Mauricio de Maio  Berthold Rzany

Injectable Fillers in Aesthetic Medicine
Injectable Fillers in Aesthetic Medicine

With 66 Figures in 97 Separate Illustrations and 6 Tables
The field of aesthetic medicine has been changing at such a rapid pace it has become hard to keep up with the latest trends and developments. Each decade has introduced new technologies that have made our practices safer, simpler and more efficacious. The 1980’s were the decade of chemical peels; the 1990’s the laser; but the two most innovative changes have come about from the aesthetic use of botulinum toxin in the 1990’s and now the explosion of fillers in this era of the 21st century. From one or two fillers available twenty years ago, we now have a full cabinet of filling materials – both biodegradable and permanent – to meet each of our patient’s needs. In the recent few years, fillers are emerging like spring flowers in a profusion of original devices, copycats and injection materials. It has become increasingly difficult for the clinician to sort through the marketing hype to find the real objective science – if it exists – on the newer agents. This is further complicated by the fact that CE certification does not require efficacy and safety data if comparable filling substances are already on the market. The reality is that most new aesthetic devices come from Europe, and it is difficult for us to evaluate what’s new and what’s good.

“Injectable Fillers in Aesthetic Medicine” provides a well-needed compendium as a complete yet very hands-on practical approach to the practice of fillers at this time. It fulfills an important niche by gathering information from many sources for the updated volume. Both, Dr. Berthold Rzany and Dr. Mauricio de Maio, are highly respected aesthetic researchers and clinicians. They have sorted through the technical data and marketing hype to provide truthful and practical information for you – the aesthetic clinician – for use in your practice.

The volume is divided into usable chapters encompassing materials, patient selection, preparations, anesthesia, regional injections including techniques, combination therapy and complications with treatment. I highly recommend this compendium for both the novice clinician beginning a filler practice as well as those with long experience needing an update on the latest materials and techniques. This is the next best thing to a “hands-on” course from master clinicians.

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Foreword

Gottfried Lemperle, M.D.

“Work’s of art are continuously restored over time – Isn’t a person a work of art, too?”

This reference on injectable dermal fillers is the first comprehensive manual for the practitioner. It is a perfect symbiosis of pragmatism, experience, and wisdom of two well-known scientists and practitioners from both continents Europe and South America. Today, information on aesthetic surgery is not limited to an exclusive group of injectors any more, but finds a broad, multi-disciplinary interest among many medical specialties. Increasingly, many non-traditional specialties such as gynecologists and dentists offer wrinkle treatment, whether in combination with anti-aging medicine or rejuvenation of the frontal teeth.

What is the optimal treatment for wrinkles? Many praises have been spread by the manufacturers and distributors regarding their own products – and fewer facts have been presented in courses and published in dermatological and plastic surgery journals. This book discusses which agent is optimally used for which specific indication. It is not only an encyclopedia of available filler substances in Europe and Brazil but also an in-depth approach to their properties and proper practical applications.

The text is both for the novice and the veteran. Indeed, compiling this reference vastly increased my own knowledge in the field of dermal fillers. Organized according target indications, it facilitates the choice of filler for each specific region of the face given the multitude of products in the global market. Of special importance is chapter 6 on treating and resolving complications, which occur with all fillers. Adhering to the “Tips and Tricks” in every chapter will prevent the majority of technical mistakes, however, there may still happen the rare possibility of an unforeseen event.

There is no longer lasting result in plastic surgery than a bad result. If we master the treatment of long lasting redness, superficial ridges and late foreign body granulomas, we will have long-lasting happy patients. Existing misconceptions pertaining to permanent fillers will fade with increasing experience, conservative application and successful treatment of rare complications.

This book will find a widespread acceptance among all interested in anti-aging and aesthetic medicine. I wish this work the great success it deserves.

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A book like this would not have been possible without the help of many others. First, we would like to thank our patients, and in particular our teaching patients, without whom we would not be able to teach our colleagues all over the world. We would like to thank those who helped us with their skills and support during the completion of this book. Furthermore, we would like to take this opportunity to thank Mrs. Ellen Blasig from Springer Heidelberg for her guidance and her continuous support, which enabled us to keep the project going.

