

Supplementary article data

Comparison of allograft-prosthetic composite reconstruction and modular prosthetic replacement in proximal femur bone tumors

Functional assessment by gait analysis in 20 patients

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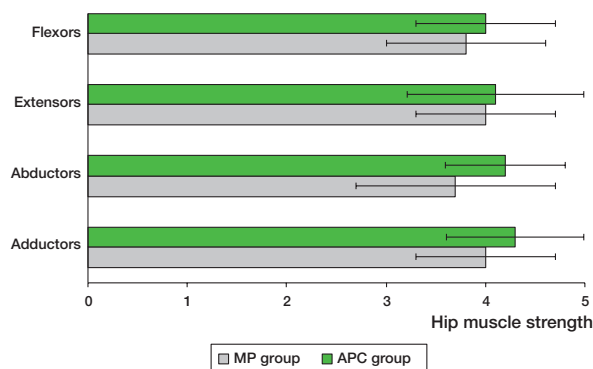


Figure 1. Hip muscle strength (mean and SD) as assessed by the manual muscle test.

Table 2. Gait analysis data

	One-way ANOVA or Kruskal-Wallis ^a p-value	Control	MP group	APC group	Sheffe test (Mann-Whitney ^a)		
					Control/MP group p-value	Control/ APC group p-value	MP group/ APC group p-value
<i>Time-distance parameters</i>							
Stance, % cycle	0.07 ^a	60.2 (1.9)	60.3 (1.7)	59.1 (2.3)			
Cadence, str/m	< 0.001	54.4 (3.6)	45.9 (4.5)	52 (5.2)	< 0.001	0.028	< 0.001
Speed of progression, cm/s	< 0.001	133.5 (16)	99.8 (14.5)	111 (18.7)	< 0.001	< 0.001	0.006
Stride length, %h	< 0.001	83.3 (7.5)	73.4 (6.2)	74.6 (6.7)	< 0.001	< 0.001	0.8
<i>Pelvis rotations (degrees)</i>							
Max. anterior tilt	0.006 ^a	-4.3 (2.9)	-2.5 (4.5)	-2 (2.6)	0.03 ^a	0.004 ^a	0.32 ^a
Max. rise (operated side)	0.2	-3.3 (2)	-3.8 (3)	-3.3 (2.6)			
Max. drop (operated side)	0.1 ^a	2 (1.5)	2.6 (2.6)	3.3 (3.7)			
Max. anterior rotation	0.57	4.3 (3.3)	4.6 (4)	4.9 (4.5)			
<i>Hip kinematics (degrees)</i>							
Flexion at heel strike	< 0.001	27 (4.3)	19.4 (5.4)	19 (3.3)	< 0.001	< 0.001	0.8
Max. extension stance	0.004	-10.7 (3.6)	-10.7 (5.1)	-8.2 (3.4)	0.8	0.013	0.02
Flexion at toe-off	< 0.001	-4 (3.3)	-6.4 (3.6)	-1.7 (3.9)	0.005	0.009	< 0.001
Max. flexion swing	< 0.001	30 (4.5)	23.1 (6.1)	25.2 (4.9)	< 0.001	< 0.001	0.19
Active ROM sagittal plane	< 0.001	40.3 (4.1)	33.2 (6.7)	31.4 (4.2)	< 0.001	< 0.001	0.4
Active ROM coronal plane	0.04	11.3 (2.6)	10.2 (3.5)	9.7 (3.3)	0.09	0.06	0.14
Max. adduction stance	0.001	-6 (3.7)	-2.9 (3.4)	-4.7 (4.8)	0.001	0.11	0.09
Max. abduction swing	0.04	5 (3.5)	7 (3.2)	5.6 (4.8)	0.05	0.15	0.13
Active ROM transverse plane	0.02	13 (3.3)	11.8 (4.2)	14.3 (4)	0.2	0.08	0.06
Max. internal rotation	0.001 ^a	2.6 (4)	5.2 (3.5)	6.5 (6.4)	0.03 ^a	< 0.001 ^a	0.3
Max. external rotation	0.3 ^a	-9 (4.5)	-6.3 (6)	-9 (7)			
<i>Hip external moments (%BWxH)</i>							
Max. flexion moment	< 0.001	9 (1.8)	4.3 (2.4)	3.7 (1.9)	< 0.001	< 0.001	0.31
Max. extension moment	0.003 ^a	-3 (1.8)	-2 (0.9)	-2.9 (1.5)	0.001 ^a	0.19 ^a	0.012 ^a
Max. adduction moment	< 0.001	-10.3 (1.6)	-3.6 (2.1)	-4 (1.7)	< 0.001	< 0.001	0.75
Max. ext. rot. moment	< 0.001 ^a	-1.9 (0.9)	0.1 (0.4)	0.3 (0.8)	< 0.001 ^a	0.001 ^a	0.18 ^a