Stefen Koubi

Laminate veneers

20 RECIPES FOR SMILE DESIGN

STYLE ITALIANO™ INDIRECT

QUINTESSENCE PUBLISHING

Foreword

As the pages of this book clearly show, today's restorative therapies allow achievements at an esthetic and functional level of perfection never before possible. In addition to the obvious virtuosity of the operator, it must be stressed at the outset that these truly prodigious results are due first and foremost to the culmination of the combined efforts of researchers, scientists, and technicians, who in recent decades have competed in creativity and ingenuity to imagine new generations of materials that are at the origin of a real revolution in the operating methodologies of restorative dentistry. We cannot introduce this book without mentioning these preliminaries, in which I had the privilege of participating as a clinician and teacher. This period of brilliance that I experienced has been an exciting scientific, clinical, and educational adventure, rich in controversy and twists and turns, and has led to the profound upheavals that shaped modern dentistry.

Describing the origins of this explosion first requires underlining the intuition of some particularly well-inspired predecessors, who in the 1960s discovered the very real possibilities of gluing on enamel. They are undoubtedly at the root of the groundbreaking idea that an adhesive approach was likely to solve the retention problems often encountered in clinical practice. Sensing a considerable challenge, the manufacturers had to trigger an unprecedented mobilization of their teams with the mission of developing reliable procedures for bonding to dental tissues, as soon as possible. However, if enamel adhesion protocols, which already greatly improved composite resin restorations, were quickly proposed, it took no less than 15 years to achieve the same result with dentin.

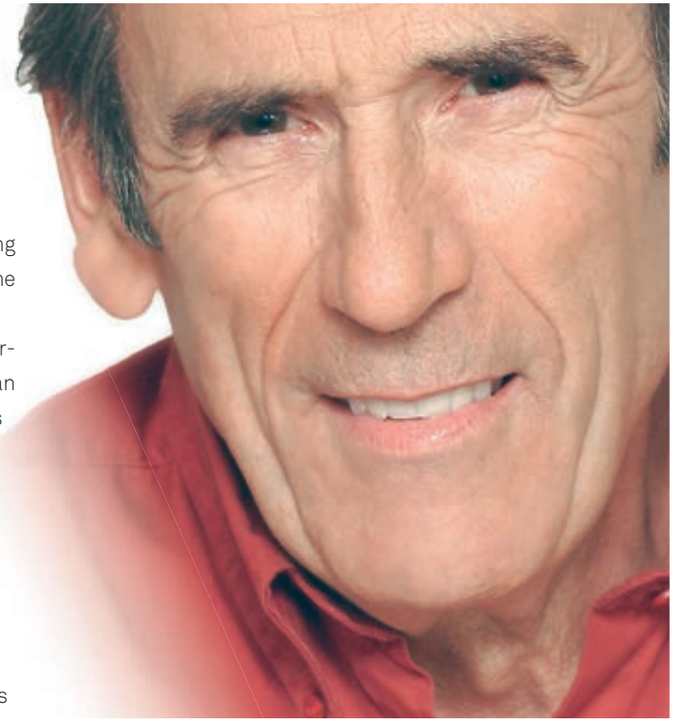
These major advances must be considered as crucial because they led to a new way of thinking about dental restorations in terms of adhesive techniques. Discussion, in all its forms, and especially at the center of debate, contributes to overturning classic dogmas in favor of new mechanical and biologic concepts, while the peripheral innovations it generates will, as this book demonstrates, lead to ever better clinical responses to the esthetic problems of our patients. Although clinicians, aware of the regrettable extent of damage caused by mechanical retention, admitted, after a short period of caution, to introducing into their practice glued assemblies allowing less invasive forms of preparation, the appearance of adhesive techniques profoundly shocked traditionalists. The acid etching of the dentin followed, without any protection, by an impregnation of polymers was then considered highly toxic and seemed to them intolerable prerequisites. These encouraging conclusions brought us firmly into the camp of modernity, with those who considered that preparations on living teeth followed by adhesive procedures should prevail and become the rule, the hybrid layer making it possible to ensure both bonding and biologic protection. For the record, in the face of this scientific evidence, as an academic I had to modify the content of my teachings over a few months or even make a difficult U-turn by explaining to my students, and also to sometimes stormy conference rooms, that the acid etching of dentin considered yesterday as highly aggressive had suddenly become a recommended prerequisite ... as well as the coating of unprotected cavity walls with polymers considered toxic ... and that it was even recommended to wet the cavity walls beforehand to improve the performance of the adhesive, whereas dryness had been taught as an absolute rule before any restoration attempt.

