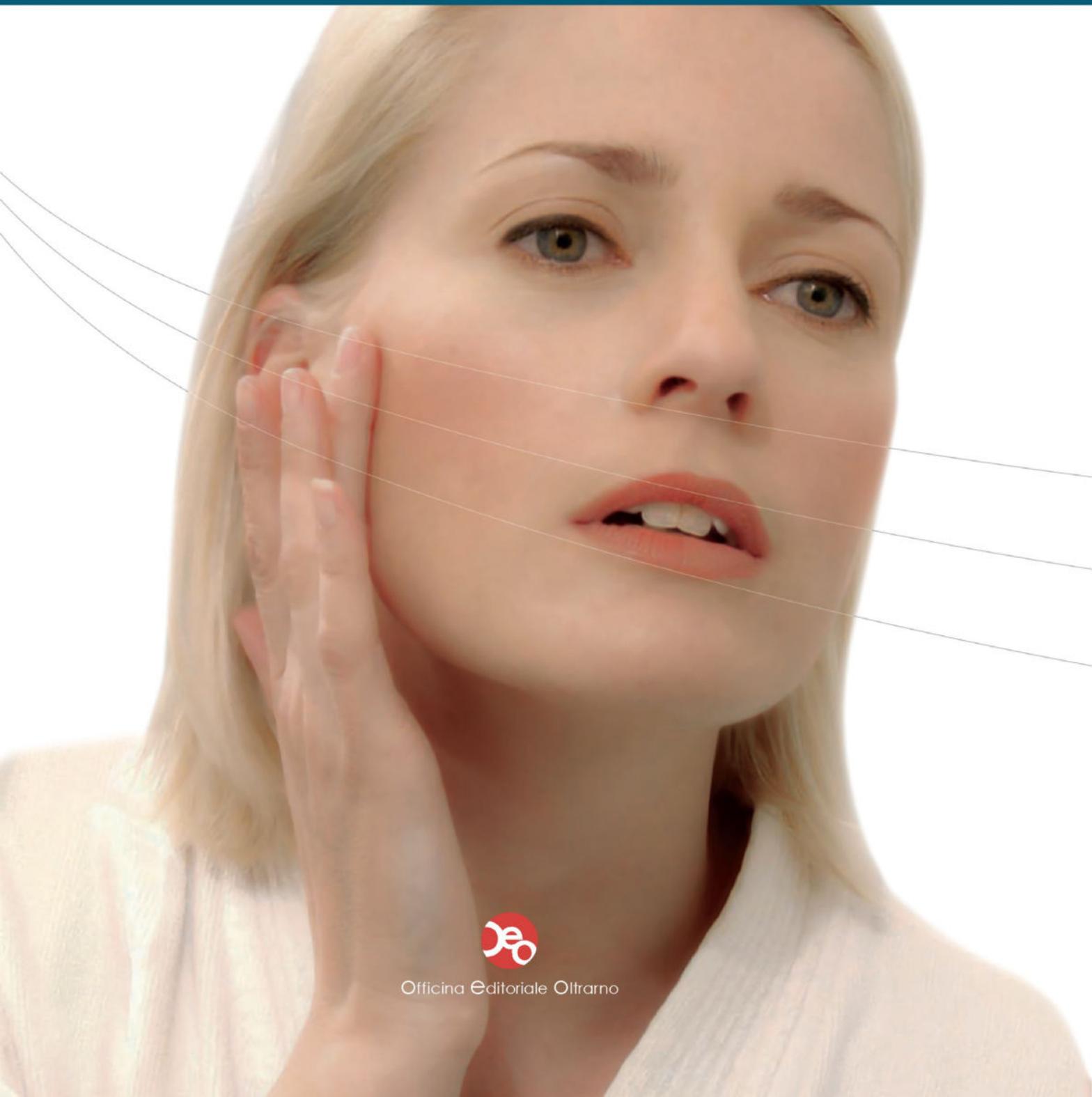


Pier Antonio Bacci

FILL TRACTION IN PDO

BEAUTY HANGING BY PDO THREADS

Mini Lift and Dermocosmetic Treatments by Threads



Officina Editoriale Oltrarno

FILL TRACTION IN PDO
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Mini Lift and Dermocosmetic Treatments by Threads

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Printed in January 2016
by Legra Sp.

