ATLAS OF ARTERIAL SURGERY
BASICS OF ANATOMY AND TECHNIQUE

by
Antonino Cavallaro
Antonio V. Sterpetti
Fabrizio Barberini
collaboration by
Luca Di Marzo

illustrations and graphic design
Bernard Luraschi

intraoperative photos of the editors
Salvatore Mammoliti
Alberto Sciamplicotti

graphic collaboration
Francesca Brunone

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The remaining photographic material was made available by collaborators, any notes to the images can be found at the end of the chapters themselves.
The figure 6.2 is a work up of the photo on page 279 of the “Atlante fotografico a colori di anatomia macroscopica umana” by Zaccaria Fumagalli, Giulio Marinozzi, Enzo Nesci, Agostino Santoro, Volume III (Piccin Nuova Libraria).


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It has been a little over 100 years, that Alexis Carrel first introduced his revolutionary technique of surgical reconstruction of blood vessels. Since the 1950’s, vascular surgery has progressed by leaps and bounds and in the past two decades the endovascular revolution transformed the face of arterial surgery.

This attractive Atlas, compiled by the talented and enthusiastic Italian surgeons Antonino Cavallaro and Antonio V. Sterpetti from the school of Professor Sergio Stipa, and by the anatomist Fabrizio Barberini, all from the “Sapienza” University of Roma, presents the full spectrum of arterial surgery as it is practiced today: from basic vascular surgery techniques and simple or complex open surgical reconstructions to endovascular and hybrid arterial and aortic procedures.

The authors have been aided by expert contributions from an international group of 76 surgeons from nine countries of the world: this atlas under Italian leadership has become a successful multi-national venture of excellence in vascular surgery.

The technical details of the interventions are beautifully illustrated in black and white and in color by Bernard Luraschi, and the large number of intraoperative colored photographed images are masterfully enhanced by computer to provide fine technical details and the exact underlying surgical anatomy.

These, together with a well written text, provide essential information on vascular surgical procedures not only for vascular trainees but also for the young and the more experienced vascular surgeons.

To quote Charles H. Mayo, a master surgeon of exceptional technical skills, this atlas is “not for those filled with principles, or the why, but for those still interested in technique, or the how.”

Surgical technique and skill are most important, but they are never enough. As Horsley once said “The career of a surgeon who merely is a cutter is of very doubtful benefit to himself and the humanity”. However, precise surgical technique is a quintessential part of the success of an operation. This includes careful planning, thorough knowledge of anatomy, flawless execution of the procedure, utmost attention to details and keeping a masterful balance between taking risk and avoiding adventures. All these, only when coupled with a constant desire to help your patient and do no harm, will transform an operator to become a master surgeon. This is how the craft of surgery turns into art. Legendary surgeons like Charles H. Mayo, Michael deBakey, Stanley Crawford, Denton Cooley, Hans Martin Becker, Andre Thevenet, Pietro Valdoni or Oliver Beahrs, among others, were not renowned because of their unique technical skills, what they of course had, but mainly because of their overall conduct of the operations performed for the benefit of their patients.

Most textbooks will teach you about the science in vascular surgery: about investigation, evaluation, prevention and treatment of vascular diseases. The Atlas of Arterial Surgery by Doctors Cavallaro, Sterpetti and Barberini, will open you the way to be fully competent in the art of vascular surgery. This is a unique volume: it brings
together the arts of printing, modern book making, superb medical illustrations and color photography with the multifaceted and exciting art of contemporary vascular and endovascular surgery.

Enjoy reading and consult frequently this beautifully presented, instructive and artful contribution to vascular surgery.

Rochester, MN, May 2011

Peter Gloviczki, MD,
Joe M. and Ruth Roberts Professor of Surgery,
Division of Vascular and Endovascular Surgery,
Mayo Clinic, Rochester, MN, USA
Foreword by Prof. Sergio Stipa

It is for me a source of delight and of pride to present this Atlas of Arterial Surgery. The text is quite exhaustive, with great attention to details. The illustrations are of top level.

This work has been carried on, for the larger part, by Colleagues who were disciples of myself and who, from the beginning of their surgical training, even before achieving the Medical Degree, are studying the problems of vascular pathology and surgery, giving rise, initially under my guidance and thereafter independently, to a clinical and experimental study group, highly esteemed in Italy, in Europe and in the extraeuropean Countries. All of them performed long periods of training in high-level Centers in Europe and USA, achieving the experience and the open-mind attitude, which allowed them to establish strong and longstanding relationships within the context of the International Scientific Community, as witnessed also by a lot of scientific papers published in the outstanding Journals of General and Vascular Surgery.

Antonio Sterpetti conceived the idea and the project of the book; Antonino Caval- laro, my first and senior disciple, cared the structure and the details, providing, together with Antonio Sterpetti, to the drafting of several chapters and to the planning of the iconography. Both of them shared with Luca di Marzo the responsibility of describing some particular aspects of arterial surgery.

Fabrizio Barberini gave a fundamental contribution, taking care of the chapters and of the illustrations on surgical anatomy.

The work of Bernard Luraschi, both as original illustrations and as computer work up of anatomic and intraoperative pictures, reaches the top, coupling exactness and effectiveness with polish and, I dare say, beauty.

Reading the book is easy and pleasant.

I strongly believe that any young surgeon, devoting himself to the surgery of the arteries, will find this Atlas to be a plain and pleasant guide during the training that progressively will make of him/her a vascular surgeon.

Rome, May 2008

Sergio Stipa
Emeritus Professor of Surgery
University “Sapienza”, Rome, Italy
Foreword by Prof. Luigi Frati

Every year, in October, at the beginning of the Academic Year, I meet the young people facing the six years of study and of practical training at the end of which the Degree of Medical Doctor will be achieved.

