

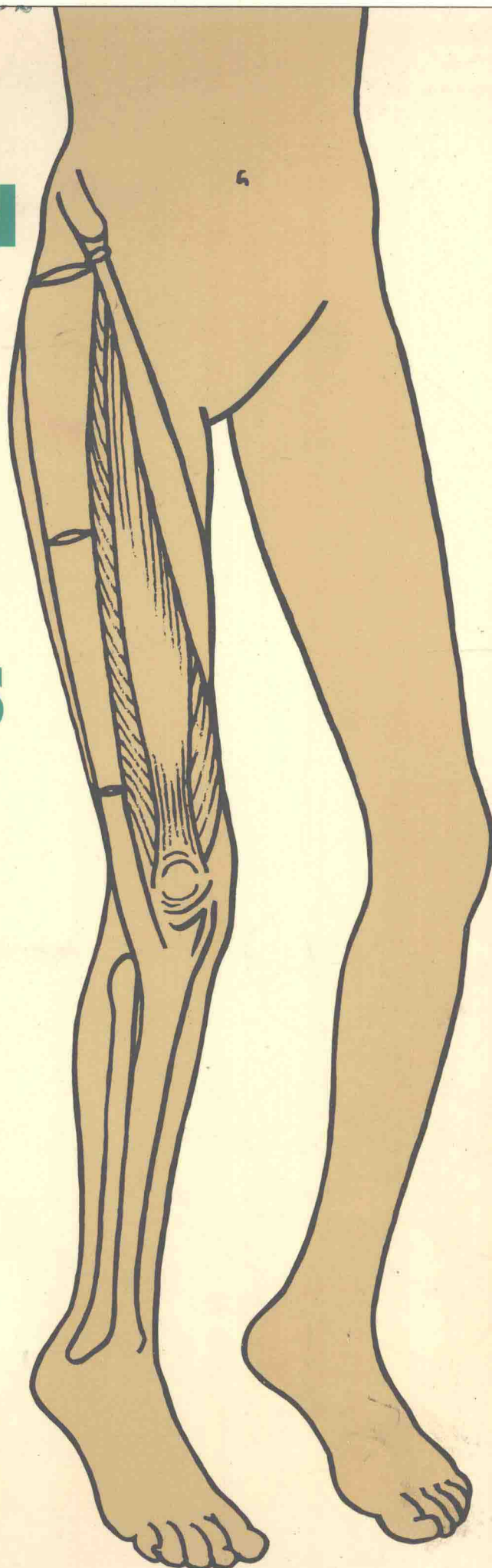
REHABILITATION SURGERY FOR DEFORMITIES DUE TO POLIOMYELITIS

**Techniques for the
district hospital**

edited by J. Krol



World Health Organization
Geneva



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Institute of Orthopaedics
and Rehabilitation
Poznan
Poland

illustrated by
Patrick Virolle



World Health Organization
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1993

WHO Library Cataloguing in Publication Data

Rehabilitation surgery for deformities due to
poliomyelitis : techniques for the district
hospital / edited by J. Krol ; illustrated
by Patrick Virolle.

1.Contracture—surgery 2.Joint deformities, Acquired—
surgery 3.Poliomyelitis—complications 4.Poliomyelitis—
rehabilitation I.Krol, J.

ISBN 92 4 154457 0

(NLM Classification: WE 312)

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TYPESET AND PRINTED IN ENGLAND
93/9552—Eastern—8000

The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this organization, which was created in 1948, the health professions of some 185 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life.

By means of direct technical cooperation with its Member States, and by stimulating such cooperation among them, WHO promotes the development of comprehensive health services, the prevention and control of diseases, the improvement of environmental conditions, the development of human resources for health, the coordination and development of biomedical and health services research, and the planning and implementation of health programmes.

These broad fields of endeavour encompass a wide variety of activities, such as developing systems of primary health care that reach the whole population of Member countries; promoting the health of mothers and children; combating malnutrition; controlling malaria and other communicable diseases including tuberculosis and leprosy; coordinating the global strategy for the prevention and control of AIDS; having achieved the eradication of smallpox, promoting mass immunization against a number of other preventable diseases; improving mental health; providing safe water supplies; and training health personnel of all categories.

Progress towards better health throughout the world also demands international cooperation in such matters as establishing international standards for biological substances, pesticides and pharmaceuticals; formulating environmental health criteria; recommending international non-proprietary names for drugs; administering the International Health Regulations; revising the International Statistical Classification of Diseases and Related Health Problems; and collecting and disseminating health statistical information.

Reflecting the concerns and priorities of the Organization and its Member States, WHO publications provide authoritative information and guidance aimed at promoting and protecting health and preventing and controlling disease.