The evolution of adhesive techniques will influence the successive improvements in bonded veneers. Another beautiful story also begins with inspirational predecessor, who in the United States in the 1970s imagined laminate veneers in prefabricated methyl methacrylate fixed in the mouth with composite resin. These techniques met with dazzling success in the US, even prompting some dental practitioners to open specialized practices (with many advertisements) offering to improve their patients' smiles in a single session. Of course, the results were far from the aims of personalized natural harmony sought today; a general stereotypical look was the rule, to which were added inevitable overcontours and frequent detachments due to incompatibilities between the resins. A second generation of methacrylic veneers did well, offering elements manufactured in the laboratory on casts, improving the esthetics but without reducing the risk of detachment. In Europe, the "American smiles" were considered too flashy and artificial, and did not trigger the same enthusiasm as in the Atlantic. However, although hostile to methacrylates, the idea of a possible vestibular cosmetic covering was retained by many. Preferring to use composite resins, the most skillful clinicians tried, sometimes with real success, to apply the mordant by brush onto enamel, judiciously choosing shade increments; others who

considered these immediate techniques too random preferred to glue pellicular elements to the vestibular enamel, manufactured in the laboratory from impression preparations of controlled depth with clearly defined limits. Finally, some of them, using highly talented ceramists, proposed to glue thin feldspar ceramic veneers fired on platinum sheets, to which refractory linings would soon be preferred. The appearance of enamel-dentin adhesive systems in the 1990s represented a major event, which, by considerably reducing biologic risks, allowed forms of preparation that at first glance appear to be more adapted to the needs of mechanical resistance. For example, recommendations included incisive covering, burying the interdental boundaries in the direction of the palate, forms of veneer which, by increasing the thickness of the ceramic, gave the dental technician the freedom to construct shape, and layering possibilities conducive to a better esthetic definition.

But the best is yet to come ... as a true cult of appearance emerges and asserts itself, this translates into ever more pressing esthetic demands. The 21st century, with controlled adhesive and biologic perspectives, will see the emergence of new families of ceramics. With access to improved adhesives, they combine high mechanical reliability with excellent optical qualities capable of reproducing, thanks in part to the free transmission of light, the natural appearance. These remarkable materials, while marking the definitive disappearance of metal, promise considerable technologic and clinical advances, the evocation and detailed presentation of which are the subject of this book ... a book conceived and written by a great professional who will guide you through an exceptional clinical experience, using examples of increasing complexity, superbly illustrated, at the highest level of clinical practice.

To speak of Stefen Koubi's career path is to evoke the journey of a gifted man with an early and passionate vocation; an already charismatic, voluble, and enthusiastic student, he was quickly noticed for his success in the clinic, where he demonstrated assertive manual skills and was soon entrusted with difficult cases. Close to his teachers, he discovered a school in Marseille that was involved in the scientific and clinical debates that accompanied the advent of adhesive procedures, and was suggesting new methodologies more respectful to nature (soon described as "biomimetics"). The awareness of these promising ideas, combined with ambitions that were obviously esthetically oriented, with limits that he learned to respect, was undoubtedly the starting point for the passion that he has never lost. Three enriching years as a resident in Paris helped him gain maturity. Above all, he discovered the pleasure of teaching, with the enthusiasm of keen pupils, at a place where he was entrusted with final year students ... they still remember it! Some of the most gifted, at the end of their studies, enter the ranks and take refuge in peaceful professional activities; our hero, as ardent as ever, started a new career between Marseille and Paris, where he added to his private practice the roles of Assistant and later Senior Lecturer. It was logical that, both gifted and motivated, he gradually developed and, through publications to remarkable speeches, has become one of the best. In 2012 he created his own practical training company in



esthetics and since then, every year, he has led no less than six sessions, some in English, from 3 days to 1 week courses, practical work, and live demonstrations. Today, always enthusiastic, this tireless educator with perfectly mastered rhetoric has become a speaker sought and appreciated throughout the world, combining the high quality that he shares serenely at his practical continuing education courses and the rigorous conditions of a private practice, which one guesses is oriented towards complex treatments.

