

Content

1. Content	P.	1
2. Preface	P.	3
3. Foreword	P.	4
4. Introduction	P.	5
5. Comments	P.	7
6. What are we doing differently?	P.	11
7. Cases		
7.1 1- 2 implants	P.	20
7.1.1 14 implant, 14/15 splinted crowns	P.	21
7.1.2 12-21 surgical crown lengthening, 22 implant placement, 12-22 2 splinted crowns	P.	26
7.1.3 11 preparation with surgical crown lengthening 21 implant, 11/21 splinted crown	P.	31
7.1.4 31, 41 extraction, gap narrowing with orthodontic plate 1 implant, augmentation, crown	P.	36
7.1.5 24 immediate implant placement, zirconium dioxide crown	P.	42
7.1.6 24 immediate implant placement, axial change of direction, crown	P.	47
7.1.7 31 cystectomy, implant placement, crown	P.	53
7.1.8 11 extraction with Benex, immediate implant placement, crown	P.	56
7.1.9 21 immediate implant placement, Prep-Cap, crown	P.	63
7.1.10 15 immediate implant placement, Prep-Cap, crown	P.	68
7.1.11 25 Immediate implant placement, zirconium dioxide crown	P.	73
7.1.12 31, 41 immediate implant placement, Prep-Caps, bridge	P.	77
7.1.13 36, 2 implants, zirconium dioxide crown	P.	81
7.1.14 11, 21 immediate implant placement, Prep-Caps, splinted crown	P.	85
7.2 3- 4 implants	P.	90
7.2.1 35, 36, 3 Implants, paranervial implant placement, splinted crown	P.	91
7.2.2 35, 36 implant placement, splinted crown	P.	96
7.2.3 44-47 immediate implant placement, plastic caps, splinted crown	P.	100
7.2.4 35, 36, 37 implant placement, splinted crown	P.	104
7.2.5 24-26 4 implants, splinted crown	P.	108
7.2.6 24-26 4 implants, zirconium dioxide splinted crown	P.	112
7.2.7 14,16,17 4 implants, laboratory made temporary, 14-17 splinted crown	P.	116
7.2.8 34, 36,37 implant placement, splinted crown	P.	120
7.2.9 45-47 implant placement, augmentation, splinted crown	P.	124
7.2.10 13 extraction with Benex, 13-16 implants with splinted crown	P.	128

7.3	5- 8 implants	P.	133
7.3.1	35-38 5 implants, zirconium dioxide splinted crown	P.	134
7.3.2	35-37 5 implants with early loading	P.	137
7.3.3	14-17 implants, tooth preparation, zirconium dioxide splinted crown	P.	141
7.3.4	24.-27 implant placement, 26 immediate implant placement , augmentation, 23-27 splinted crown	P.	146
7.3.5	14-18 implant placement, 13 tooth preparation, 13-18 splinted crown	P.	150
7.3.6	35-37, 44-46 6 implants, plastic caps, 2 splinted crowns	P.	154
7.3.7	36, 37 splinted crown, 44-47 splinted crown	P.	160
7.3.8	34-37, 43-46 implants, paranasal implant placement, 2 zirconium dioxide splinted crowns	P.	164
7.4	9 and more implants	P.	170
7.4.1	11 implants (upper jaw, lower jaw), 48 osteotomy, augmentation, fracture of an implant, 2 splinted crowns	P.	171
7.4.2	11 upper jaw implants placed under general anaesthesia, 17-27 3 splinted crowns	P.	179
7.4.3	11 upper jaw implants, augmentation. 18-28 3 zirconium dioxide splinted crowns	P.	186
7.4.4	12 lower jaw implants, 36 additional implant placement, bridge	P.	194
7.4.5	8 x extraction, 15 lower jaw implants, 43 explantation 33-37/32-47 zirconium dioxide bridges	P.	201
7.4.6	38-48 16 implants, 3 zirconium dioxide splinted crowns	P.	206
7.5	Overdentures	P.	212
7.5.1	6 lower jaw implants with direct matrix integration	P.	213
7.5.2	43-33 6 tulip head implants with early loading	P.	216
7.5.3	6 lower jaw implants with direct matrix integration	P.	221
7.5.4	6 lower jaw implants with direct matrix integration	P.	225
7.5.5	6 lower jaw implants with direct matrix integration 43 immediate implant placement	P.	229
7.5.6	Upper jaw implants, direct matrix integration	P.	233
7.5.7	5 x extraction, 8 upper jaw implants, augmentation, direct curing of matrices into denture resin	P.	236
7.5.8	10 upper jaw implants, augmentation, direct matrix integration ball head shortening	P.	241
7.5.9	6 x upper jaw extraction, 15-25 implants, 15 explanted, palatal free prosthesis after osseointegration	P.	246
7.5.10	10 upper jaw implants, 10 matrices directly cured into denture resin	P.	251
7.5.11	15-25 10 tulip head implants with early loading	P.	255
7.5.12	10 upper jaw implants for a palatal-free prosthesis	P.	260
	8. Acknowledgement	P.	266
	9. Additional literature	P.	267
	10. Vitae	P.	270

