



Vincenzo Denaro

# Stenosis of the Cervical Spine

Causes, Diagnosis and Treatment

With 220 Figures

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*For Professor  
Mario Boni*

## Foreword

Professor Vincenzo Denaro has been an active member of the Institute of Clinical Orthopedics and Traumatology of the University of Catania since 1986. It has been my pleasure, as Director, to be associated with Professor Denaro, first as a Sessional Consultant in diseases of the spine and finally, after his promotion to the permanent staff, as Associate Professor.

Professor Denaro began his postgraduate program of specialization, and hence his career, in the Orthopedic Clinic of the University of Pavia under the tutorship of Professor Mario Boni. It was the latter who directed and guided his development in studying the disease processes of the vertebral column.

In his pursuit of knowledge, he undertook additional studies in foreign clinics, including the Wellesley Hospital at the University of Toronto with Professor I. MacNab and Professor V. Fornasier. He spent a full year at the Orthopedic Clinic of the University of Paris under the guidance of Professor Roy-Camille. He derived great benefit from the clinical experience gained there and became acquainted with advanced and specialized surgical techniques specific to his field of interest.

More recently, since accepting his current appointment, he has been able to put into practice the expertise developed over 20 years of study and research. Not only does he have extensive personal clinical experience, but he very wisely undertook to maintain a thorough, complete, and accurate record of the experience gathered from his case load.

This volume is the culmination of all this effort and expertise. It unquestionably justifies the interest of those who are involved in or intend to dedicate themselves to this special area of surgery, which may sometimes be thankless, but is always challenging, requiring the fine honing of very specific and special skills.

This book brings together the various approaches and surgical techniques with a discussion of their advantages and limitations. As such it will be invaluable in the selection of appropriate management for each patient the surgeon encounters.

Prof. Quintino Mollica

## **Preface**

The aim in preparing this work was to gather together and discuss the pathogenic factors (both organic and functional) known to participate in creating a discrepancy between the “contents” of the cervical spine (the cord and nerve roots) and its “container” (the vertebral canal), leading to what is now clinically referred to as spinal stenosis.

The discussion first considers the anatomy, biomechanical and clinical features, and instrumentation, as well as the value and significance of using current radiological imaging, all of which are essential in identifying the disease process that may be present in the patient. The approaches to the cervical spine and the specific surgical techniques available to the surgeon are then described in more detail. Great emphasis is placed on the illustrations which, the author hopes, will not only provide an understanding of the disease processes, but also describe the surgical procedures, their indications, their limitations, and the possible risks involved with each of them in a very practical way.

In presenting this book, I have adopted a relatively didactic approach that I hope will be useful to those who are new students of this discipline. I make no pretence of having been encyclopedic, nor of having dealt with every possible aspect of surgery in this area. Gaps obviously remain. The literature already contains exhaustive discussions of the pathology of the cervical spine. This work is intended to provide the reader with an understanding of the practical aspects of surgical management and a detailed description of the surgical techniques needed to deal with the various pathologies that produce cervical stenosis.

A number of contributors who helped in preparing this manuscript for the publisher must be acknowledged. Professor M. Boni was my first teacher. He taught me the first, the basic, and the essential steps in surgery of the cervical spine. I was fortunate to be able to work with him in developing many of the surgical principles and techniques discussed in this book. Professor Q. Mollica’s encouragement, advice, and constant support gave me the strength to pursue and complete this undertaking. Through the friendship of Professor R. Roy-Camille I was able to learn much about internal fixation of the

## X Preface

vertebral column. Professor A. Wackenheim provided guidance in the development of this work with practical suggestions and encouragement. My thanks are also due to Professor P. Kehr, C. Dosdat, H. Hirabayashi, A. White, M. Panjabi, A. Grasso, and F. D'Alpa for their very important contributions to specific, specialized sections of this book. I am indebted to Professor V. Fornasier, who undertook the long and arduous task of translating the entire volume, and to Anna Sapuppo, whose artistic skills are reflected in the valuable and clear illustrations that she created from my crude drawings.

Catania, July 1991

Vincenzo Denaro

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