From the German team, we are grateful to Hendrik Zielke for his help in writing the chapters on the efficacy and safety of the injectable fillers, Mr. Tobias Gottermeier for the excellent photographs of our teaching patients, Miss Madita von Bargen and Miss Susan Fritz for various tasks including the elaborate graphics, and last but not least Miss Miriam Bollerhoff and Miss Stefanie Rosumeck for formatting the text.

From the Brazilian team, we would like to thank the staff, who are always prompt in providing support with new tasks: Mrs. Liliann Amoroso Ribeiro, Miss Leticia Barros Alves, Miss Gisele Aparecida de Souza, and Dr. Renato Rodrigues Naufal.
Why a book on injectable fillers? Astonishingly, there are few books on this subject. Furthermore, during the last decade we have seen a tremendous increase in the number of filler materials and a parallel increase in our knowledge about them. Treatments have become more subtle and now include more indications. The task of this book is therefore twofold. First, to give an overview on the most common biodegradable and nonbiodegradable fillers and to give parallely some advice about how to approach new fillers, which are often accompanied by marketing myths rather than good scientific data. Second, injecting filler can be tremendously rewarding; based on the perspectives of a dermatologist and a plastic surgeon, this book will give an overview of how to use injectable fillers for the most common indications in aesthetic medicine. It will also offer some insights into more specific aesthetic indications like, for example, remodeling the face, including the nose.

We have tried to use a hands-on approach to be as specific as possible. However, do not hesitate to contact us if you have further questions and we will both try to answer your questions as clearly and quickly as possible.

Berlin and São Paulo, November 2005

Berthold Rzany  Mauricio de Maio
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Berthold Rzany is a dermatologist and clinical epidemiologist who has held the position of C3-Professor of Evidence Based Medicine in Dermatology at the Department of Dermatology and Venerology of the Charité Universitätsmedizin in Berlin since 2002. He studied medicine in Freiburg, Germany, Vienna, Austria, and Harvard Medical School, Boston, USA. He received his dermatological education at the Department of Dermatology at the University of Freiburg, Germany, and worked as a consultant in dermatology in Mannheim, Fakultät für Klinische Medizin, University of Heidelberg. He received a Master of Science in Clinical Epidemiology from the School of Public Health, Johns Hopkins University, Baltimore. He has a special interest in aesthetic medicine and tries to incorporate evidence-based medicine in aesthetic medicine. He likes teaching and frequently gives hands-on workshops on Botulinum toxin A and injectable fillers. He is also a consultant for various companies and government agencies for these substances.

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Hendrik Zielke is a medical student in his final year at the Charité Universitätsmedizin and works as assistant at the dEBM. Together with Linn Woelber he helped to establish the Berlin Registry for adverse reactions to injectable fillers.
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Mauricio de Maio
Mauricio de Maio is a board-certified plastic surgeon in Brazil. He studied medicine in São Paulo, Brazil, and received his education in general surgery and plastic surgery at the Clinics Hospital of the Faculty of Medicine of the University of São Paulo. He has postgraduate qualifications in plastic surgery (MSc) and in otolaryngology (PhD). His interest in aesthetic medicine began while training in plastic surgery. In 2004, he edited a 138-chapter compendium in aesthetic medicine, which was published in Brazil. Since 2000, he has given training courses in this field in Europe, North and South America, Oceania, Asia, and the Middle East.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BoNT-A</td>
<td>Botulinum toxin A</td>
</tr>
<tr>
<td>CE</td>
<td>Conformité Européenne</td>
</tr>
<tr>
<td>CHP</td>
<td>Calcium hydroxylapatite</td>
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<tr>
<td>FDA</td>
<td>Food and Drug Administration</td>
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<tr>
<td>HEMA</td>
<td>Hydroxyethylmethacrylate</td>
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<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
</tr>
<tr>
<td>PMMA</td>
<td>Polymethylmethacrylate</td>
</tr>
<tr>
<td>PLA</td>
<td>Polylactic acid</td>
</tr>
<tr>
<td>SMAS</td>
<td>Submuscular aponeurotic system</td>
</tr>
<tr>
<td>SOOF</td>
<td>Suborbicularis oculi fat</td>
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