Preface

Frank Schrader is a gifted dentist, a great colleague, who really deserves it to be called "colleague". Furthermore, he is my friend too! When he asked me to write this preface for the book, at first I wasn't entirely sure what I should actually write, after all it is my first preface for a book! Should I write that the Champions systems has gained an immense popularity in our online forum also thanks to his articles? Should I write that we have managed to stand up to the "big ones" in an effective manner? Should I write that in the meantime the other systems and their self-appointed "experts" use the same operating protocols and prosthetics strategies which we have used for almost 16 years now? Should I write that we as Champions users are able to offer our patients in our dental offices much more and finally can also implement it thanks to our excellent cost-effectiveness, since "affordability" with optimum quality often enough determines our patients' choice of dental prosthesis?

No, Frank has literally absorbed the entire Champions philosophy, further developed it and wonderfully implemented it in the patients' interest in his everyday practice. Not only is Frank an extraordinarily good surgeon, but also an equally excellent prosthodontist. This is surely just as important! Certainly, in Germany someone who is successful will not only win friends but also attract some envy. For that reason, also a strong human character is required.

Frank is someone, you can trust a 100% as colleague, friend and patient! I for one would be one of his patients, if I ever needed a "Champion". To my mind, Frank Schrader has been a real "champion" for a long time! He doesn't even need the title of professor to make himself understood by his patients -also in "their language"- and to put his enormous expertise into practice working with them- often enough in the field of immediate restoration/loading.

Anyhow, I wish the reader great pleasure studying his first book...

Sincerely yours, Dr. Armin Nedjat



October 2011, Flörsheim

Dentist
Implantology Specialist
ICOI Diplomate
CEO Champions- Implants GmbH



Foreword

Around 60 years ago the US American Leonhard I. LINKOW invented his "leaf implant". What was celebrated as a pioneering work in the field of oral implantology at that time, today can only be found under the section "physical injury" in the forensic part of legal magazines.

Definitely, Linkow was a pioneer in his commitment to "fixed teeth" and thus, his place in the upper echelons of implantology is justified and deserved.

Developments do not stand still. The once hailed design rapidly became less important. Today, the focus in research is on the anatomical shape of the dental root. Scientists and practitioners generally agree on the design.

Other topics are being discussed instead: immediate restoration of implants, implant placement directly after extraction, immediate loading, one-piece, two-piece implants and so on.

Topics that are and should be of burning interest to dentists, implantologists and oral surgeons, after all it is about the practical use in patients. Patients who demand the best value for their money have highest demands for the money and are no (longer) willing to endure hours-long painful treatment sessions and intervals for years on end.

It was only a question of time for the "CHAMPIONS®" of Armin NEDJAT from Flonheim to cause a stir in the implantology scene in Germany. However, *one* brilliant mind is not enough. Equally important are, many brilliant practitioners who are able to understand these ideas and concepts, take them up and implement the stirring visions for the patients as well as for the colleagues in the everyday practice.

Today, one of these brilliant practitioners and currently one of the most prominent users of CHAMPIONS® implants in Germany is the dentist and implantologist Frank SCHRADER from Zerbst in Germany.

In his own implant education centre, he places more than 700 implants per year. In this centre, he provides surgical and prosthetic training to dentists. To colleagues who have recognised the tide is turning. He shares his knowledge enthusiastically and vividly- without any reservations of getting in contact with the universities' state of the art.

Frank Schrader particularly focuses his activities on fields such as "immediate restoration" and "immediate implant placement- immediate loading".

The amount of his national and international publications is constantly growing.

Therefore, it is only a logical consequence to summarise the large number of interesting and ambitious documents of his treatments in book form. For the colleagues who know Frank the book will be a reliable guide in the everyday practice. That's why I am happy that he decided to publish his complex wealth of experience and to share it with us in this form.