I wish you enjoyable reading
of this remarkable book.

Jean-Louis Brouillet

My Hall of Fame

Gilles Koubi
The creator

Jean-Louis Brouillet
Mentor

André-Jean Faucher
The perfectionist

Galip Gürel
The charisma

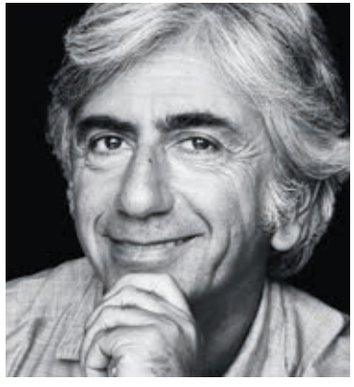
Gérald Ubassy
The scientific artist

Hilal Kuday
The diamond

Francesca Vailati
The brilliant

Patrice Margossian
Absolute rigour

Éric VanDooren
The visionary



Angelo Putignano
The professor

Walter Devoto
The ideas man

Nitzan Bichacho
Pure intelligence

Richard Massihi
The brainstormer

André Krief
The coach

Jean-Francois Lasserre
The artist

Gil Tirlet
Mr Bio

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Recipe 1
Systematization of the esthetic approach
Videos on pages 12, 15, 22, 23 et 26

Recipe 3
Laminate veneers: basic principles
Videos on pages 79, 85, 94, 95, 96, 98, 99,100, 101 et 105

Recipe 6
Malocclusion: proclined incisors
Videos on pages 176 et 181

Recipe 8
Black triangles and diastemas
Videos on page 232

Recipe 9
Laminate veneer for single dyschromia
Videos on page 263

Recipe 10
Laminate veneers for multiple dyschromia
Videos on page 282

Recipe 13
Laminate veneers and periodontal recessions
Videos on page 379

Recipe 14
Veneers and orthodontics
Videos on page 416

Recipe 15
Mixed restorations: veneer/crown
Videos on page 444

Recipe 16
Implant considerations
Videos on pages 469, 470, 474, 486 et 487

Recipe 17
Veneers and digital workflow
Videos on pages 512, 513, 520, 521, 522, 523,524, 525, 528 et 532

Recipe 18
Veneers and wear: “prep less” approach
Videos on pages 563, 572, 573, 575, 583, 591, 592 et 593

Recipe 19
Veneers and wear: “no prep” approach
Videos on pages 616, 619, 621, 622, 625, 626, 627, 632 et 633

Recipe 20
Extreme wear: “prep” approach
Videos on pages 650, 653, 655, 661, 661, 663, 665, 669, 670 et 674

Contents

Foreword: Stefen Koubi V
Foreword: Galip Gürel VI
Foreword: Jean-Louis Brouillet VIII
My Hall of Fame X
Interactive videos XII