Officina Editoriale Oltrarno S.r.l. - Firenze
sito web: www.oeofirenze.it - e.mail: info@oeofirenze.it

ISBN 978-88-97986-22-5

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PREFACE



This volume is a collection of experiences for the best use of absorbable threads in polydioxanone (PDO), used both for rejuvenation procedures of the face and body and in therapeutic treatments for painful lipodystrophic, traumatic or venolymphatic diseases.

In 2006 I published "Mini-invasive esthetic surgery with thread lift", edited by Minelli Editore and translated into three languages. This text represents the first scientific monograph on the theme at an international level.

Prof. Ivo Pitanguy, a true friend and a perpetual master, with his typical Brazilian enthusiasm contributed an introduction and presented the book at his clinic in Rio de Janeiro: "Plastic surgery is no longer a new medical field, over a span of a century we have witnessed some of the greatest discoveries in every field of medicine. Mini-invasive procedures have gained popularity in esthetic surgery, whether as complementary to surgery or as a first choice, with undoubtable advantages in the possibility of obtaining good results with the least amount of trauma to the tissue. Very often it is the patient himself to ask for these mini-invasive strategies, and the surgeon should be able to un-

derstand these requests. Despite this, it is important to correctly evaluate the true advantage these mini-invasive strategies can offer (and this must be explained thoroughly to the patient) since, despite the good results, even these procedures are not completely without risks and complications, even if minimal, while traditional surgery, even if more invasive, can offer the patient longer lasting results in the right cases."

I agree completely with this presentation, just as I must acknowledge the incredible and unimaginable evolution these techniques have had over the years, all well described in the various international publications, especially those by Julio Ferreira, Roberto Tullii, Roberto Pizzamiglio, Anthony Erian, Antonino Campisi and Fundarò, even if the most complete and important ones are without a doubt those by Nikolay Serdev and Mel Shiffman.

With some worthy colleagues in this field in 2015 I will publish the revised edition of the book "Mini-invasive esthetic surgery with thread lift", where the various surgical techniques with their different indications for different materials will be described. This volume is instead dedicated to the mini-invasive and dermocosmetic methods with soluble PDO thread, a new philosophy that has stimulated many reflections.

This book has been written for those who wish to seriously dedicate themselves to mini-surgical and dermocosmetic methods, especially for those who love to share knowledge and their own experiences, but this book does not contain Truth. It is solely the result of many years of scientific experience and interchanges with other doctors, surgeons, phlebologists, dermatologists, esthetic doctors and physiotherapists from many countries, including Korea, Russia, Bulgaria, USA, Argentina, Brazil and in particular Spain, in great friendship and academic collaboration which, together with Prof. Victor Garcia and Prof. Maurizio Ceccarelli, has lasted almost twenty years.

While writing these pages I was undecided whether to follow the market trends with practical manuals full of large photos and little writing or else to opt for a lot of content and perhaps smaller photos. I believe that the best use of any method or medical device occurs only through a good basic background with the knowledge and experience of others, both the better ones and those who aren't quite so good. For this reason, with absolute conviction and with the greatest respect for the patients, I decided to write this volume like a novel to be read through the pages and plot, addressing those readers who "love to waste time understanding contents and reflecting upon motivations".

At any rate, I wish to repeat and emphasize that all the methods with all the types of threads will never substitute traditional plastic surgery. PDO threads have typical indications and can become synergetic with great advantages but always after careful examination, correct use and respecting the patient's requests.

Moreover, we must remember that any clinical or esthetic improvement is always the consequence of better metabolic, vascular and oxygenating activity of our cells, aided both by an informed lifestyle and by preventative or corrective medical treatments.

Before concluding I wish to mention Maurizio Valeriani of Rome, Pier Guido Ciabatti of Arezzo and Dov Klein of Tel Aviv, surgeons of great talent whom I thank for the friendship and professional esteem they have always shown me and I also owe Prof. Lucio Andreassi, Prof. Carlo D'Aniello and Prof. Sergio Mancini thanks and gratitude for having given me the chance to take on the academic world with these methods, and then calling me to teach them at their schools of Dermatology, Plastic Surgery and General Surgery at the University of Siena for almost thirty years.

Pier Antonio Bacci

PRESENTATION



As a result of his extensive experience of over fifteen years, Pier Antonio Bacci is rightly considered as an opinion leader in minimally invasive cosmetic surgery and a pioneer in strategies with suspension threads.