For colleagues, who hesitate to deal with this matter, it represents an invitation to a discussion.

Only through critical discussion creativity can arise!

I wish Frank's book a lot of success- it will find its audience".



Dr. Ulrich Brause
December, 2011, Pottenstein, Germany



Introduction

When I started working in the field of dental implantology in 1999, the world was still intact in Germany. All pulled together. The goal was the improvement of the overall performance in the field of implantology.

The implantologists and the prosthodontist created techniques in order to improve the osseointegration and the "red-white-aesthetic". Apart from innovative mesio-structures the industry also designed new implant structures and improved implant surfaces. The laboratories integrated new materials and methods in dental work.

And that was a good thing.

Although the big secrets in the field of implantology had been lifted within the following years, the industry developed and still develops new implant types, abutments, connection elements, prosthetic elements and a vast set of equipment. Therefore, those who work in the field of implantology can no longer find in many catalogues what they really need without experts or a helpline.

The industry wants us to believe that a new implant set every year is indispensable including all instruments, DVT or dental GPS systems.

For that reason in the 2nd half of the last decade implantologists - unnoticed by many- divided into two groups.

The first group believes in all new "inventions" and positions itself between their own beliefs and the available budget.

I belong to the second group. To those, who challenge the benefit of every measure with scientific facts for implant success. The point is not to reject new things in general. It is necessary to find out if these actions are reasonable.

We try to reduce the vast amount of available information to the essentials and make use of them. For example which aspects are important for a successful osseointegration? There are primarily two factors:

1. Primary stability of the inserted titanium implant
2. to prevent movement of the implant during the healing period

The supporters of the first group are going to argue now:

But what is with all the many other factors such as immediate implant placement, immediate restoration or loading, inflammations, peri-implantitis, hygienic potential, general diseases and the like?

Based on the 2 quoted "strong" factors for the osseointegration I have looked for years to find possibilities to prevent these problems.

The biggest difficulty was to question the traditional implantology method (KIV).

I still remember it exactly. When I read his first studies, articles and images about minimally invasive implantology methods 4-5 years ago, it made my hair stand on end to think about inserting "blind" into the bone. And the notion to restore these one-piece implants *immediately* was a case of extreme madness to my mind.

I did not think it could be possible that I had laid flaps with difficulty, performed internal and external sinus lifts, bone block graftings and operated distraction osteogenesis, while these MIMI®-tologists simply inserted the implant through the finished hole after some minimally invasive pre-drillings.

I thought about these concepts for several months, and then I did it!

I pursued these "mad assumptions". For Christmas I bought myself a starter set of Champions® implants with a drill and tried it. I tested the concept using chipboard to simulate the maxilla and a harder solid pine board for the mandible. The method is similar to working with wood screws, a small pilot hole in the wood followed by an expanding wood screw. Taken to the mouth, a small pilot hole, expanders/condensors in the bone and screwing in the implant. It was similar to working with wood screws. So I asked myself why this technique should not also work in bones? The mechanical procedures are similar. And the success was astounding. Everything was great.

Following my initial success with the concept and the system, I began to think I could place as much as 50% of all my implants using these techniques. To my surprise, I was able to increase the percentage even higher as daily use of the system helped me overcome the challenges of the method and overcome the conventional methods I knew before.

This method is predominately minimally invasive and 95% of the cases we do are one piece implants without grafting or augmentation. The remaining cases can be done with the two piece implants and some form of augmentation or grafting.

What this means for the patient is: *always* immediate loading and immediate restoration.

The most important advantages of the minimally invasive method of the (MIMI) implantation are:

1. almost painless and almost without swelling
2. no suction-pump effect (at the implant-abutment transition)
3. as a result no bone loss
4. significantly faster restoration
5. cost effective

At present, many deride, ignore or condemn this method. In my opinion, the future will show the following: An implantologist, who does not throw light on these methods is guilty of an offence just like a dentist who does not throw light on implants. Regardless of whether he applies this method or not.

This book is not a schoolbook with complete theoretical explanations.

I am a practitioner. No statistician. Neither am I representing the university. It is in my interest to reveal the fantastic opportunities of this method. This book should guide all curious and interested people to reflect and perhaps rethink or even make changes.

