

Reconstruction of the Thumb

Edited by A. LANDI
Clinica Ortopedica e Traumatologica
Universita di Modena, Italy

Co-editors S. DE LUCA
G. DE SANTIS

London



Chapman and Hall Medical

Contents

Colour plates appear between pages 176 and 177

Contributors		viii
Acknowledgements		xi
Foreword	D. M. BROOKS	xii
Foreword	P. BEDESCHI	xiii
Introduction		xiv
PART ONE History		
1 From the Roman Age to the Renaissance	G. DE SANTIS, S. DE LUCA AND R. BERNABEO	3
2 The Chinese culture and hand reconstruction	P. C. LEUNG	11
3 The thumb in Indian culture – an overview of its importance	B. B. JOSHI AND N. S. LAUD	17
PART TWO The Pioneers		
4 The French school	TUBIANA	21
5 Nicoladoni and the Central European school	D. BUCK-GRAMCKO	27
6 The British experience	D. A. CAMPBELL REID	35
7 Italian history of thumb reconstruction	A. LANDI, S. DE LUCA AND G. DE SANTIS	47
8 The American experience	G. BRODY, W. LITTLER AND R. HENTZ	55
9 Hand surgery and the Latin-American experience	G. LODA	59
10 Recent Soviet history of reconstruction of the thumb	V. S. KRYLOV	62
PART THREE The Microvascular Era		
11 The first replant	S. TAMAI	69

vi Contents

12 History of experimental toe transfer	H. BUNCKE AND F. VALAURI	74
13 The Chinese experience with microsurgery and free toe transfer	A. LANDI	80
14 Free toe transplantation – 1968	J. COBBETT	83
PART FOUR The Amputated Thumb		
15 Functional assessment of the amputated thumb	E. MACKIN, P. BAXTER-PETRALIA AND S. M. BLACKMORE	89
PART FIVE Surgical Techniques		
16 Thumb reconstruction by skin flap, bone graft and neurovascular island flaps	R. TUBIANA	101
17 Pollicization of the index finger	G. BRUNELLI	107
18 Pollicization of the ring finger	J. MICHON	114
19 Pollicization of the little finger	T. LUPPINO, S. HARRISON AND L. PEDERZINI	120
20 Pollicization of stumps	D. A. CAMPBELL REID	128
21 Thumb lengthening by the Bulgarian method	I. MATEV	143
22 Thumb lengthening by callotaxis and chondrodiasis	L. CUGOLA	148
23 Reconstruction of the thumb by composite groin flap	Y. ALLIEU AND R. GOMIS	152
24 Thumb reconstruction using the osteocutaneous forearm flap	E. BIEMER	158
25 The vascular rein technique	G. LODA	162
26 Traditional techniques for thumb reconstruction: guidelines for indications	V. R. HENTZ AND W. J. LITTLER	170
PART SIX Peri-operative Considerations in Toe Transfer		
27 Anaesthesiological guidelines in microvascular toe transfer	G. C. BARBIERI, A. TASSI AND R. STACCA	187
28 The prevention and treatment of intra- and post-operative complications of toe transfer	U. LANZ	191
PART SEVEN Microvascular Techniques		
29 Vascular anatomy of the first web space of the foot	A. GILBERT	199

30	Thumb reconstruction using the second toe	P. C. LEUNG	205
31	Extended second-toe free transfer	WEI WANG AND T. S. CHANG	213
32	Grip reconstruction with toe to antebrachial stump transfer	S. K. VILKKI	233
33	Big toe to thumb transfer	H. J. BUNCKE AND F. A. VALAURI	242
34	Thumb reconstruction with trimmed-toe transfer	F. C. WEI AND L. H. COLONY	254
35	The wrap-around technique	A. LANDI, W. MORRISON AND O. SORAGNI	263
36	Twisted two toes technique in thumb reconstruction	G. FOUCHER AND T. VAN DER KAR	275
37	Indication for microvascular techniques	M. MERLE	280
PART EIGHT The Reconstructed Thumb			
38	Present state of thumb reconstruction	J. MICHON	297
39	Medicolegal implications of thumb amputation and reconstruction: a world-wide review	M. MONTELEONE AND S. DE LUCA	301
40	Functional assessment of the reconstructed thumb	E. J. MACKIN, P. BAXTER-PETRALIA AND S. M. BLACKMORE	308
41	Thumb reconstruction: comparison between different techniques	R. LUCHETTI, S. DE LUCA AND M. ALFARANO	318
42	The aesthetic and functional replacement	J. PILLET	332
	Index		336