His merit is primarily that of never having been seduced by the enthusiasm of novelties and the charms of advertising, always endeavouring to reach conclusions and protocols after a serious and thorough scientific journey, confronting with the academic world and official societies of reconstructive and aesthetic plastic surgery.

These minimally invasive strategies, today all too exalted, are not entirely new, given that over the years several less invasive solutions have been proposed throughout surgery, thus we must reflect on the fact that their widespread use has sometimes provoked confusion in professional roles leading to superficiality in training and information, in addition to the risk of scarce results and possible risks. If used well and for the right indications, these methods could offer undoubted advantages.

In 2006, Pier Antonio Bacci published the first scientific book at an international level on the methodologies of suspension and support threads, the willingness of which to publish an update in the future is to be commended, in order to conclude these minimally invasive strategies in all their surgical and aesthetic aspects.

Pier Antonio Bacci has dedicated this book to the so-called "Korean revolution with polydioxanone threads", now all the rage, and should therefore be applauded for this volume that seeks to shed light on the principles that sustain these methods to their best use, still emphasizing that they can never replace traditional lifting, even if they may become synergistic in certain cases.

Carlo D'Aniello

Professor at the University of Siena

Director of the Department of Surgery and Specialties

Director of Plastic, Reconstructive and Aesthetic Surgery School at the University of Siena

Past President of SICPRE – Italian Society of Reconstructive and Aesthetic Plastic Surgery



Pier Antonio and I started in the profession almost simultaneously and we have worked together for the past twenty years. The first clinical use (in Europe) of the unidirectional surgical barbed threads, which form the background upon which this book is based, was back in October 1999 in the operating room of the nursing home "Poggio del Sole" of Arezzo, now "CCT- Centro Chirurgico Toscano" (Tuscan Surgical Centre).

We have work together in the clinic for over twenty years, only that he has continued to perform his job admirably, while I have limited myself to directing it. Many plastic and cosmetic surgeons have worked in this nursing home over the years, but only two of them still continue to operate there: the best. One of these is Pier Antonio Bacci, an anomalous aesthetic surgeon, whose anomaly

consists of persisting in combining science and innovation with a surgical specialty considered by many to be the most "commercial" of all.

This convinced obstinacy, given that it has been constantly crowned with success, lies with the indisputable merits of Pier Antonio, who has contributed, like few others, to the understanding that the attainment of so-called beauty, both through medicine and surgery, requires continuous study and research, as with any branch of medicine.

Prof. Bacci was a forerunner for another concept, now commonly accepted, that of considering every imperfection and lack of beauty as a potential pathology, and along with this the ethical obligation to investigate the solution and cure with scientific methodology.

In particular, new forms of treatment have always been at the centre of attention for Pier Antonio, who has always, after careful consideration, preferred to risk by experimenting with new technologies first-hand rather than prospering by using only those that have already been tested and therefore less risky, from all points of view.

This book describes and recounts one of the many "risks" run by Pier Antonio over the past years, but which today, thanks to his accumulated experience, has become a well-established therapeutic practice throughout the world.

In conclusion, I cannot fail to mention that in the same nursing home "Poggio del Sole", now the Tuscan Surgical Centre, back in October 1983 Pier Antonio Bacci performed, with the assistance of the School of Surgery of the University of Siena, the first phlebectomy operation using mini incisions, taking up and reviewing the idea of Robert Muller to remove varicose veins in a mini-invasive manner, a technique which has since become a method used throughout the world.

Prof. Bacci has always faced the challenges of his work with adventurous mentality, namely youthfulness, so congratulations and best wishes to the young Pier Antonio.

Stefano Tenti

Director of the Tuscan Surgical Centre of Arezzo

International centre of surgical excellence



"A GREAT INCISION A GREAT SURGEON". Who has never heard this phrase uttered?

It was a phrase and a concept that frequently resonated among people up to the end of the last century. Above all, in my experience as a doctor, no longer young, many elderly people exhibit extensive skin scarring, sometimes with a touch of pride, almost as evidence of a serious illness that they have overcome. Vast scarring was a demonstration of their physical strength, a strength that had enabled them to overcome a serious illness.

For the surgeon who had left a large scar it was almost like some sort of certification of the great work that he had accomplished. Unfortunately, for both, when later going on to verify the condition treated, in many cases it was found that the disease was of little consequence. Much extensive scarring in the epigastric region is simply a sign of a gallbladder stones, large and even retracting scars in the iliac fossa are the results of appendectomies performed with large cutaneous incisions and without the proper attention given to the suturing of the various planes.