I try to explain to them that Medicine relies on the traditional principles and rules of the exact sciences (Physics, Mathematics, Chemistry) which are applied to the individual so that the lines of conduct are ruled by the strictness of scientific disciplines but as well comply with the alert and judicious behavior deriving from the knowledge that the ambush of variations is always impending. I explain that, through the centuries, the interrelationships between the science and the practical use of science developed following a peculiar aspect of knowledge and practice, represented by Anatomy. First with Hippocrates and his conception of the human body and of the organs containing humors and qualities; then with Galen, who coupled each organ with a specific function; later on with the rediscovery, at the University Schools in the Middle Ages, of the anatomical and autopsy studies as a mean to analyze and verify scientifically the theoretical hypotheses and statements. Finally, Galileo Galilei breaks out into the scenario of the scientific world with his mathematic interpretation of nature, including that of living bodies. From Galileo, the ridge originates and descends which marks the epistemologic revolution in Medicine, relying on the experimental observations of William Harvey, formerly a medical student at the University of Padua, where Galileo was a professor. Harvey measured the quantity of blood entering into a vascular segment and coming out from this, during a determined time interval, and verified the mathematic incompatibility of his findings with the statement made by Galen, that blood is continuously neo-formed within the liver. Harvey established that blood circulates and the anatomo-physiologic studies (the structure of an organ and its function) became the protagonist in the subsequent development of Medicine.

Just for what so far outlined, the work illustrating the foundations of anatomy (and of surgical techniques) of the arterial system represents the ideal bridge between the past, when the great advancements of Medicine took place, and an increasingly technologic future, where the exact exposure and preparation of an artery is the first step of a surgical procedure relying both on the classic methods and on newer technologies and materials, in a physiologic perspective, i.e. the reconstruction of an arterial segment if not properly a regenerative medicine.

The School headed by Prof. Sergio Stipa has always been oriented toward the innovative methods and techniques albeit firmly adherent to the theoretical and practical foundations of Surgery: his disciples, and first of all Prof. Antonino Cavallaro, now air this work (Atlas of Arterial Surgery: Basics of Anatomy and Technique) according to the extraordinary line of research. Up-to-date and high level of professional expertise of the Roman School of Surgery, oriented also toward the surgical specialties. Strict adherence to the scientific method, exact description of procedures, and a rich iconography are peculiar to this Atlas, expressing a style of thinking and behaving proper of the best tradition of University Schools.

Rome, May 2008

Luigi Frati
Dean of the First School of Medicine
University “Sapienza” - Rome, Italy
Foreword

When arriving at the completion of a long-lasting and painstaking work, one feels a gratifying sensation of relief but, as well, the undefinable sensation of having forgotten an important detail, may be the most important; but this remains unidentified, to become probably tremendously evident when a remedy will not be possible. Patience! We hope to be forgiven and, first of all, to be able to forgive ourselves.

This Atlas of Arterial Surgery is devoted to the trainees in Vascular Surgery and to the young Vascular Surgeons. It was designed by Antonio Sterpetti, who, with a perseverance close to obstinacy, was able to carry out his original plane, involving outstanding Italian and international Authorities, who accepted to participate to the project on the basis of the role played by him within the International Scientific Community, due to his clinical and experimental research work on the physiopathology and pathology of the arterial vessels.

For a long time, my activity was only of support and suggestion; later on, I took care of co-writing several chapters and as well of revising the entire book and the legends to figures.

Antonio and I discussed repeatedly if the first name should have been his name or my name: I thought that, as the idea was of Antonio, it was right to put his name as the first; but Antonio, being a true “homo academicus” and considering me as his surgical and academic mentor (and this is for me a source of pride and delight), at last prevailed, and consequently the first name is mine. Really, this work implied a continuing exchange of ideas and personal beliefs, teaching and learning from each other; at the end, we were certainly older and probably wiser, like the old sailor of Coleridge.

The contribution of “local” experts, such as Fabrizio Barberini for surgical anatomy and Luca di Marzo for some peculiar clinical aspects, was of crucial importance.

Fundamental and not replaceable the contribution of Bernard Luraschi, as the author of figures and drawings, of the graphic work-up and as well of the entire graphic project and of pagination of the book. His enthusiasm and the capability of understanding and representing the problems related to the exposure of the arteries and to the operative requirements and accomplishments, are the expression of outstanding human and professional qualities (even if discussions were often animated and sometimes stormy). I never will be able to thank him adequately for his cooperation.

My thanks to the Department of Surgery “Pietro Valdoni” (it is a privilege to be a member of this) for having allowed that Bernard worked almost full-time to this Atlas, within the context of the activity of the “Sezione di Iconografia Didattica”.

Thanks to Mrs Rossella Trima who, always gently and with a lot of patience, transferred into the computer texts and legends.

Finally, my thanks ( but these are “permanent” thanks ) to my masters and mentors: Prof. Paolo Biocca, who was for me the first example of intellectual honesty toward surgery and patients; and mainly to Prof. Sergio Stipa, my friendly mentor through almost 50 years, who first made me knowledgeable (we were in 1960) about the splendors and disenchantments of Vascular Surgery.

Rome, April 2008

Antonino Cavallaro
P.S.
Translating into English the chapters originally written in Italian, in French and in German, was an additional gratifying endeavour and I am happy of having undertaken and accomplished it.

In the meantime, the Italian Society of Surgery awarded the annual prize 2009 “Ettore Ruggieri” to this Atlas of Arterial Surgery.

I hope that young Colleagues, interested to Vascular Surgery, will appreciate our efforts, throughout European and extra-European Countries.

Rome, November 2010

Antonino Cavallaro