Book review

Microsurgical Technique in Orthopaedics

Robert W H Pho (ed.), 182 pages, Butterworths, London 1988
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Robert Pho, Professor of Orthopedics in Singapore, is a well known microsurgeon with special interests in hand surgery and in free-bone transfer. Of the 182 pages in this book, half are devoted to hand surgery, 10 to general principles of microsurgery, and the remainder to transfer of free-skin and muscle flaps, vascularized epiphyseal bone, and bone transplants in reconstructive surgery. Pho is the main author and is responsible for more than half of the text. Other internationally well-known authorities from East and West have made contributions in their respective fields. Viktor E. Meyer has written about peripheral nerves, Chen Zhong-Wei, Mitsuo Yoshimura, Chang Ti-Sheng, and James Urbaniak have made their contributions about different aspects of hand reconstruction, using foot as a donor tissue. It is of special interest to take part of the vast Chinese experience of toe to hand transfer.

The problems of skin cover are discussed by Wang Wei and Chang Ti-Sheng. The authors stress the importance of using the simplest and safest technique. Whenever possible, the first choice should be free-skin graft, the second choice is a cutaneous or musculocutaneous flap, and the third choice is a free flap. The failure rate of free flaps even in experienced hands is at least 10 percent. The authors present a long list of possible free flaps and an extensive description of the flaps that are mostly used.

Transplantation of free skeletal muscle with anastomosis of vessels and nerves to obtain contractility is now an established procedure. It is exemplified by 2 children with Volkmann's ischemic contracture after supracondylar fracture of the humerus. The pectoralis major muscle and the gracilis muscle, respectively, were used, and finger motion was restored in both cases.

Free vascularized bone grafts are described for congenital pseudarthrosis, for posttraumatic defects including infected pseudarthrosis, and for reconstruction after tumor surgery. The fibular graft, which can be made composite—including as much as 10 x 20-cm skin—is the most commonly used.

There are a lot of black and white photographs of varying quality, most of them very good, and also some excellent color plates. The schematic drawings in Pho's own chapters are bicolor illustrations of excellent quality. Some other Chinese ink drawings are not of the same high standard.

As often happens with many authors, the disposition of the different chapters is somewhat heterogeneous; there are few references after 1985, possibly reflecting delays in communication between the authors. Pho's own articles are didactic, systematic, and easy to read; they can be used as instructions for the different procedures. Some of the other articles are more an expression of general principles. The most interesting chapters are those concerning vascular-bone transfer by Pho and Leung. The descriptions of the operative technique in text and picture are excellent, and the illustrations of their own cases are interesting and impressive.

Jan Holmberg Anders Rydholm Magnus Åberg

Lund University Hospital, Departments of Hand Surgery Malmö, Orthopedics Lund and Plastic Surgery Malmö, Sweden