Nowadays the health culture has changed dramatically. Extensive or unsightly scarring, in addition to causing an unpleasant states of mind in the patient, can bring its share of remonstrations towards the surgeon, which, in some cases, may lead to a compensation claim, being considered by the patient or lawyer (both doctor, lawyer or even the judge!) as an injury.

Without considering the excesses, at the end of the last century, especially during the first years of this century, we have witnessed a major cultural change in medicine: the improvements of the aesthetic results have become the result of the synergic action of multiple factors.

Diagnostic instruments, both in imagery and in biochemistry, have now reached levels that, until a few years ago, were unimaginable, becoming more refined and allowing physicians to obtain improved preparation for their operations.

In parallel with the diagnostic phase, in choosing the procedure to be performed, it is also important to consider the availability of increasingly sophisticated and refined instruments and medical devices, the result of research in biochemistry, along with the purity and the manufacturing techniques of the materials themselves.

With the advent of endoscopic surgery, up to robotic surgery (which is nothing more than advanced endoscopic surgery), in order for it to be well executed it entails a fine understanding of the anatomical structures and pathologies, thus a greater level of professional skills. The use of this technique consents to a maximum amount of respect for the anatomical structures and the possibilities of extremely precise surgical intervention that would be otherwise unimaginable, and the results that can be achieved, when used in accordance with appropriate criteria, are inevitably and clearly superior to other techniques used.

Endoscopic surgery and its computer-assisted evolution (or robotics) is a demonstration of the importance of the concept of mini-invasiveness, but it is important to remember that the term "minimally invasive" must not be understood as a synonym for "doing little." Instead, it should be understood as "doing exactly what is necessary," nothing more, nothing less!

The concept of minimal invasiveness should always be kept in mind in order to indicate and to remind us, in every sector and at every moment in the art of medicine, of how and where to proceed.

If physicians can intervene as precisely as possible, the outcome will be closer to the common objective of the doctor and patient, to be achieved with as little trauma as possible, hence more rapid healing and fewer side effects. Moreover, even at the lowest cost, in both economic and physical terms, in conditions of benefit and not profit, for the doctor and patient.

The increasing availability of ever more detailed and refined concepts has led to the side effect of the fragmentation of individual pathologies within the same specializations; the concept of specialization has gradually been exasperated, leading to the emergence of the need for specializations within specializations.

These essential points (but many others could be added to these and perhaps of no lesser importance) are both the causes and effects of the physician's cultural evolution. The increasingly improved results that are obtained from the treatment of individual pathologies is lavished onto the population, with satisfaction at first, but then with an increase in qualitative levels that are expected for the same services. The effort to meet the ever-higher demands of the patients represents a stimulus for an in-depth analysis, both for the doctor and for the manufacturers of instruments and medical devices. This virtuous circle, managed with ethical balancing, is the essence of human and professional growth.

I have experienced this in full throughout my professional career, starting as a student where the prevailing surgery was destructive and attention to the aesthetic aspect was very minimal, through to conservative surgery and on to the last years with the use of robotic surgery, that has allowed us to bring the concepts of minimally invasiveness and aesthetic results to a higher level.

The professional history of Pier Antonio is a tangible expression of an enlightened professional who has been able to grasp the cultural changes whilst being able to integrate them with intelligence and professionalism in this great and swirling cultural evolution.

The merit of Pier Antonio is, and not only, to have understood what was taking place in the world of cosmetic surgery, as well as providing a major boost to those changes and, above all, to have also contributed to indicating a direction.

With his latest work, delivered with simplicity and humility, Pier Antonio offers everyone working within the field his experiences during this cultural journey, without jealousy or envy, a rare gift among physicians.

I, for my part, would like to thank him for what he has given us not only from the technical point of view but also, and perhaps above all, for having made known to us his intellectual journey.

Pier Guido Ciabatti

*Director of the Department of Specialized Surgery USL8 Arezzo
Director UO Otolaryngology and Cervical-Facial Pathology
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It is easy for me to talk about Pier Antonio Bacci, easy and enjoyable, as I have had the pleasure of knowing him for many years and consider him a great friend, as I hope he considers me. It would be easy to talk of him, but it becomes difficult to reduce my thoughts to a few lines of text because, for Pier Antonio Bacci, the world is too small and time is too short.

