

Sagittal knee kinematics of a poor responder

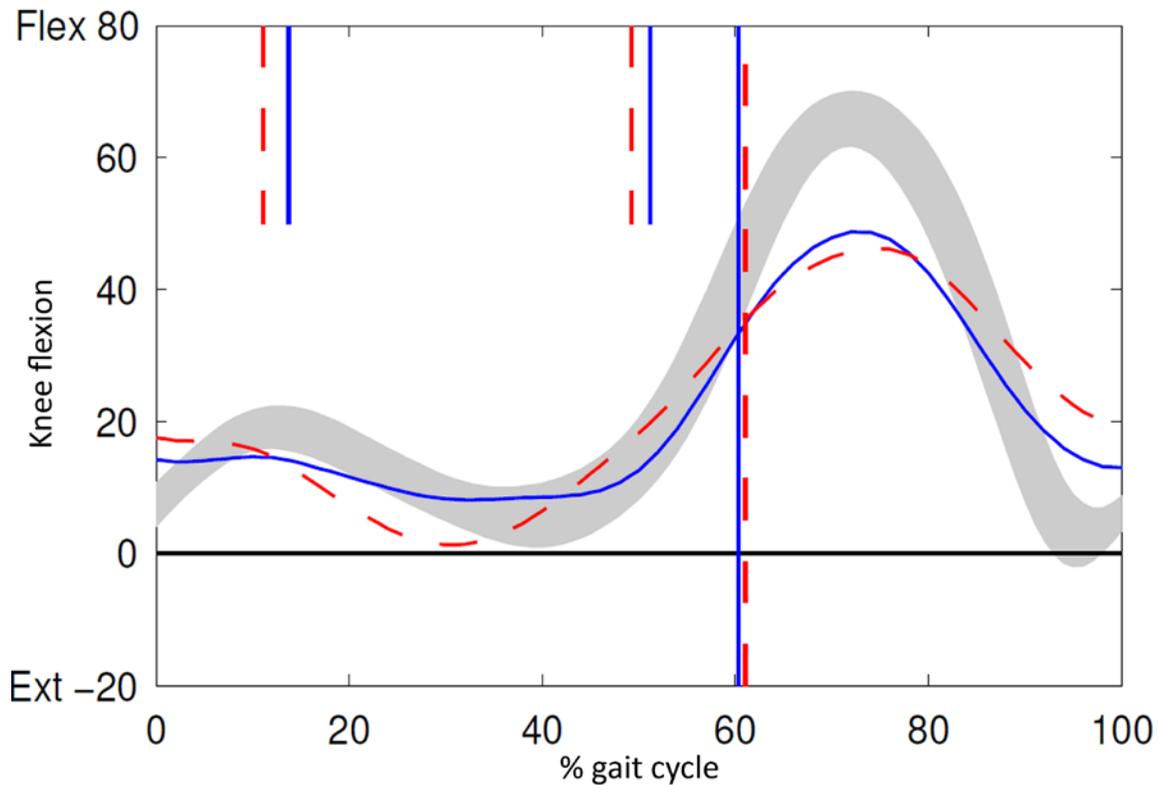


Fig. E-1

An example of a patient with a poor response. The preoperative (dashed red line) and nine-year postoperative (solid blue line) knee kinematics are shown. The reference data for physiologic knee kinematics are also presented (gray area). This patient was classified as a poor responder since the increase in peak knee flexion and range of knee flexion in swing was vanishingly low, and the stiff-knee gait remained after distal rectus femoris transfer.

TABLE E-1 Demographic Data and Global Walking Ability

Follow-up intervals	C-DRFT Group*			P-DRFT Group*		
	Preop.	One Year	Long Term	Preop.	One Year	Long Term
Mean duration of follow-up (yr)	–	1.2	8.6	–	1.0	8.9
Patient age† (yr)	10.1 (3.3)	11.3 (3.3)	18.7 (4.4)	11.8 (3.5)	12.8 (3.5)	20.7 (3.2)
Body mass index† (kg/m ²)	18.0 (3.2)	18.7 (3.6)	22.2 (3.9)	17.9 (3.7)	18.9 (4.5)	20.7 (4.1)
Sex (F/M)	10/23	10/23	10/23	7/13	7/13	7/13
GMFCS level‡ (no. of patients)						
I	7	10	12	1	2	3
II	22	16	17	8	5	8
III	4	7	4	11	13	9
Gillette Gait Index§	355 (298)	177 (179)	183 (14)	495 (230)	312 (202)	301 (162)

*The group that had distal rectus femoris transfer for correction of decreased peak knee flexion in swing (<55°) (C-DRFT) included sixty-six limbs in thirty-three patients, and the group with normal or increased peak knee flexion (≥55°) that had prophylactic distal rectus femoris transfer (P-DRFT) included forty limbs in twenty patients. †Data are given as the mean, with the standard deviation in parentheses. ‡GMFCS = Gross Motor Function Classification System^{19,20}. §The Gillette Gait Index²⁴ was calculated for both groups considering all limbs. The data are given as the mean score, with the standard deviation in parentheses.

TABLE E-2 Concomitant Surgical Procedures During Single-Event Multilevel Surgery

Surgical procedures	C-DRFT Group* (no. of procedures)	P-DRFT Group* (no. of procedures)
Distal rectus femoris transfer	66	40
To gracilis	62	36
To semitendinosus	4	4
Psoas over the brim	8	14
Proximal rectus femoris release	20	28
Medial hamstring lengthening	56	40
Lateral hamstring lengthening	4	16
Posterior knee capsulotomy	0	8
Modified Eggers technique†	8	8
Calf muscle lengthening	50	28
Femoral derotation osteotomy	35	25
Tibial derotation osteotomy	6	4
Foot stabilization (valgus foot)‡	21	22
Foot soft-tissue procedures§	23	14

*The group that had distal rectus femoris transfer for correction of decreased peak knee flexion (C-DRFT) included sixty-six limbs in thirty-three patients, and the group with normal or increased peak knee flexion that had prophylactic distal rectus femoris transfer (P-DRFT) included forty limbs in twenty patients. †The modified Eggers technique is transfer of the semitendinosus tendon to the femoral condyle. ‡A calcaneal lengthening osteotomy (Evans procedure), extra-articular subtalar fusion (Grice procedure), calcaneocuboid joint distraction fusions, Chopart, or triple fusion. §Intramuscular lengthening of the tibialis posterior, long toe flexors, split anterior or posterior tibial tendon transfer.