Background
The ability to produce esthetically appealing results poses the greatest challenge to implant therapy today. Thus, after tooth loss or compromised site requires reconstructive surgery to correct the hard and soft tissue defects.

Several clinical approaches had been recommended to solve these problems in the past. What techniques and materials surgeons use are often determined by their own preconceptions. This case report describes treatment guidelines drawn on from evidence of implant dentistry focused on higher rates of predicting success of esthetic outcome.

Material and methods:
Preliminary considerations

Considerations for making decisions in clinical procedures and materials have been researched in recent literature, especially review articles and proceedings of conferences concerned with the last years, both implantology and periodontology. The following aspects have been rated. Access procedure and flap design, hard tissue augmentation procedures (techniques and materials), soft tissue augmentation procedure (techniques and materials), implant insertion techniques, and implant restoration.

To achieve a high level of predictability only these procedures are selected, which offer a high success rate in clinical outcome especially tissue maintenance and esthetic parameters. Because this clinical pathway focuses on both predictability and esthetic aspects, it could be named ‘predesthetic’.

Clinical procedure
A 30 year old female patient was treated by an auto transplantation of the palatal distracted and retained upper right canine also lost 12 years ago. The patient was in good general health and was a non-smoker.

In the past a reception of the clinical crown occurred with signs of discoloration and appearance of chronic submucosal inflammation. The soft tissue was deficient lining the extraction socket, and the gingival sulcus was reduced by the dead tooth. The patient was instructed in proper plaque control procedures and professional tooth cleaning.

Before treatment

Risk assessment:
• High risk level:
  • Health status, non-smoker, shape of tooth crown, bone level at adjacent teeth, no restorations at adjacent teeth, width of edentulous span ≥ 7 mm.

• Low risk level:
  • High lip line, high expectations, soft tissue defects.

Results:
• Risk assessment: The aesthetic risk profile could be classified as medium.

Discussion and conclusion
To accomplish a maximum of predictability in aesthetic implant dentistry a evidence-based clinical pathway in augmentation and restorative procedure has been suggested. Reducing trauma of access a minimally invasive microsurgical (MIS) approach was described by Hame (1998) and was also transferred to periodontal guidelines especially reparative procedures by Cortellini (1995).

In case of lateral hard tissue augmentation the GBR procedure seems to be the only well documented surgical technique as reviewed by Agathos and May (2007).

With respect to augmentation materials xenogenic are very successful in sinus floor procedures. In case of lateral ridge augmentation studies of Avé and Buser (2006) have revealed advantages in the combination of autogenous bone, xenograft and collagen membrane, which was superior to xenograft or autogenous bone grafts alone. This has been applied in this case report by Buser et al. (2004).

To receive high predictability in clinical success rates and the prevalence of sufficient clinical augmentation, measures to keep up the paraprosthetic soft and hard tissue level (Norton, 1998).

For the clinician a treatment strategy based on evidence is a reliable way to receive high predictability in clinical success. Nevertheless, beyond these ‘hard skills’ there are also ‘soft skills’, which cannot be estimated in mind. These are the precision of the surgeon’s implant treatment and finally the skill at the dental technician to mimic a natural tooth.

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Predesthetic-Predictability of esthetic outcomes for the replacement of an auto transplanted upper canine in implant therapy – A Case report.