

TABLE E-1 Data on the Patients and Surgical Procedures

Case No.	Age at Initial Surgery (yr)	Gender	Side of Operation	Type of Forearm Deformity	No. of Operations	Surgical Procedures†	Complications‡	Persistent Pain§	Restrictions of Activities of Daily Living#	Cosmetic Appearance**	Duration of Follow-up†† (yr)
1	6	M	R	IIa	2	EE/EE UL CRO RHRed		–	+	U	13
	12		L	III	1	EE		–	–	S	13
2	12	M	R	III	1	EE		–	–	S	8
	3		L	I	5	EE CRO/UL/EE/CRO/CRO		+	–	U	7
3	11	F	R	I	1	EE UL CRO		–	–	S	13
	10		L	IIb	1	EE UL CRO	Callus fracture	–	–	S	14
4*	10	F	R	III	2	EE CRO/EE RL CRO		–	–	S	10
	10		L	I	1	EE UL		–	–	U	13
5*	22	M	R	I	1	EE UL CRO	Nonunion, RNN	–	+	S	10
	23		L	I	1	EE UL CRO	Nonunion	+	–	S	10
6*	11	F	R	I	1	EE		–	–	S	11
	10		L	I	1	EE UL	Nonunion	–	–	S	11
7	10	F	R	I	1	EE UL	Callus fracture	–	–	S	9
	5		L	I	2	EE UL CRO/EE UL		–	–	U	10
8	16	M	R	I	2	EE UL/EE UL RL CRO		–	+	S	10
9	5	F	R	I	3	EE UL/EE/CRO CUO		+	–	U	8
10	6	M	L	I	1	EE UL CRO		–	–	U	14
11	10	M	L	I	2	EE CRO CUO/UL EE		+	–	U	12
12	11	F	R	IIb	1	EE UL CRO RHRed		–	+	U	29
13	14	M	L	I	1	EE UL RL		–	+	S	7
14*	11	M	R	III	1	EE RL CRO		–	–	S	7
15*	18	M	R	IIa	1	EE RHRes		–	–	S	27
16	23	M	R	IIb	1	EE RHRes		–	–	S	22
17	5	M	L	I	1	EE		–	–	S	14
18	8	M	R	I	1	EE		–	–	S	11
	8		L	I	1	EE		–	–	S	11
19	15	M	R	I	1	EE		–	–	S	7
20	12	M	R	I	1	EE		–	–	S	6
21	9	M	R	III	1	EE		–	–	S	39
22	16	M	L	I	1	EE		–	–	S	11
23	12	M	L	I	1	EE		–	–	S	11

*No family history. †EE = excision of exostoses, UL = ulnar lengthening, RL = radial lengthening, CRO = corrective radial osteotomy, CUO = corrective ulnar osteotomy, RHRed = radial head reduction, and RHRes = radial head resection. ‡Nonunion = nonunion at the site of ulnar lengthening, callus fracture = fracture of callus at the site of ulnar lengthening, and RNN = radial nerve neuropathia. §Persistent pain was classified as none (–), mild (+), moderate (++), or severe (+++). #Restrictions of activities of daily living was classified as none (–), mild (+), moderate (++), or severe (+++). **S = satisfactory, and U = unsatisfactory. ††The duration of follow-up from the final surgical procedure to the time of evaluation.

TABLE E-2 Questionnaire

	No Difficulty	Mild Difficulty	Moderate Difficulty	Severe Difficulty
Activities of Daily Living*				
Open a tight or new jar				
Write				
Turn a key				
Push open a heavy door				
Carry a heavy object (>5 kg)				
Wash or blow dry your hair				
Brush your teeth				
Use a knife and fork to cut and eat food				
Use a keyboard				
Recreational activities that require little effort (e.g., playing cards, knitting, etc.)				
	None	Mild	Moderate	Severe
Pain*				
Arm, elbow, forearm, wrist, or hand pain when you are at rest				
Arm, elbow, forearm, wrist, or hand pain when you perform any light activity				
Arm, elbow, forearm, wrist, or hand pain when you perform any strenuous activity				
Stiffness in arm, elbow, forearm, wrist, or hand				
Appearance of the elbow, forearm, or wrist	Satisfactory		Unsatisfactory	

*With regard to activities of daily living and pain, the worst result (none, mild, moderate, or severe) for a symptom was adopted.