Immediate extraction: Implantation in the anterior maxillary region

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After learning to treat the completely edentulous patient and the partial mandibular and maxillary edentulous patient, an implantology practitioner sets out to restore patients en route to losing their teeth, i.e., patients with teeth that are suffering from advanced periodontal disease requiring extraction, teeth that have suffered a sub-gingival fracture, end stage caries attack, trauma and endodontic problems.

These teeth are usually in the anterior region of the maxilla, which is of high esthetic importance. The assumed advantages of the extraction implantation procedure are:

- Preservation of bone mass after extraction as a bony groove in the tables is avoided, particularly in the vestibular table.
- Preservation of the geometry and volume of the papillae.
- Preservation of the gingival margin and preparation of an optimal emergence profile. It soon became apparent that to succeed in achieving an esthetic result for the anterior region, the implant would need to meet specific positioning criteria.

The aim of this article is to describe the specific features of extraction-implantation for implants in the anterior maxillary region. To do this, the biological rules of the implant-geri-implant tissue interaction currently known are described and are followed by the positioning criteria that flow from these. The subject is illustrated by two cases.

**Biological rules**

These rules explain the biological response of hard and soft tissues to implantation. They involve:

1) **The principle of preserving the biological space and its application in the three planes of the space.**
   a) In the mesio-distal plane: this is expressed by observing a minimum distance between two implants, or between a tooth and an implant.
   b) In the mesio-buccal plane: this is expressed by observing a minimum distance between two implants, or between a tooth and an implant.