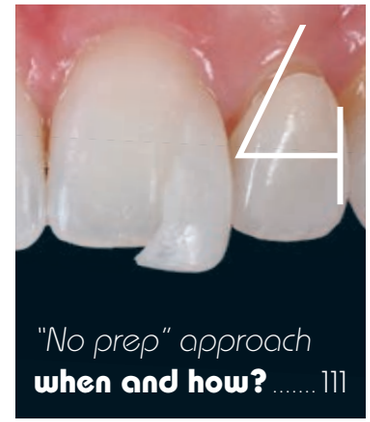
20 RECIPES FOR SMILE DESIGN

THE BASICS

1 Systematization **of the esthetic approach** 1

2 Ingredients **choosing the right ingot** 37

3 Laminate veneers **basic principles** 67



4 *"No prep" approach* **when and how?** 111

10 Laminate veneers **for multiple dyschromia** 271

16 Implant **considerations** 457

5 Malocclusion **retroclined incisors** 139

6 Malocclusion **proclined incisors** 159

7 Laminate veneers **design failure** 193

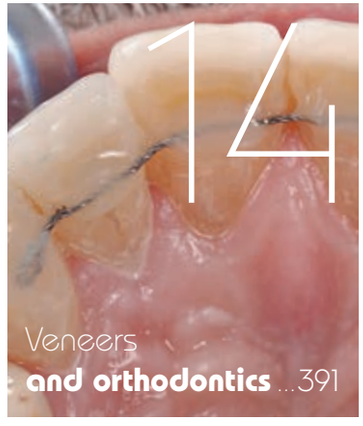
8 Black triangles **and diastemas** 219

9 Laminate veneer **for single dyschromia** 255

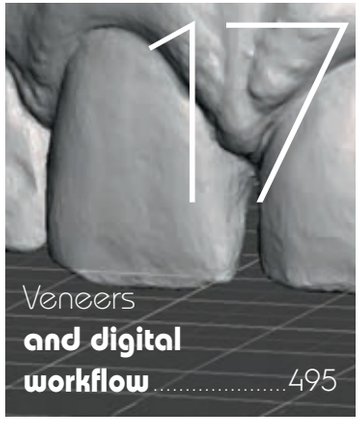
11 Extra-white **laminate veneers** 299

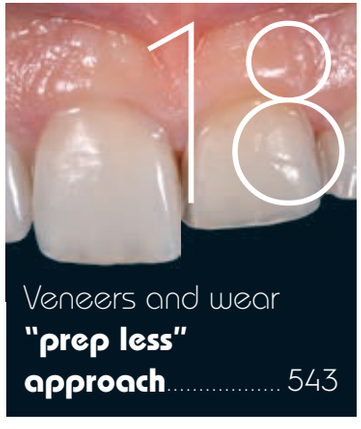
12 Congenitally missing **lateral incisors** 325

13 Laminate veneers **and periodontal recessions** 359


14 Veneers **and orthodontics** ... 391

15 Mixed restorations **veneer/crown** 425


17 Veneers **and digital workflow** 495


18 Veneers and wear **"prep less" approach** 543

19 Veneers and wear **"no prep" approach** 609

20 Extreme wear **"prep" approach** .. 639

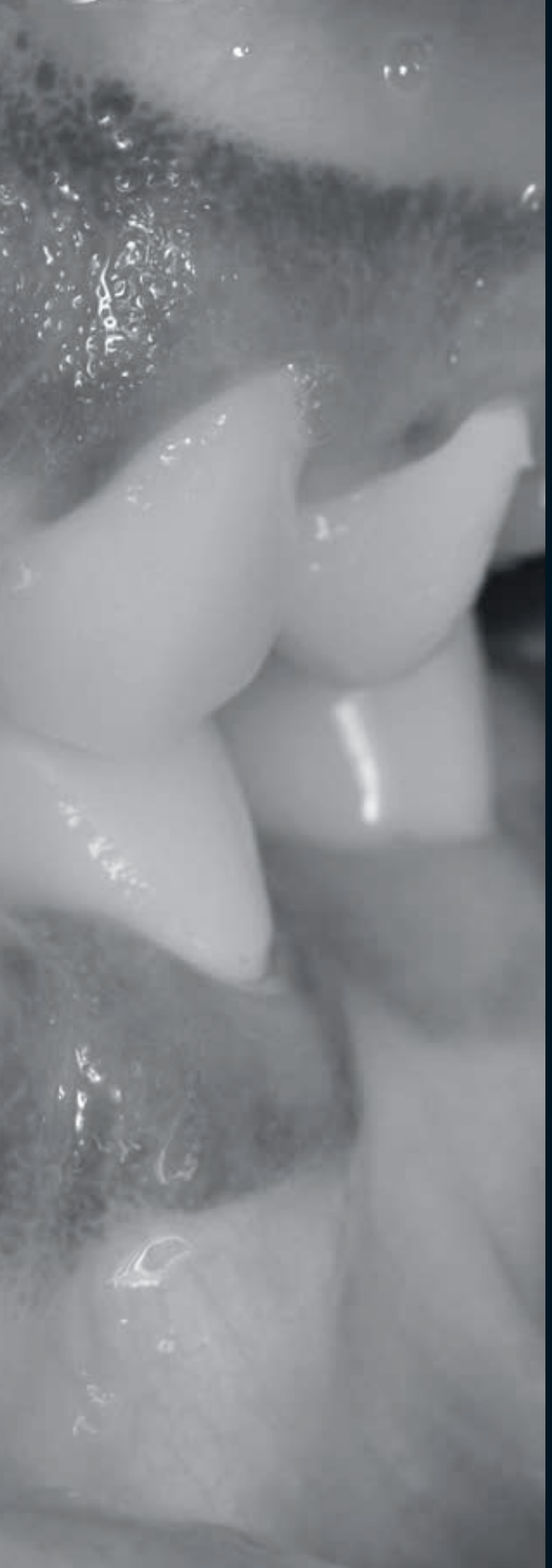
Further reading 679
L'institut de la facette 682

