

TABLE E-1 Demographic Data*

At enrollment	
Chronologic age of onset† (yr)	7.7 (6.0, 11.6)
Physiologic age of onset† (yr)	6.1 (3.5, 12.0)
Male/female (<i>no. of patients</i>)	46/10
At final follow-up†	
Duration of follow-up (yr)	20.4 (16.3, 24.5)
Excluding 4 patients with total hip arthroplasty or pelvic osteotomy	20.3 (16.3, 24.5)
Age (yr)	28.1 (22.8, 34.5)
Excluding 4 patients with total hip arthroplasty or pelvic osteotomy	28.7 (22.8, 34.5)
Body mass index at follow-up (kg/m^2)	31.0 (18.8, 49.1)

*Values are based on fifty-six patients (fifty-eight hips). †Values are given as the mean (based on the number of hips), with the range in parentheses.

TABLE E-2 Demographics and Outcomes According to Treatment Type

	Treatment		P Value*	95% CI of Difference†
	Bracing (N = 32)	Range of Motion (N = 26)		
At enrollment				
Chronologic age of onset§ (yr)	8.0 (6.5, 11.6)	7.4 (6.0, 9.5)	0.086	−1.32, 0.09
Physiologic age of onset§ (yr)	7.0 (4.0, 12.0)	5.5 (3.5, 9.0)	0.07	−3.08, 0.13
Lateral pillar type#			0.84	
A	1	0		
B	21 (68%)	18 (69%)		−26%, 20%
B/C	4 (13%)	3 (12%)		−21%, 20%
C	6 (19%)	5 (19%)		−24%, 21%
Stulberg type#			0.83	
I or II	13 (41%)	11 (42%)		−12%, 40%
III	9 (28%)	10 (38%)		−20%, 27%
IV or V	10 (31%)	5 (19%)		1%, 48%
At final follow-up				
Duration of follow-up‡§ (yr)	20.0 (16.3, 24.5)	21.2 (17.5, 23.4)	0.005	0.46, 2.46
Reconstructive surgery done#	2 (6%)	2 (8%)	0.65	
Nonarthritic Hip Score‡§	78 (35, 100)	79 (36, 100)	0.89	−10.3, 11.8
Iowa Hip Score‡§	73 (45, 99)	74 (43, 100)	0.92	−7.5, 8.2
Any impingement on exam.‡#	20 (67%)	13 (54%)	0.35	
Pain in affected hip‡#	21 (70%)	20 (87%)	0.25	−27%, 15%
Articular-trochanteric distance‡§ (mm)	7 (3, 10)	10 (6, 14)	0.23	
Tönnis grade of 2 or 3‡#	12 (40%)	12 (52%)	0.46	

*Calculated with use of the Fisher test or the t test. †CI = confidence interval. ‡Excluding hips that required reconstructive surgery (pelvic osteotomy or arthroplasty). §Values for the treatments are given as the mean (based on the number of patients for age and on the number of hips for all other parameters), with the range in parentheses. #Values for the treatments are given as the number of hips, with the percentage in parentheses.

TABLE E-3 Comparison of Nonoperatively Treated Patients Who Did and Did Not Return for Follow-up

	Value at Enrollment			
	Follow-up (N = 56 Patients, 58 Hips)	No Follow- up (N = 145 Patients, 148 Hips)	P Value	95% CI of Difference*
Chronologic age at onset† (yr)	7.7 (6.0, 11.6)	8.0 (6.0, 12.0)	0.2182	−0.2, 0.7
Physiologic age at onset† (yr)	6.1 (3.5, 12.0)	6.2 (3.0, 13.0)	0.7838	−0.8, 1.0
Male/female‡	46/10	117/28	1.0000	−0.12, 0.12
Bilateral disease‡	2	3	0.6195	−0.04, 0.11
Lateral pillar type§			0.6794	
A	1 (2%)	1 (1%)		−3%, 8%
B	39 (67%)	94 (64%)		−12%, 18%
B/C	7 (12%)	25 (17%)		−15%, 8%
C	11 (19%)	28 (19%)		−11%, 14%
Stulberg type§			0.8155	
I or II	24 (41%)	68 (46%)		−20%, 11%
III	18 (31%)	43 (29%)		−12%, 17%
IV or V	16 (28%)	37 (25%)		−11%, 18 %

*CI = confidence interval. †Values at enrollment are given as the mean (based on the number of patients for age and on the number of hips for all other parameters), with the range in parentheses. ‡Values at enrollment are given as the number of patients. §Values at enrollment are given as the number of hips, with the range in parentheses.

TABLE E-4 Patients Who Required Reconstructive Surgery

Patient	1	2	3	4
Reconstructive surgery*	THA	THA	THA	Pelvic osteotomy
Age at reconstructive surgery (yr)	23	23	29	19
Chronologic age of onset (yr)	7.3	9	9.5	7.4
Sex	M	F	M	F
Lateral pillar type	B	B	B	B
Stulberg type	IV	IV	III	II

*THA = total hip arthroplasty.

TABLE E-5 Previously Reported Long-term Results of Nonoperative Treatment of Legg-Calvé-Perthes Disease*

Study	No. of Patients (No. of Hips)	Typical Treatment at Diagnosis	Mean Follow-up (Range) (yr)	Follow-up of Original Cohort	Childhood Radiographs	Basis of Definition of Arthritis	Arthritis (%)				Iowa Hip Score <80, THA, or Fusion (%)	Reconstructive Surgery† (%)
							Overall	Stulberg I or II	Stulberg III	Stulberg IV or V		
Danielsson and Hernborg, 1965 ¹⁸	35	Bed rest	33	88% (35/40)	None	Joint space narrowing, structural changes	49	N/A	N/A	N/A	N/A	None
Mose et al., 1977 ⁶	152	Bed rest, walking caliper	25-65	N/A	N/A	Modified Heripret score	36	N/A	N/A	N/A	N/A	N/A
Stulberg et al., 1981 ² (Study Group 1)	88 (99)	Spica cast, cork shoe, walking caliper	40 (30-60)	N/A	Radiographs from active phase missing for many hips	Sclerosis, osteophytes, cysts, or joint space narrowing	51	16	58	75-78	N/A	5 (THA or fusion)
Stulberg et al., 1981 ² (Study Group 2)	68 (72)	Bed rest, cork shoe non-weight-bearing	25	29% (68/237)	Radiographs for 68/237 patients (29% of original cohort)	Sclerosis, osteophytes, cysts, or joint space narrowing	22	0	0	22	N/A	N/A
Perpich et al., 1983 ⁴	38	Spica cast	30	49% (38/78)	None	Joint space narrowing >2 mm	8	N/A	N/A	N/A	13	8
McAndrew and Weinstein, 1984 ¹	35	Spica cast	48	31% (35/112)	Original radiographs for 12/35 (11% of original cohort)	Joint space narrowing >2 mm	29	N/A	N/A	N/A	61	39
Current Study	56	Bracing or range of motion	20		Original radiographs available for 100% of original cohort	Tönnis grade	44	22	61	61	67	7 (THA or PAO)

*N/A = not available, †THA = total hip arthroplasty, and PAO = periacetabular osteotomy.