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Esthetic Clinical Case Studies: Dilemmas and Solutions



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Preface

There are three aspects to learning: theoretical, procedural, and performance. Each one is necessary for learning a given task. The objective of this book is to concentrate on performance. Performance is doing – it is clinical practice. It is the part of the learning process that builds experience, through learning from mistakes and, most importantly, self-deprecation – with the view that improvement is infinite, never finite, no matter how good the performance. It is worth remembering that perfection is a journey, not a destination.

This book works on two levels. First, it can be used in conjunction with other textbooks, dealing with theoretical and procedural aspects, and second, it can be read as a standalone text to aid critical thinking and treatment planning, which are essential for performance. For this reason, references are omitted, and the reader should consult dental literature or Internet search engines for more information on the theory or technique that is under discussion.

An effective method for teaching performance is to use case studies depicting clinical challenges and demonstrating how dilemmas can be transformed into solutions. Therefore, this book is mainly pictorial, with sparse text. The text serves to guide the reader to salient items of the planning process or clinical practice. The premise of the book is to present a variety of anterior dental esthetic anomalies, and then propose options (which are not exhaustive) for solving each of these dilemmas. After discussing the “pros and cons” of each option, one is chosen to restore health, function, and esthetics.

For any given disorder, there is often more than one option for treatment, but the key element is to adopt a systematic, evidence-based approach to treatment planning (outlined in Chapter 1). The chapters in this book cover a wide range of prosthodontic modalities, including porcelain laminate veneers, full-coverage crowns, fixed partial dentures, and dental implants. The option chosen for treating a specific anomaly is neither right nor wrong, but is one method for achieving the desired outcome. It is hoped that presenting different options, and the reasons for pursuing a particular option, will stimulate discussion and help with the thought process during this crucial and vital stage of any therapy. No doubt some will agree with the chosen options, while others will beg to differ. If this is the case, the book will have accomplished its task.

The layout of the book is as follows. Chapter 1 describes the evidence-based treatment approach for methodical treatment planning. The remaining chapters each discuss a case study with one or more dental esthetic dilemmas. These chapters have an identical format.

- 1 Pre- and postoperative status
- 2 Dental history
- 3 Preoperative status
- 4 Treatment options
- 5 Scientific credence for treatment
- 6 Clinical erudition and feasibility
- 7 Patient needs and wants (and reasons for choosing a particular option)
- 8 Treatment sequence (detailing clinical and laboratory sequences for the chosen option)
- 9 Discussion.

Items 5, 6, and 7 form the evidence-based treatment planning approach discussed in Chapter 1.

Adopting this consistent format ensures uniformity in the treatment planning process, allowing the reader to apply these steps for their own patients. Although the cases shown are all related to anterior dental esthetics, this approach is useful for arriving at eventual solutions for all types of clinical dilemma.

The making of this book has been possible with the participation, and kind permission, of the featured patients. Many of the pictures depicting various clinical stages are beyond those necessary for treatment, and I am thankful to my patients for their endurance and for giving up their valuable time. Without this altruistic co-operation, the book would not have come to fruition. I am also thankful to Dr Alan Sidi for carrying out some of the surgical procedures, and to all the dental technicians who have produced stunning ceramics for the definitive restorations. In addition, my gratitude goes to the Quintessence “production machinery” for translating my thoughts into reality, and especially Mr Haase for accepting this project for publication.

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Treatment Options

- 1 Discard the Rochette bridges and provide a removable acrylic-resin partial denture (Fig 5-8).
- 2 One Rochette bridge or composite-resin fiber-reinforced fixed partial denture (FPD) with improved pontic esthetics (Fig 5-9).
- 3 Planned Le Forte fracture, followed by premaxilla retrusion to decrease the vast horizontal overjet, followed by prosthetic replacement of the central incisors by one of the other listed options (Fig 5-10).
- 4 Orthodontic treatment to distalize the mesially inclined roots of the lateral incisor, and convert the arch form to an oval shape, thereby creating space for placing two implant-supported crowns to replace the missing central incisors (Fig 5-11).
- 5 Four-unit FPD, using the two lateral incisors as abutments (Fig 5-12).

Scientific Credence for Treatment Options

The partial denture is the least invasive option but is predisposed to dislodgment, relining, and/or replacement. The orthognathic surgical option is obviously the most invasive and protracted, but it would achieve the objective of reducing the horizontal overjet. It would also be prophylactic by preventing undue trauma to the eventual prostheses replacing the missing central incisors. Orthodontic treatment is an alternative (possibly in conjunction with surgery) but would involve realignment of both arches, with permanent retention to prevent relapse. Both options 3 and 4 would potentially pave the way for implant-supported prostheses. The last option, an FPD, will be destructive, but offers better retention than a removable denture or a Rochette or fiber-reinforced bridge.

Clinical Erudition and Feasibility

The removable and fixed partial dentures are within the remit of the practitioner. However, experience and knowledge are required to sculpt the pontic sites to create an emergence profile that gives the pontics the appearance of emanating from the soft tissues – similar to natural teeth surrounded by a free gingival margin (FGM). Of course, employing a skilled ceramist is mandatory for creating life-like restorations.

For the remaining options (ie, surgery, orthodontics, and implants), specialist consultation or referral is advisable.

Patient Needs and Wants

The removable denture option was greeted with dismay, as was the thought of attempting another Rochette bridge. The latter choice was specifically dismissed based on the poor experience with the two previous similar prostheses.



Fig 5-8 Option 1: acrylic-resin removable partial denture (green).



Fig 5-9 Option 2: Rochette bridge (purple), with palatal wings.

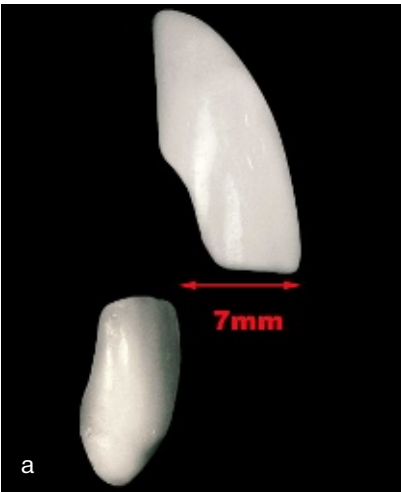


Fig 5-10a,b Option 3: Le Forte fracture followed by premaxilla retrusion to decrease the horizontal overjet.

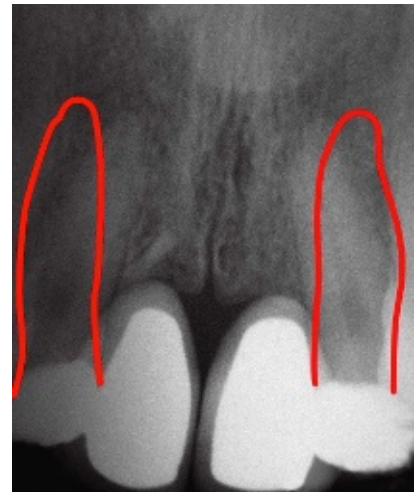


Fig 5-11 Option 4: orthodontic treatment to distalize the mesially inclined roots of the lateral incisors.



Fig 5-12 Option 5: four-unit fixed partial denture (blue), using the lateral incisors as abutments.