Interactive videos
This book contains augmented reality videos available for free from your smartphone or tablet.

1

Systematization **of the esthetic approach**

- Esthetic analysis
- Treatment planning
- Guided treatment steps



Introduction

The smile has become, in the last 20 years, of increasing concern to patients.
It conveys many positive values such as wellbeing, success, strength, and beauty.
Emphasis has therefore been placed on systematizing the esthetic approach in order to provide a clear framework for the practitioner during reconstruction of the smile. Dental esthetics is governed by well-established rules in which a great diversity can be expressed, offering what is commonly called a personalized smile.

The aim of the first recipe is to present a hierarchy within esthetics so that the clinician and laboratory technician can first analyze the clinical situation in relation to a given facial framework, and establish, in a second step, a project in harmony with these esthetic references.
Thus, the analysis of the face, the smile, the dental composition, and the gingiva will be successively developed in order to obtain a method for analysis and creation of our patients' smiles.

Step one
Observe

Backgrounds

- → 20 years old, with a genetic disorder
- → Two orthodontic treatments
- → Two maxillofacial surgeries
- → Presence of pediatric crowns and temporary crowns in the posterior areas

Smile

- → Forced smile, physiologic rest
- → Lips
- → Teeth

Face

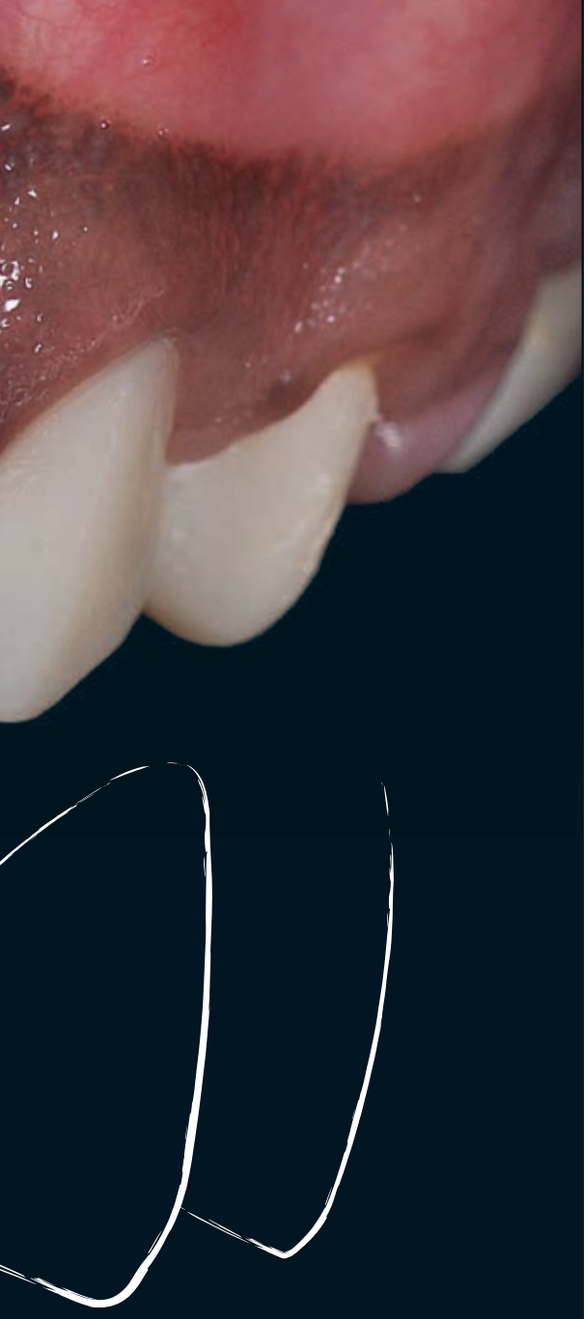
- → Harmony
- → Symmetry
- → Skin

Complaint

- → Wishes to smile

Initial situation

Ideal proportions



Step one
Analyze

Teeth
Position, tooth shape (microdontia) and structure (amelogenesis imperfecta), absence, discoloration.

