
Knee extension <sup>a</sup>	-1 (12)	-1 (12)	-2 (8)	0 (7)	2.0	[-3.2–7.2]	0.452	84	84
Knee popliteal angle	51 (15)	54 (16)	53 (21)	53 (18)	3.9	[-1.3–9.1]	0.143	113	113
Knee flexion while prone <sup>a</sup>	153 (20)	145 (19)	136 (19)	119 (24)	-9.3	[-30.5–12.0]	0.383	47	47
Ankle dorsal flexion knee 90° flexion <sup>a</sup>	11 (9)	14 (8)	16 (13)	19 (15)	-0.2	[-5.5–5.2]	0.950	76	76
Ankle dorsal flexion knee extended <sup>a</sup> (*p=0.007)	5 (11)*	6 (9)	10 (11)*	9 (10)	-1.6	[-5.4–2.1]	0.395	113	113
<i>Angle of catch (AoC, number of degrees short of physiologically normal end of range)</i>									
Hip abduction in flexion (AoC mm adductors) (*p=0.024, physiological end range: 70°)	35 (19)*	37 (20)	50 (14)*	48 (18)	3.8	[-7.7–15.3]	0.509	92	90
Knee popliteal angle (AoC mm hamstrings) (*p=0.006, physiological end range: 0°)	38 (32)*	37 (31)	62 (22)*	52 (28)	9.6	[-2.6–21.8]	0.120	96	98
Knee flexion while prone (AoC m rectus femoris) (physiological end range: 160°)	15 (41)	21 (43)	12 (22)	6 (14)	12.3	[1.6–23.0]	0.025**	88	95
Ankle dorsal flexion knee 90 flexion (AoC m soleus) (physiological end range: 20°)	11 (18)	7 (13)	15 (19)	15 (19)	-5.6	[-17.9–6.7]	0.357	35	36
Ankle dorsal flexion knee extended (AoC mm gastrocnemii) (physiological end range: 20°)	33 (19)	26 (18)	29 (14)	31 (15)	-8.6	[-17.7–0.4]	0.062	113	112
<i>Walking speed (m/s)</i>									
Walking speed barefoot <sup>a</sup>	0.85 (0.3)	0.82 (0.3)	0.83 (0.3)	0.84 (0.3)	0.05	[-0.11–0.20]	0.540	64	63
Walking speed wearing (special) shoes and/or AFO(s) <sup>a</sup>	0.89 (0.3)	0.91 (0.3)	0.95 (0.3)	0.93 (0.3)	-0.04	[-0.19–0.11]	0.632	62	63
<i>Gait (absolute degrees as measured)</i>									
Ankle midstance – while walking barefoot <sup>a</sup>	-7 (12)	-1 (10)	-11 (11)	-5 (11)	-0.9	[-7.2–5.5]	0.783	76	74
Ankle midswing – while walking barefoot <sup>a</sup>	-19 (17)	-14 (16)	-23 (12)	-17 (13)	1.2	[-6.2–8.9]	0.752	76	73
Knee midstance – while walking barefoot	21 (20)	18 (17)	21 (17)	19 (14)	-0.3	[-5.6–5.0]	0.908	113	111
Knee maximum swing – while walking barefoot	16 (21)	12 (20)	14 (15)	13 (14)	-2.4	[-7.3–2.5]	0.327	113	110
Ankle midstance – while walking with footwear/AFO <sup>a</sup>	4 (5)	4 (5)	1 (7)	0 (7)	-0.7	[-3.9–2.5]	0.662	74	74
Ankle midswing – while walking with footwear/AFO <sup>a</sup>	-1 (7)	0 (7)	-5 (11)	-4 (8)	-0.9	[-4.2–2.4]	0.582	72	74
Knee midstance – while walking with footwear/AFO	19 (17)	18 (15)	19 (12)	14 (11)	3.7	[-0.7–8.1]	0.100	111	111
Knee maximum swing – while walking with footwear/AFO	14 (18)	11 (16)	14 (11)	10 (11)	1.1	[-3.6–5.8]	0.632	111	111
<i>Gait (absolute number of degrees deviation from physiologically normal gait pattern joint-angle-range)</i>									
Ankle midstance – barefoot (norm range: 2° plantar flexion – 10° dorsal flexion)	8 (9)	4 (5)	10 (9)	7 (7)	0.2	[-4.9–5.4]	0.924	76	74
Ankle midswing – barefoot (norm range: 5° plantar flexion – 5° dorsal flexion)	15 (15)	11 (14)	19 (12)	15 (12)	0.2	[-6.9–7.4]	0.948	76	73
Knee midstance – barefoot (norm range: 15° flexion – 0° flexion)	11 (16)	9 (12)	11 (10)	7 (9)	1.3	[-2.8–5.4]	0.536	113	111
Knee maximum swing – barefoot (norm range: 10° flexion – 5° hyperextension)	11 (17)	9 (15)	10 (9)	8 (10)	0.2	[-4.1–4.4]	0.943	113	110
Ankle midstance – footwear/AFO (norm range: 2° plantar flexion – 10° dorsal flexion)	1 (2)	0 (2)	2 (5)	2 (4)	-0.4	[-1.9–1.1]	0.617	74	74
Ankle midswing – footwear/AFO (norm range: 5° plantar flexion – 5° dorsal flexion)	1 (4)	1 (4)	4 (8)	3 (6)	1.1	[-0.6–2.8]	0.214	72	74
Knee midstance – footwear/AFO (norm range: 15° flexion – 0° flexion)	9 (13)	7 (11)	8 (7)	4 (6)	2.1	[-1.5–5.7]	0.247	111	111
Knee maximum swing – footwear/AFO (norm range: 10° flexion – 5° hyperextension)	9 (15)	7 (16)	7 (6)	5 (11)	0.2	[-3.6–4.0]	0.915	111	111
<i>General functioning</i>									
Satisfaction primary caregivers with general functioning child (0–10 point VAS score range) <sup>a</sup>	7.3 (1.6)	7.8 (1.2)	7.1 (1.1)	7.9 (1.0)	0.30	[-0.58–1.18]	0.494	65	65
Satisfaction child with own functioning (proxy-assessed 0–10-point VAS score range) <sup>a</sup>	7.3 (1.2)	7.6 (1.4)	7.7 (1.1)	8.1 (1.0)	0.07	[-0.85–0.98]	0.883	65	65

<sup>a</sup>Higher score indicates better functioning. \*Presence of a significant difference between mean group scores at baseline with corresponding p-values (left-hand column).

<sup>b</sup>Negative estimated differences in effect are in favour of BoNT-A+CR treatment and positive estimated differences in effect are in favour of only-CR treatment (\*\*p ≤ 0.05). Mixed models were adjusted for age, number of previous BoNT-A treatments, CP-severity GMFCS levels, strength of the preference, and relevant interactions. Bilaterally assessed outcome measures were additionally adjusted for left-right legs in the models.

<sup>c</sup>A total of 65 children participated, including 14 with unilateral CP type, hence the maximum is 116 observations for bilaterally measured outcome measures. CI: confidence interval; AFO: ankle-foot orthoses.