Case of the month
The Use of Matched Anatomical Healing and Preppable Abutments to Define Soft Tissue Contour Around Implants

Stefano Volpe, DDS¹ • Nyree Divitini² • Neil Meredith, BDS, MSc, PhD³

Abstract

Esthetics are increasingly becoming a hallmark for success for dental restorations. This article discusses use of matched anatomical healing and preppable abutments to define the soft tissue contour around dental implants. These abutments aid the clinician in delivering a more esthetic final restoration to the patient with harmonious gingival contours.

KEY WORDS: Dental implants, prosthetics, abutment, gingiva, esthetics

1. Private practice, Rome Italy.
2. Clinical Research Manager, Neoss Ltd, Harrogate, UK.
3. Director of Research, Neoss Ltd, Harrogate, UK and Professor of Prosthodontics, University of Queensland Dental School, Brisbane, Australia.

The Journal of Implant & Advanced Clinical Dentistry • 17
The soft tissue profile developed by the abutment between and implant fixture and crown has historically been a cylindrical design. Early osseointegrated implant supported prostheses were most commonly full arch frameworks with extensive use of acrylic to replace missing soft and hard tissues. So function rather than esthetics were the primary consideration.

However, the desire for excellent soft tissues esthetics mimicking the natural soft tissue contour of the gingival tissues has become highly sought after around implants in the last few years. A natural transition from the cylindrical implant abutment connection to the emergence profile of the crown at the gingival sulcus is highly desirable. This may be achieved by immediate replacement, soft and hard tissue grafting, or the use of customised healing abutments.

Custom healing abutments are commonly made at abutment connection or at implant placement following tooth extraction. They are often made by freehand sculpting of light cured composite or similar material around a prefabricated cylindrical temporary component. The advantage of this technique is that the gingival tissues can be formed in an individual contour specific to a single implant. This in itself carries a disadvantage in that the sculpted gingival tissue needs to be recorded with a custom impression coping. Such a procedure is also time consuming and requires skill in achieving a smooth well finished abutment. There is some current discussion about the use of resins as provisional abutment materials as they may be considered to help to maintain the gingival contour following extraction by achieving an element of fibrous attachment.

The disadvantages of a purely customised healing abutment technique can be eliminated by the use of prefabricated components. Neoss (Harrogate, UK) has produced a range of anatomical healing abutments manufactured from a combination of resins to ensure esthetics, ease of adjustment and bonding to crown and bridge resins, and a surface finish that provides optimal soft tissue interface. Unique in the Esthetic line system is the matched design for a range of permanent abutments which will precisely fit the soft tissue profile created by the healing abutment. This appears to offer a number of advantages over traditional methods. This case report describes the use of anatomical components in the replacement of an upper canine tooth.

Disclosure
Neil Mendel is Director of Research for Neoss.

Correspondence:
Dr. Stefano Volpe
e-mail: studiostefanovolpe@tiscali.it
**Figure 1:** Initial presentation with soft tissue deficiency.

**Figure 2:** Gingival augmentation and Neoss implant placement.

**Figure 3:** Closure of surgical site.
**Figure 4:** Four months healing. Note improved soft tissue profile.

**Figure 5:** Esthetilne abutment placement.

**Figure 6:** Provisional crown on Esthetilne abutment 2 weeks after placement.
Figure 7: Placement of modified Esthetiline prepable abutment 4 weeks after temporary abutment delivery.

Figure 8: Prepable abutment in situ.

Figure 9: Final restoration. Note well defined interproximal tissues.