Occlusion
Static (first and fourth quadrants inverted), dynamic (protrusion, lateral excursion).

Periodontium
Gingival margin alignment, vertical defects, horizontal defects (buccal concavity at the maxillary right canine).

First sketch the ideal dental proportions
regardless of the pink esthetics

Build the ideal white corridor

Poor design

Incorrect because it was established only from the pink esthetics (smile line identical to the initial situation).

Poor design

Incorrect because it was established only from the white esthetics (smile line too low and poor relation between the lips and teeth).

Ideal design

Created taking into account the pink and white esthetics.

Step one

Think like an architect

The key to success is to position the teeth according to the famous “golden ratio,” which corresponds to the proportions of the teeth that we want to improve. Well-proportioned teeth can only have a satisfactory esthetic impact if they are also well positioned. It is actually easier to find harmonious tooth proportions based on the golden ratio than to place the free edges in three-dimensional space.

> *It is essential to think like an architect before you act like a dentist.*

Step one

Record

Key elements for the development of the esthetic and functional treatment plan

1. Extra- and intraoral photographs

→ Extraoral frontal view perfectly centered to avoid any distortion

→ Extraoral close-up of the smile

→ Frontal view perfectly centered, in occlusion

→ Maxillary and mandibular occlusal views

Laminate veneers

20

RECIPES FOR SMILE DESIGN

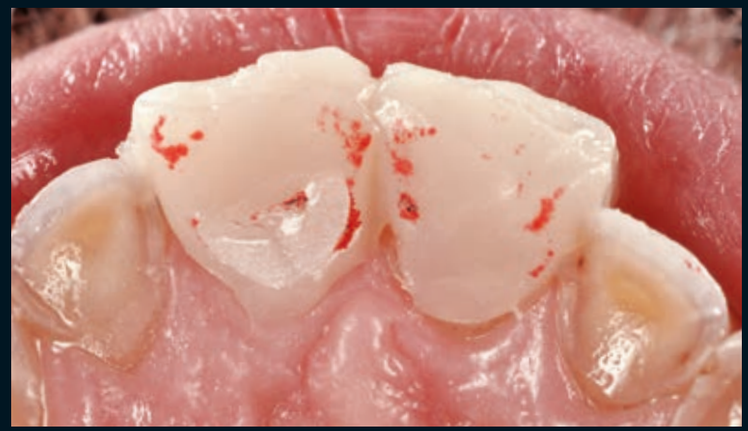
The realization of the project requires the creation of new free edges for the maxillary central incisors. These are performed directly in the mouth and validated by the patient and the clinician. In cases of increased vertical dimension of occlusion (VDO), the palatal aspects are reconstructed in the same way, in order to obtain new guidance surfaces, and the new occlusion is registered in centric relation (CR).

Esthetics

The free edges are extended using composite resin in order to validate the future proportions.

Function

The palatal aspects are rebuilt using composite resin in order to register the new VDO in CR.



Step one

Record

Key elements for the development of the esthetic and functional treatment plan

2. Esthetics and function

> *Try-in the new design of the central incisors to appreciate the consequences for the posterior region.*

3. Impressions

The situation modified directly in the mouth by the clinician is registered and plaster casts are made. This allows precise esthetic assessment (height and length) of the two central incisors, necessary for the wax-up.

3D-printed model.

Plaster cast.

