

IMPLANTOPROSTHESIS

for Who, How and When

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PRESENTATION

Implant rehabilitation has become a standard, quite widespread procedure in dentistry. This implant boom is all the more surprising for someone like me who is advanced enough in years to remember the primeval period when handcrafted, rather rudimentary metallic devices were what was available, in Italy, too.

Implant placement is not an end unto itself. What the patient requests in substitution of his missing teeth is a prosthesis that can integrate them both functionally and esthetically. Application of a prosthesis, which can vary greatly depending on all the different individual conditions, completely obeys the precepts of traditional prosthetics, even in the case of implant support.

A prosthesis supported by intraosseous implants is different from a traditional prosthesis for another characteristic, too: the relationship between implant and bone is not, in fact, an even minimally articulated one, as is the relationship between the alveolus and root of the natural tooth. The direct contact between the metal and bone is rigid, ankylosed. There is no micro-yielding of the periodontal ligament nor any positional mini-adaptations allowed by the handling of the alveolar bone and the radicular cement. Because of this there is absolute need to respect the prosthetic procedures in order to have a harmonious restoration of the occlusion that is subject to significant functional stress, not only axial but also transversal and torsional.

This interdependence between the two designs is the *raison d'être* of this work, which is the condensation of a strongly consolidated activity, carried out under the guide of Prof. Preti together with his two precious collaborators Profs. Bassi and Schierano. We should also mention the authoritative contributions by several student-colleagues who participated in the productive research activity and clinical application that have received so much recognition and awards, especially internationally.

To properly complete this exposition of the specific problems of dental prosthetic rehabilitation, a chapter has been dedicated to Periodontology and therefore entrusted to Prof. Aimetti and his collaborators. The periodontist's participation with the implant team is important, as we can easily imagine, for correct maintenance of the prosthetic implant over time. The rules of hygiene are in fact essential, particularly at the neck of the teeth where the barrier to the septic environment of the oral cavity is given by the juxtaposition of the gums to the metal. Longevity of most implants, as well as experimental findings (the referred

statistics, especially international ones, have success rates we could define as overwhelming) have disproved worries about this being a possible entry way for infection. Moreover, the periodontist's participation, as well as that of an endodontist, starts from the very beginning with the planning of the intervention, when deciding whether the compromised teeth can be saved or not, when they may still be responsive to treatment.

The rich array of images and photographic documentation that completes and illustrates the text testifies to the great experience of the Authors, who have been able so effectively and descriptively to condense the knowledge collected and developed in thirty years of prolific clinical and research activity.

Remo Modica

Professor Emeritus, University of Turin, Italy

PREFACE

If we take a look at publications on the subject of implants, we can't help noticing how vast and rich a field it is. This is one of the effects of the "dental cultural revolution" fed by the recognized validity of osseointegration by the international scientific community.

As happens with all significant innovations, this starts off quietly. Who can still remember that to obtain authorization for the use of new methods it was necessary to present a "team" consisting of a surgeon, prosthodontist, radiologist, dental technician and psychologist? And that the only treatment, validated by a long course of basic research, experimental application on animals and clinical application on man, was inserting implants into the interforaminal area of the toothless mandible? The brilliant solution to a problem that has anguished generations of patients, dentists and surgeons was only reached through meticulous scientific rigor.

In a brief time the barriers of caution have been overrun. Is that good? Is it bad? A little of both.

The bad, which has involved many unknowing patients, is emphasized by Professor Per-Ingvar Brånemark himself, who in a famous editorial¹ does not hesitate to use strong words: "*Today, perhaps, what we need most is to clean out the dirty stables of dental implantology*".

And the good? It is significant. Today, thanks to basic and clinical research requiring considerable commitment of human and economic resources, most intra and extra-oral mutilations can benefit from implantology. New journals arise, reserved for the publication of numerous specific studies and hand in hand, new publications, as we have already mentioned.

In this perspective, why write the nth book of the subject of implants? Our answer lies in the following considerations.

A closer examination of the present editorial offerings tells us that these are admirable works, as far as both images and contents are concerned. However, we often find lacking a

¹ Looking back for Per-Ingvar Brånemark, *The International Journal of*

holistic vision of the patient, and references the basic principles of prostheses are taken for granted. These are exactly the goals that we are proposing to answer, supported by a critical and exhaustive review of the literature.

The second consideration is we believe that after so many years we have matured an experience that allows us to assemble and divulge all the aspects that may not be new but are scattered in so many directions and are indispensable for the success of this treatment, emphasizing their importance.

The first team is assembled in Italy at the beginning of the 80s, around the charismatic figure of Professor Remo Modica. I was the prosthodontics of that team.

Consulting with my guide, I traced the course of this work. I have involved as key figures my two best students of the ones who have not left the hearth to teach in other universities and who over the years have dealt with dental implantology: Francesco Bassi and Gianmario Schierano, today both excellent teachers, clinicians and researchers on the international scene.

I very strongly wanted the participation of the professor of periodontology in our School and his collaborators: Mario Aimetti. This is because I believe that the periodontologist and prosthodontist are complementary and indispensable for guaranteeing a sustainable and long-lasting treatment, even for patients in a weak economic situation.

Giulio Preti

Honorary Professor, University of Turin

GIULIO PRETI

Emeritus Professor of the University of Turin.

From 1987 to 2006 he was the Chair of Prosthodontics at the Dental School. He is a member of the Academy of Medicine of Turin.

He has written text books in Italian, English and Spanish, together with his students.

He has held lectures upon invitation in Europe, the United States, Canada, China, Japan, Russia and the Middle East.

He was bestowed the title of Knight of the Grand Cross by the President of the Republic.

He was by featured in the "International Journal of Prosthodontics".

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Francesco Bassi graduated in Medicine in 1982 and specialized in Dentistry in 1988. He is now Full Professor at the University of Turin, Dept. of Surgical Sciences, CIR Dental School, Prosthodontic Section.

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 He is author of about 100 papers, 41 of which on international journals, on prosthodontics, oral implants, mandibular physiology. He is joint author of books in Spanish, English and Italian.

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