Nearly all of the images were taken with our intraoral cameras. This camera can photograph both x-ray and intra oral images. It is designed for sharp intraoral views which you will see in this book. Even though there are some quality limitations, I have for the "integral experience" deliberately included some blurred images in the documentation of some cases. I hope you will understand.

It would be a pleasure for me if you can send me your opinions, suggestions, proposals for improvement to my email address: f.schrader@feste-zähne-an-1-tag.de



Frank Schrader

Comments

1. Abbreviations

KISS	Keep It Safe & Simple
MIMI	Minimally Invasive Method of Implantology
PC	Prep-Cap
PT	Periotest

2. Implants

all implants are the German CHAMPIONS® - IMPLANTS - GMBH

3. Treatment periods

the period between the placement of the implant and the fabrication of the dental prosthesis and are well-elaborated

4. Cementation

- a) all temporaries and fixed definitive dental prostheses are cemented with Havard.
- b) all Pre-Caps are cemented with commercially available Glass Ionomer Base cement.

5. Impressions

- a) Impregum impression material was used for all prepared and unprepared Champions® implants
- b) for impressions of natural teeth and Champions® implants with restored prepcaps, we used the sandwich technique with a PVS material
- c) Impregum impression material was used for combination cases

6. Prep-Caps

Pre-Caps are available in different materials (titanium, zirconium, WIN), shapes and angles. They will be cemented and have the following functions:

- Widening of the clinical crown
- Simplify the cast creation
- Aesthetic improvement of implants
- Compensation of abutment and insertion divergences
- Exact transfer of implant preparation from mouth to laboratory
- Improvement of the peri-implant soft-tissue situation after implant placement

7. Periotest® (PT)

This measuring device is used for the assessment of the osseointegration of dental implants. It shows the damping characteristics and by doing so indirectly the implant stability from -8 up to +50.

PT < 0	negative values are generally considered as good
PT 0 up to +9	clinical tests are required; e.g. PT values in the lower jaw are principally lower than those in the upper jaw
PT above 10	suspect and alarming

8. Intraoral camera- I.C. Lercher

The intra oral cameras we generally use to record implant placement are tried, tested and used for these reasons:

- a) forensic security
- b) detailed monitoring in normal and macro function
- c) manual operation without foot switch

9. Matrices

MMT (metal matrices for tulip head implants)

- a) available in 3 different pull-off forces (blue, red, black rubber rings)
- b) due to the rubber they have a very good buffered locking
- c) due to their location below the ball a compensation for divergences is not possible

Preci-Clix

- a) available in 3 different pull-off forces (white, yellow, red plastic caps)
 - b) thanks to this plastic the retention is stronger
- c) due to their location on the ball a compensation for divergences is possible
- d) in a case of limited space the plastic caps can also be cured into the denture resin without metal sleeves

Matrix integration

- a) it is preferential to integrate the matrices directly into the existing prosthesis on the day of surgery and implant placement
- b) if the case is to be done with a new prosthetic device, our laboratory integrates the matrices into the prosthetics before final delivery

10. The 3rd level

All cross-sectional images are taken by a non-linear spiral computed tomography

11. Up to date

My discontent concerning old, obsolete presentations in conventional books has prompted me to present mainly relevant cases.

However, I also added some older cases in order to present the practicability of our proceeding. By this means, the X-ray images allow a documentation of a long-term success of these cases.

12. Additional implant placements

"Fixed teeth in one day" mean that you only have to place the implant "once"!

If possible, we always try to ensure that additional implants are not required at a later date. For this reason we insert 1 or more extra implants at the first visit. Because we cannot control osseointegration factors such as chewing behaviour, poor oral hygiene or patient behaviour we cannot as implantologist provide any guarantee against the loss of the dental implants. By placing extra implants, the loss of a single implant will not affect the overall success of the case.

For example: In the upper jaw with a removable dental prosthesis. We would place **8 + 2** extra implants.

The patient receives a total of 10 ball head implants. 2 of the 10 are charged only for the material costs. If 1 or 2 of the implants fail to integrate, a palatal free dental prosthesis can still be placed without the need for additional implants.

13. Implant diameter, implant minimum thickness and number of implants

In jaws with adequate and mature bone we use implants with a diameter of 3.5 mm in approximately 90% of the cases. In addition, we aim for a reproduction of the natural root arrangement. "Mother Earth" has a long preliminary phase of 100,000 years and there is a reason some teeth have more than one root. We mimic this natural anatomy by restoring molar teeth with 2 implants. This provides security for the static forces and guarantees anti-rotation protection.