QUINTESSENCE PUBLISHING
FRANCE

Quintessence International
62 boulevard de La Tour-Maubourg
75007 Paris - France
www.quintessence-international.fr

© Quintessence International 2020
ISBN : 978-2-36615-055-1

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Production and design: Quintessence International, France
Editor: Elizabeth Ducker
Printed in Croatia

Stefen Koubi

Laminate veneers

20 RECIPES FOR SMILE DESIGN

QUINTESSENCE PUBLISHING

Berlin, Barcelona, Chicago, Istanbul, London, Milan, Moscow, New Delhi,
Paris, Prague, São Paulo, Seoul, Singapore, Tokyo, Warsaw

Doctor Stefen Koubi graduated from the University of Marseille, France, in 1998.

He has held the position of Associate Professor in the Restorative Department of Marseille University since 2008 and received his PhD in 2011. He maintains a private practice in Marseille and in Paris. His main areas of interest are esthetic rehabilitation for cosmetic or functional reasons (worn dentition). He has been invited to many prestigious esthetic academies to lecture on simple ways to achieve high-quality esthetic dentistry. He is an invited professor in many esthetic postgraduate programs.

Dr Koubi received the Gold Molar title from the students of his university (best teacher of the year) in 2012, and the title of Best French Speaker the same year.

Since 2012 he has been a member of Style Italiano community in charge of indirect topics. He founded in 2013 L'Institut de la facette, a private training center focused on smile design for worn dentition and cosmetic rehabilitations.

He is the author or co-author of many scientific articles and case reports on esthetic dentistry.

Why a book?

A dental book is the result of a practitioner's history and clinical experience, his or her background, failures, and especially his or her view of dentistry.

Fifteen years in the service of restorative dentistry at the Faculty of Dentistry, Aix-Marseille University, has taught me scientific rigor and the principles of education.

Twenty years of in-office experience has given me insight into the feasibility of different techniques, taught me modesty in the face of the daily challenges of general practice, better communication with patients, an understanding of the economic challenges of private practice, and, above all, the development and testing of new treatment concepts.

Collaboration with the best dental technicians has given me a valuable laboratory ethos, and has allowed me to meet people (with a capital P) whose humility is equaled only by the immensity of their talent. I would like to express my gratitude to Wilfrid Pertot, who has been by my side since the beginning; to Gerald Ubassy, who gave me the opportunity to experience the heights of esthetics and sharpened my eye to the innumerable details that characterize a beautiful tooth; and finally to Hilal Kuday for the technologic leap he allowed me to make, for his artistic qualities and his unique artistic interpretation. Our collaboration has been invaluable, based on a rare exchange of ideas and shared passion. This book is YOUR book.

Travelling to many countries in the last 10 years has allowed me to meet exceptional practitioners who have become valuable friends today, to understand the different educational needs of the new generation of practitioners in all regions, to improve my knowledge by learning from others, and to synthesize my ideas in order to better share them.

Being a member of the largest online scientific community (www.styleitaliano.org) has given me not only a second family, but also the opportunity to understand the challenges and needs of general practice, or indeed any esthetic, simple, reproducible, and predictable dentistry. These four prerequisites represent the pillars of modern dentistry and can lead practitioners to a high-quality and viable outcome.

The son of a dentist and teacher, I have been immersed in the world of adhesive dentistry since I was a child, and this allowed me to meet my mentors (such as Jean-Louis Brouillet and André Faucher). They gave me a taste for a dentistry that was considered at that time to be avant-garde, as well as a certain idea of pedagogy and excellence. This book is a natural extension, and their legacy.

A special mention goes to Bernard Touati, who opened the way to esthetic dentistry by being a pioneer, and was the first to export his knowledge internationally.

As for my dear Gillou, this book is a modest recreation of all that you have taught me. To succeed to be successively a creator, a parent, a father, and a best friend is probably one of the most beautiful gifts that life has given me.

Being married to an understanding woman with a strong artistic flair from a different background has allowed me to continue to develop professionally and personally, without remorse or regret, which is fantastic. Thank you my Gabo for your unfailing support.

Having the chance to have two affectionate little girls (Gaya and Yara), curious about this particular profession and proud of their father, gives me strength and energy every day.

Finally, coming from a loving family, warm and cheerful, gave me a precious emotional foundation. These few words and lines will be so little compared to what you gave me. Thank you Vetine, Nana, Elie, and all your great tribe.

