

TABLE E-1 Preoperative Data on the Patients*

Case	Age at surgery (months)	Degrees of derotation †	Deformity ‡	ABD	ER	HTN	HOS	HTM	Total
1	30	60	3	3	2	3	3	2	13
2	88	75	3	3	2	2	2	2	11
3	90	80	4	4	2	3	3	2	14
4	38	80	4	4	2	2	2	1	11
5	96	-40	2	3	4	2	2	4	15
6	174	70	4	3	2	2	2	3	12
7	113	50	5	3	2	3	2	3	13
8	82	75	5	2	2	2	2	2	10
9	109	90	5	4	2	3	2	3	14
10	75	80	5	4	2	3	3	3	15
11	152	80	4	4	3	3	3	3	16
12	98	60	5	3	2	2	2	2	11
13	107	90	5	3	2	2	2	2	11
14	80	50	3	4	2	3	2	3	14
15	43	65	4	4	3	4	3	3	17
16	87	50	4	3	3	3	3	3	15
17	59	50	4	3	3	2	2	2	12
18	114	60	3	4	3	4	2	4	17
19	108	35	4	4	2	3	3	3	15
20	83	70	3	4	2	2	2	2	12
21	53	60	3	4	2	4	2	4	16
22	65	60	3	4	2	3	2	4	15
23	75	70	3	3	2	2	3	2	12
24	27	80	5	3	2	2	2	3	12
25	128	80	4	3	3	2	2	3	13
26	81	60	4	4	2	2	2	3	13
27	199	75	4	3	1	2	2	3	11
Average	91	64	4	3	2	3	2	3	13

*Modified Mallet classification scores and radiographic classifications of glenohumeral deformity in patients undergoing derotational humeral osteotomy. Individual Mallet classification scores are listed for global shoulder abduction (ABD), external rotation (ER), hand-to-neck motion (HTN), hand-on-spine motion (HOS), and hand-to-mouth motion (HTM). In addition, aggregate Mallet scores (“Total”) are provided. †The amount of external rotation achieved during osteotomy is listed as “degrees of derotation.” ‡Radiographic glenohumeral deformity (“Deformity”) is listed according to the scheme of Waters et al.¹³.

TABLE E-2 Postoperative Data on the Patients*

Case	Follow-up (months)	Deformity †	ABD	ER	HTN	HOS	HTM	Total	Comments‡
1	24	3	5	4	4	3	4	20	
2	42	3	5	4	5	4	4	22	
3	34	4	4	4	4	3	4	19	forearm osteotomy
4	48		4	3	4	3	4	18	wrist fusion; revision wrist fusion
5	24	2	4	4	4	3	4	19	
6	28		4	3	4	3	4	18	PRC and wrist fusion
7	24	5	4	4	4	4	4	20	
8	24		3	4	2	2	4	15	
9	89	5	4	2	3	3	4	16	
10	63	5	5	4	4	4	4	21	
11	49		5	4	5	4	5	23	
12	24	5	3	4	4	3	5	19	
13	72	5	4	3	4	2	4	17	scar revision
14	24		5	3	4	3	3	18	
15	42	4	4	4	4	3	4	19	
16	31		3	4	4	4	4	19	
17	31	4	4	3	4	3	3	17	
18	53		4	4	4	3	4	19	
19	41	4	4	4	3	3	4	18	
20	29		3	2	2	2	4	13	wrist fusion
21	54	3	4	3	3	3	4	17	revision humeral osteotomy
22	44	3	5	4	5	2	5	21	
23	30		3	3	3	3	4	16	
24	100	5	3	3	4	2	4	16	tendon transfers
25	29		3	4	2	2	3	14	fracture below plate
26	90	4	4	4	4	4	4	20	
27	24		3	3	4	2	4	16	
Average	43	4	4	4	4	3	4	18	

*Modified Mallet classification scores and radiographic classifications of glenohumeral deformity in patients undergoing derotational humeral osteotomy. Individual Mallet classification scores are listed for global shoulder abduction (ABD), external rotation (ER), hand-to-neck motion (HTN), hand-on-spine motion (HOS), and hand-to-mouth motion (HTM). In addition, aggregate Mallet scores (“Total”) are provided. †Radiographic glenohumeral deformity (“Deformity”) is listed according to the scheme of Waters et al.¹³. ‡Subsequent surgical procedures and postoperative complications are listed under “Comments.”

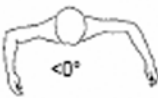
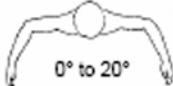
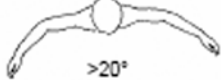
	Grade II	Grade III	Grade IV
Global abduction	 <30°	 30° to 90°	 >90°
Global external rotation	 <0°	 0° to 20°	 >20°
Hand to neck	 Not possible	 Difficult	 Easy
Hand on spine	 Not possible	 S1	 T12
Hand to mouth	 Marked trumpet sign	 Partial trumpet sign	 <40° of abduction

Fig. E-1

Schematic representation of the modified Mallet classification system of active shoulder function for patients with brachial plexus birth palsy. Grade I denotes no active motion, and grade V denotes normal function (equal to that on the contralateral side). Aggregate modified Mallet classification scores are calculated by adding the grades of each of the five individual elements (range of scores, 5 to 25 points).