The scientific community admires him and considers him an opinion leader in almost every field of Aesthetic Medicine and Surgery, but it is in three fields that his contributions have transformed him into one of the recognized world leaders: cellulitic oedematous fibrosclerotic panniculopathy (PEFS), outpatient phlebectomy, and support and suspension threads.

Pier Antonio understands aesthetic pathologies like no other, as he went in search of signs and symptoms of aesthetic pathologies, investigating the clinical aspect, highlighting the pathophysiology, histology, biology, biochemistry, and, recently, even the genetics and genomics.

Like other authors, he too argues that imperfections are not only visible imperfections but also true aesthetic conditions (most of which fortunately are not life threatening), emphasizing that the right treatment becomes genuinely safe and effective therapy. Of course, in summary, this exciting book reveals the depth of his vast knowledge regarding various threads and treatments that can be integrated with them, describing different protocols that, if correctly used, can be adopted to provide beneficial solutions for our patients.

Support and suspension threads are now in common use, but it was Pier Antonio who taught everyone how to use them as early as 2002.

Pier Antonio Bacci is one who has always transmitted everything he knows, never keeping a trick up his sleeve nor protecting his findings or his protocols with patents, registrations or licenses, which today, alas, is all too fashionable.

Like all other authors, Pier Antonio Bacci certainly does not possess the truth, but at least he enjoys sharing and comparing his thought and his knowledge with everyone.

Thank you Pier Antonio.

J. Víctor García

*Director of the Master of Cosmetic, Aesthetic Medicine and Physiological Aging - University of Barcelona
Pres. Spanish Society of Cosmetic Medicine and Surgery*



Yet again a book by Pier Antonio Bacci.

Every time I have a book by my friend Pier Antonio in my hands, before I read it I wonder: how does Pier find the time?

For those of you not familiar with Pier Antonio Bacci he manages, simultaneously, to be a doctor, a surgeon, a phlebologist, a cosmetic surgeon and an aesthetic physician, as well as a writer, a scholar of philosophy, religion, esotericism, art and more.

He manages to tour the world and brings his scientific knowledge to all the major medical conferences, often the first to uncover all the new proposals. Novelties that, after verifying their scientific content, are offered to us in his books. Amazing!

I increasingly believe that the Tuscan atmosphere, which has given us several "multifaceted talents" in the past, has also donated one to us in our time.

Some years ago, I spent an unforgettable day with Pier Antonio and Ivo Pitanguy, and was struck by the varied and profound knowledge of the father of plastic and aesthetic surgery. Pier told me later that he was not only a master of science but also a master of life. Now I can say that the student Pier Antonio has followed in the footsteps of his mentor, and I believe that one day he may even surpass him.

Coming to the book, Pier Antonio provides us with a detailed and thorough examination of both the historical and scientific practice regarding the use of the new polydioxanone threads. In a historical moment for medicine and cosmetic surgery in which information reaches us principally through the commercial filter, it is important to receive explanations on the different uses and indications of the various threads available around the world, by a physician who is not just knowledgeable at a theoretical level, but by a doctor who has personally tested the various threads and verified their clinical response and the possible side effects.

Thus, another book by Pier Antonio Bacci, a book to be read and studied and not to be kept on our library shelves. Keep it up Pier.

Maurizio Ceccarelli

*Director Aephymed Recherche Centre - Rome
Master Professor Aesthetic Medicine, University of Barcelona and Camerino*



Pier Antonio Bacci is rightly considered to be a pioneer in suspension and support thread strategies, contributing with intelligence and professionalism to the changes and evolution of thoughts and actions in minimally invasive cosmetic surgery and in the dissemination of professional practices.

Pier Antonio Bacci is someone who likes to pass on his knowledge, with enthusiasm and professional generosity.

Minimally invasive cosmetic surgery and support threads act on the tissues of the human body, conditioned by "its" metabolic, hormonal and genetic structure.

As a physician who has taught and practiced clinical nutrition for 40 years, I am convinced that the key to this structure, to a large extent, is in daily nutrition and glycaemia fluctuations, lipid and fat acids, blood insulin levels and genic modulation after each nutritional intake. No calorie acts on genetic inheritance, only molecules modulate our DNA.

Nutritional genomics has eliminated the calculation of daily calories, as I have been discussing with Pier Antonio Bacci for many years.

Nutritional genomics highlight the relationship between food molecules and "individual" genetic heritage. An excess of saturated fatty acids within a cell causes a condition of cellular obesity capable of modulating a genetic profile, characterized by a change in protein synthesis and cell hypoxia.