The book is the fusion and mixing of all these worlds, which has resulted in an atypical format and an original style. Indeed, its ambition is to offer the reader a unique experience of laminate veneers by offering 20 recipes that cover almost all clinical situations.

The first 17 recipes are dedicated to the theme of cosmetic dentistry, and the last three deal with the reconstruction of worn dentitions. The main idea is to propose a common thread around guided, predictable dentistry and the use of veneers as a versatile restoration tool. While the first three chapters lay the foundations for this esthetic and adhesive dentistry, later chapters focus on specific clinical issues.

In addition, this book has the benefit of augmented reality, as videos downloaded via the book app are revealed as the reader browses the pages.

I hope this book will be useful in your daily practice and that it gives you a taste of contemporary dentistry.

I wish you happy reading.

Stefen Koubi

Foreword

In the last decade, technology and innovations in the dental field have given dental professionals the opportunity to produce esthetic restorations that mimic nature. Therefore, the esthetic demands and expectations of patients have risen. Patients are more willing to have restorations that copy the form, color, surface texture, and function of healthy and esthetically pleasing natural teeth. This has led us to observe and imitate natural teeth in all their aspects, from esthetic design to functional, morphologic, and structural components.

Porcelain laminate veneers (PLVs) have been the most successful minimally invasive indirect prosthodontic application of esthetic dentistry in the last few decades. When designed and delivered properly, PLVs are not only the most sparkling, natural-looking manmade (and now digitally designed) form of esthetic dentistry, but they also help the dental practitioner to enhance function in the patient's mouth.

For the majority of practitioners, however, information on the vast subject of esthetic dentistry has changed dramatically, or was simply unavailable during their formal dental training. The many different choices of techniques and materials available may initially appear overwhelming. In reality, when properly organized, this body of knowledge is easily managed. This was the challenge for Dr Koubi in preparing this book: to create a definitive, all encompassing, single source of information presented in a clinically relevant, "user-friendly" manner. This book was written to help the esthetic dentist in treating unesthetic alignment, color, shape, or form of the teeth—in other words, enhancing the smile while enforcing function and occlusion.

Resolution of an esthetic dental problem requires the practitioner to determine a diagnosis, formulate a treatment plan, and select the appropriate instruments and materials. Treatment must then be performed in an orderly fashion with an understanding of proper clinical technique and specific material manipulations. The confident clinician approaches any esthetic dilemma in the above manner.

Dr Stephan Koubi, whom I have known personally for 20 years, is one of the leaders in this field. In this book, combining his scientific background as an academician with his clinical experience, he is sharing his knowledge together with all the clinical realities of PLVs, with all their pros and cons. Over the years, he been able to assess many new materials and techniques, and I have greatly valued his clinical judgment. This new book is a further step in sharing knowledge that has taken many years to accumulate and then refine into a critical reappraisal of many of our current practices. That is, I believe, what makes this book so valuable for every clinician, whether they work as part of a team or in a solo practice.

All the vital issues, like the treatment of single central tooth with veneers, tooth preparation techniques, material selection, tips for minimally invasive preparations, as well as prepless and no prep veneers, bonding procedures, and last

but not the least treatment of the worn dentition, have been extensively covered in this book. Simple, straightforward recipes are given for the different clinical conditions and their solutions.

In the same way that Dr Koubi uses the latest technology in the field of dentistry, advanced technologies are used in the publication of this book. Augmented reality through your mobile device allows you to watch the videos related to some of the pictures and procedures.

I hope that this book will provide dental practitioners with all the information needed to understand and implement up-to-date esthetic procedures, as part of their everyday practice. The text should also aid in developing the skills of critical observation, analysis, and decision-making before embarking on a program of treatment.

Readers will be most impressed with the overall organization of the text, the clarity and simplicity of each chapter, and the outstanding photography, which clearly demonstrates the clinical application of this material by Dr Koubi.

Nonetheless, my rationale for this foreword is not only my appreciation of the book, but also my respect for its author and his accomplishments. It is a credit to the author that he has found time in his extremely busy practice to record, organize, and present his work. In a short time, Dr Stefan Koubi, through his vision, has not only improved the perception of esthetic dentistry in France, but has advanced the art of dentistry in the global world of dentistry.

I wish you all a pleasant reading of this book.

Galip Gürel