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Preface

This handbook is part of a series produced by the World Health Organization on the surgical care of patients at small hospitals that are subject to constraints on resources and where doctors have limited access to specialist services. It describes surgical procedures that can facilitate rehabilitation of selected patients with deformities due to poliomyelitis. The procedures described are those that can be undertaken by the non-specialist medical officer who, nevertheless, has experience, gained under supervision, of all the relevant techniques. Procedures that involve bones require more training and experience; although descriptions of some such techniques are included here, they should be performed at the district hospital only by doctors with wide experience or under the immediate supervision of a specialist. These procedures are marked with an asterisk in the text.

Physical therapy is an essential part of the management of these patients, especially before and after surgery. The physiotherapist and the surgical team must therefore work together to provide the patient with the best possible rehabilitation. This work at the district hospital depends greatly on regular supervision and technical support by specialists at regional or central hospitals.

The handbook has been prepared in collaboration with the following organizations:

- Handicap International
- Health Volunteers Overseas
- IMPACT (An International Initiative Against Avoidable Disablement)
- International Society of Orthopaedic Surgery and Traumatology
- International Federation of Red Cross and Red Crescent Societies
- Terre des Hommes
- World Federation of Societies of Anaesthesiologists
- World Orthopaedic Concern.

Acknowledgements

The contributions and suggestions of the following people are gratefully acknowledged:

Dr Mohammed H.S. Al-Turaiki, Director, Joint Centre for Research in Prosthetics and Orthotics, Riyadh Medical Rehabilitation Centre Building, Riyadh, Saudi Arabia

Dr F. Cardenal, Colmenarejo (Madrid), Spain

Dr A.R. Goerdts, Rehabilitation, WHO, Geneva, Switzerland

Dr E. Helander, Senior Programme Coordinator, International Programme for Disabled People, United Nations Development Programme, Geneva, Switzerland (former Chief, Rehabilitation, WHO)

Professor R.L. Huckstep, Professor and Head, Department of Traumatic and Orthopaedic Surgery, University of New South Wales, Kensington, Australia

Dr E. Pupulin, Chief, Rehabilitation, WHO, Geneva, Switzerland

Dr A. Wasunna, Medical Officer, Clinical Technology, WHO, Geneva, Switzerland.

Introduction

Poliomyelitis is a major problem in most developing countries and is one of the main causes of locomotor disability. The disability resulting from paralysis is greatly aggravated by deformities which frequently develop, especially in the lower limbs. Patients with severe deformities of both limbs cannot stand or walk, and this greatly restricts their daily living and social activities.

The correction of deformities, using simple surgical procedures, can significantly facilitate rehabilitation and improve the physical independence of polio victims. According to recent estimates, the number of people in need of such surgery in developing countries is in the region of one million. However, rehabilitation surgery is not available to the majority of disabled people in these countries. There are few special institutions, and they cannot cope with the magnitude of the problem.

One solution would be to make essential rehabilitation surgery services available at the district hospital. Such services, however, cannot work effectively in isolation. They must have close links with community rehabilitation activities, within the framework of the district health services. It is evident that only selected surgical procedures are feasible at this level. Reasonably experienced district hospital doctors should be able to carry out such basic procedures provided that they have had practical training in essential rehabilitation surgery.

This guide has been prepared both for training purposes and as an *aide mémoire*. It is aimed at doctors providing surgical services in district hospitals. The procedures described have been deliberately limited to those that are feasible at this level and can meet the needs of the majority of people with disabilities due to poliomyelitis. These are, therefore, mainly corrective and stabilizing procedures on the lower limbs.

The surgical techniques described fall into two groups: first, simple but essential procedures that can be carried out by a general duty doctor with some experience, in an average district hospital; second, procedures that require more experience and better than average facilities. However, operations in the second group (marked with an asterisk in the text) might also need to be performed at district hospitals.

As rehabilitation surgery is not life-saving, patients who require treatment involving more complicated techniques should be referred to specialized centres. It is important that the district hospital doctor is fully aware of the level of service the hospital can offer.

In rehabilitation surgery, just as in general surgery, additional skills such as a basic understanding of underlying pathology, practical competence in clinical evaluation, and sound judgement in selecting patients for surgery are important.

The procedures described here are intended to be carried out as part of a comprehensive rehabilitation programme for those with limb disabilities resulting from polio. Neither physical therapy nor surgery alone can bring full benefit to many patients with such disabilities. A coherent system of prevention, kinesitherapy, surgery and bracing, integrated with general health services at all levels, is needed. Particular emphasis must be placed on services at community and district levels.

POLIOMYELITIS AND THE FUNDAMENTALS OF REHABILITATION SURGERY