An excess of saturated fatty acids within the fibroblasts generates a reduction of the synthesis of collagen, hyaluronic acid, proteoglycans, glycosaminoglycans and an increase in hyaluronidase, heparanase and metalloproteases. Conditions that can deconstruct the connective tissue.

I have often discussed and analysed with Pier Antonio Bacci, how clinical nutrition and aesthetic medicine & surgery can and should "meet" in the connective tissue.

An excess of glucose and saturated fatty acids within the fibroblasts, the glycation of connective tissue components, the variation of the pH in tissue, the derivative cellular hypoxia, as well as the altered relationship between the vascular system and lymphatic system can promote a functional and aesthetic decay of tissues, on which to insert support threads, under conditions of reduced (vascular and lymphatic) protein, lipid and water drainage.

Pier Antonio Bacci, aware of this complex metabolic, hormonal and genetic horizon, indicates adequate nutritional lines in his book, allowing for improved functional and histological recovery to affected tissue with the insertion of support threads and minimally invasive surgery.

The human body is a biological organ that is based on complexity.

With recognition for his professional activity and teaching, I sincerely hope that Pier Antonio preserves his youthful enthusiasm in the exercise of his medical activity.

Just as when we completed our undergraduate studies at the University of Siena together, we have experienced over 40 years of professional activity together, in different fields of medical science, but always united by mutual esteem in a constant confrontation of ideas and professional choices.

Pier Luigi Rossi

*Specialist Physician in Nutritional Science in Arezzo
Professor in Nutrition at the Bologna University*



There are people who know how to make easy and understandable, all what is not easy. Then there are people who manage to convey and share knowledge of a life without fear, without hesitation, just for the sake of reaching a horizon of knowledge. Sometimes, with other people, we can find a summary of the many reflections made in our own career and life, overcoming barriers often artificially raised to define areas of belonging and place the measures of value.

I have this experience every time I talk with Pier Antonio, whom I met for the first time many years ago and in which haunts every time the same enthusiasm that lights up the eyes and words fail to keep up with ideas.

This latest book is a further confirmation of a thought that goes beyond the technicism and the choking of medical thought. Whatever its specialization and field of activity, a doctor is always a doctor and is primarily dedicated to the pursuit and maintenance of the health of his patient.

Once again our paths meet and is exciting perceive and see how, as applied empirically in the spa tradition, are today exciting confirmations in cellular biochemistry: as ormetic stimulus, pH modulation in matrix, cellular oxygenation and contrast to chronic tissue inflammation. May be incredible to see as what all this has a powerful ally in the correct use of the polydi-oxanone PDO threads (when well applied), the use of which is primarily aimed to the bio-stimulation.

Thanks Pier, for your commitment to disclose a modern medicine, without adjectives, a medicine of man and to man. Finally, thanks for your friendship

Nicola Angelo Fortunati

*General Manager Terme SPA and the IHC Group SpA
Health Director Terme Fonteverde and Grotta Giusti
Chairman of the Scientific Committee of Tuscany Spa*

THANKS

This book is dedicated to my father, I have ever in my heart, and to my friend and teacher professor Ivo Pitanguy.



Sincere thanks to all my friends:

Domenico Amuso (Modena)
Emanuele Bartoletti (Roma)
Fausto Bonsignori (Livorno)
Giovanni Botti (Salò)
Cesare Brandi (Siena)
Julio Ferreira (Buenos Aires)
Nicola Fortunati (Montecatini)
Monica Germani (Roma)
Massimo Jannaccone (Avellino)
Eugenio Luigi Iorio (Salerno)
Theresa Jang (Hong Kong)
Mohammad T. Jaberansari (Budapest)
Cinzia Leonardi (Palermo)
Federica Lerro (Roma)
Zhongxue Lin (Seoul)
Francesco Malatesta (Montevarchi)
Giuseppe Migliorini (Arezzo)
Mauro Mario Mariani (Ascoli)
Alberto Massirone (Milano)
Paolo Mezzana (Roma)
Silvia Migliaccio (Roma)
Giuseppe Nisi (Siena)
Zois Polizois (Atene)
Francesca Pozzi (Porretta terme)
Maurizio Priori (Viareggio)
Giuseppe Rampino (Firenze)
Pier Luigi Rossi (Arezzo)
Wolfgang Redka Swoboda (Marktobersdorf)
Alessandra Scilletta (Catania)
Nikolay Serdev (Sofia)
Stefano Tenti (Arezzo)
Corrado Tavelli (Sondrio)
Fulvio Tomaselli (Roma)
Roberto Tullii (Sao Paulo)
Gabriele Vestrini (Firenze)
Maurizio Ceccarelli (Roma)
Pier Guido Ciabatti (Arezzo)
Carlo D'Aniello (Siena)
Victor Garcia (Barcellona)
Mitchell Goldmann (New York)
Torello Lotti (Firenze)
Dov Klein (Tel Aviv)
Romulo Mene (Rio de Janeiro)
Niccolò Scuderi (Roma)
Maurizio Valeriani (Roma)

and anesthesiologists

Simona Alpini
Marco Bartolucci
Pietro De Gregori
Sara Marsupini
Benedetta Valli
Carlo Viviani

and physiotherapists

Sabrina Frappi (Roma)
Serena Leonardi (Arezzo)
Silvia Vannuccini (Arezzo)

and secretaries

Pamela Corazzari (Arezzo)
Silvia Goti (Arezzo)
Mara Indrizzi (Roma)

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FILL TRACTION in PDO

This volume contains the description of our protocols using PDO microthreads.

1) Fill/Traction

Rejuvenation of the face with PDO suspension threads and fillers

2) PDO/Soft Lift

Reshaping the face with PDO threads and small incisions

3) PDO/Mini-Lift

Reshaping the face with PDO threads and vertical lift

4) Fill/Stim

Tissue biostimulation with regenerative medicine and PDO microthreads

5) Fill/Stem

Tissue restructuring with regenerative medicine and PDO microthreads

6) Fill/Therap

Medical therapy with PDO microthreads

7) Thermal/Fill

Thermal treatments and PDO microthreads

INTRODUCTION

After lengthy experimentation and many studies carried out in America, in 2002 esthetic surgery saw the arrival of a "new era" due to a revolutionary strategy which was defined "Contour Threads Liff™" and used unidirectional barbed surgical sutures, called "suspension threads".

We have had a very honor to being considered as opinion leaders in our activity about threads, in the same time our office was considered Centre of Excellence for training. Our city, Arezzo, since 2002 has hosted many colleagues from all over the world who have taken advantage of our courses also to visit our history and our beautiful countries along with the beauty of Tuscany. The new strategy was widespread, at the beginning threads were not-absorbable in "polypropylene" (Prolene™), white and absolutely inert for tissues, but soon began experiences by absorbable threads, barbed or not barbed, called "support threads, and not suspension threads"



Vasari Square, hystorical old town of Arezzo

In the beginning these threads were white non-absorbable polypropylene (Prolene™) and absolutely inert for tissue, but quite soon experiences with absorbable, barbed or unbarbed threads called "lifting threads" began.

These new absorbable threads show typical capacities including "tissue biostimulation".

My personal experience in this matter, built up over more than fifteen years with significant numbers whether in medical-surgical corrective treatment of various esthetic pathologies or with scientific exchanges and training courses in many countries as an International Opinion Leader has allowed me to observe the problem from different aspects, observing good and not so good results, identifying the strategy on different occasions of the philosophy of mini-invasiveness and noting in the meantime the absence of side effects and serious complications.

Today this strategy has gone international and the five characteristics that have most convinced the scientific world are in particular as follows:

1. the strong capacity for recovery and spontaneous restructuring of the tissue after the new spatial positioning.
2. the possibility to improve the results along the way.
3. the possibility of turning back with relative ease.
4. the threads' capacity to stimulate new tissue activity.
5. the total absence of serious side effects or complications.

Tissue relaxation and excess skin are an expression of the passing of time; slowing down these processes means to diminish the speed of aging and improve the outer appearance.

All of what is called mini-invasive surgery is aimed at solving problems without surgery, reducing trauma and complications. It is a philosophy that is quite useful also in the treatment of various esthetic flaws and signs of aging, but whatever solution is adopted it is always necessary to plan a precise path which must begin with a careful examination of the patient and a precise diagnosis in order to define the best strategy.

In this sector we adopt the methods that call for the use of suspension and lifting threads used to reposition the tissues and to aid their physiological restructuring while a new philosophy with the use of PDO threads has been born.

This volume aims to open a window on the understanding of these new medical devices to allow their better utilization.