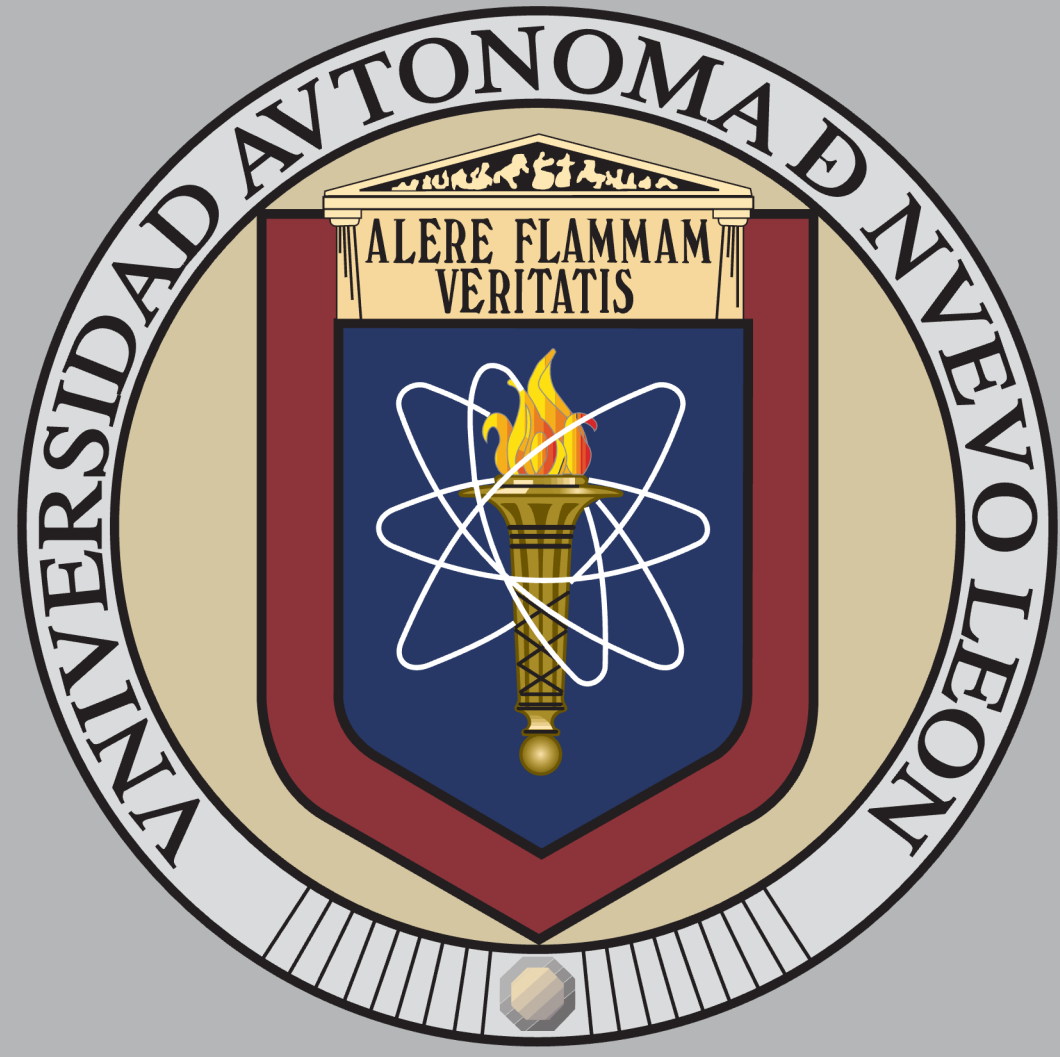




OPEN SLEEVE TEMPLATE FOR GUIDED IMMEDIATE IMPLANT PLACEMENT IN MAXILLARY MOLAR SITE

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BACKGROUND

Immediate implant placement, has now become a predictable treatment with similar results to healed site implant placement, in terms of success and survival rate, but it is still considered challenging and technically sensitive. Torque insertion, primary stability and a prosthetically guided position are essential to achieve long term success. In molars it is sometimes more challenging due to root position, root length or septal bone anatomy and density. Guided surgery provides a more accurate osteotomy and placement during implant surgery in healed sites. Diverse literature has been found comparing designs of surgical guides, for post-extraction sites and immediate implants guided surgery, the literature is very limited.

OBJETIVE

Evaluate an open sleeve surgical guide design that improve immediate implant placement accuracy and facilitate the prodecure.

CLINICAL CASE

A 55-year-old female patient comes to a private clinic with chief complaint of “pain”;. A clinical examination was performed, and an CBCT was requested due to suspected root fracture. Extraction was indicated, for which reason, considering the distance to anatomical structures and the thickness of the interradicular septum, it was decided to perform an immediate implant placement.

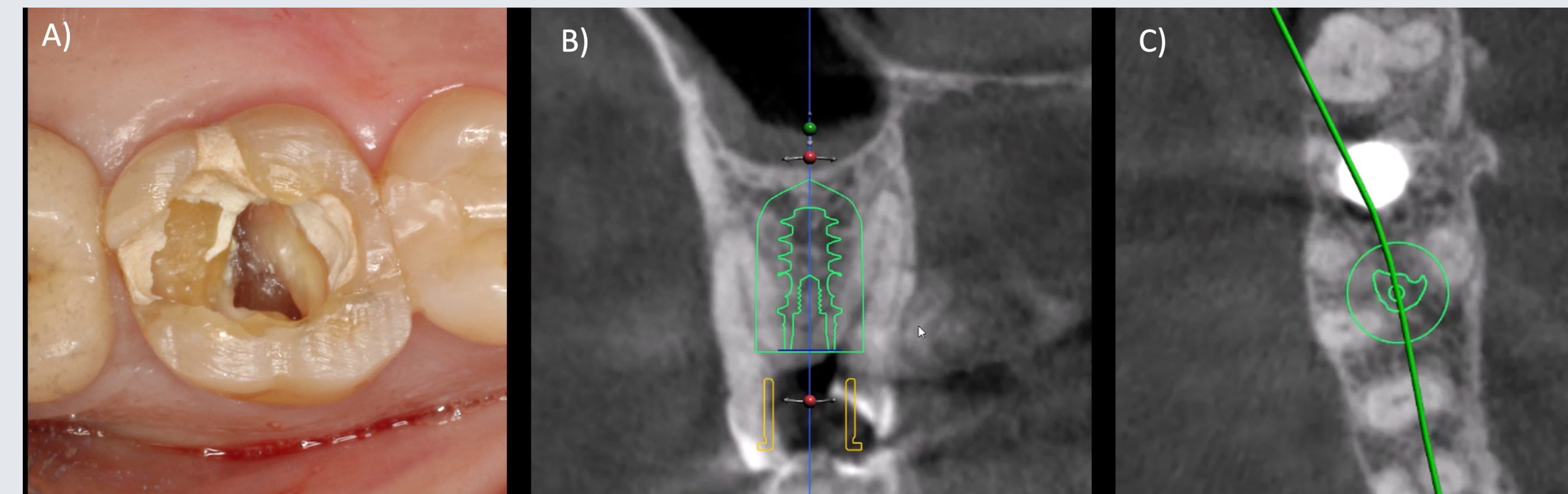


Figure 1. A) Initial photograph before the odontosection, B) Prosthetically guided planning by means of guided surgery

METHODS

The design was performed with the Straumann 3 shape library, and a buccal access was performed in order to allow the bur inclination. When planing, the distance between the sleeve and the soft and hard tissue was calculated.

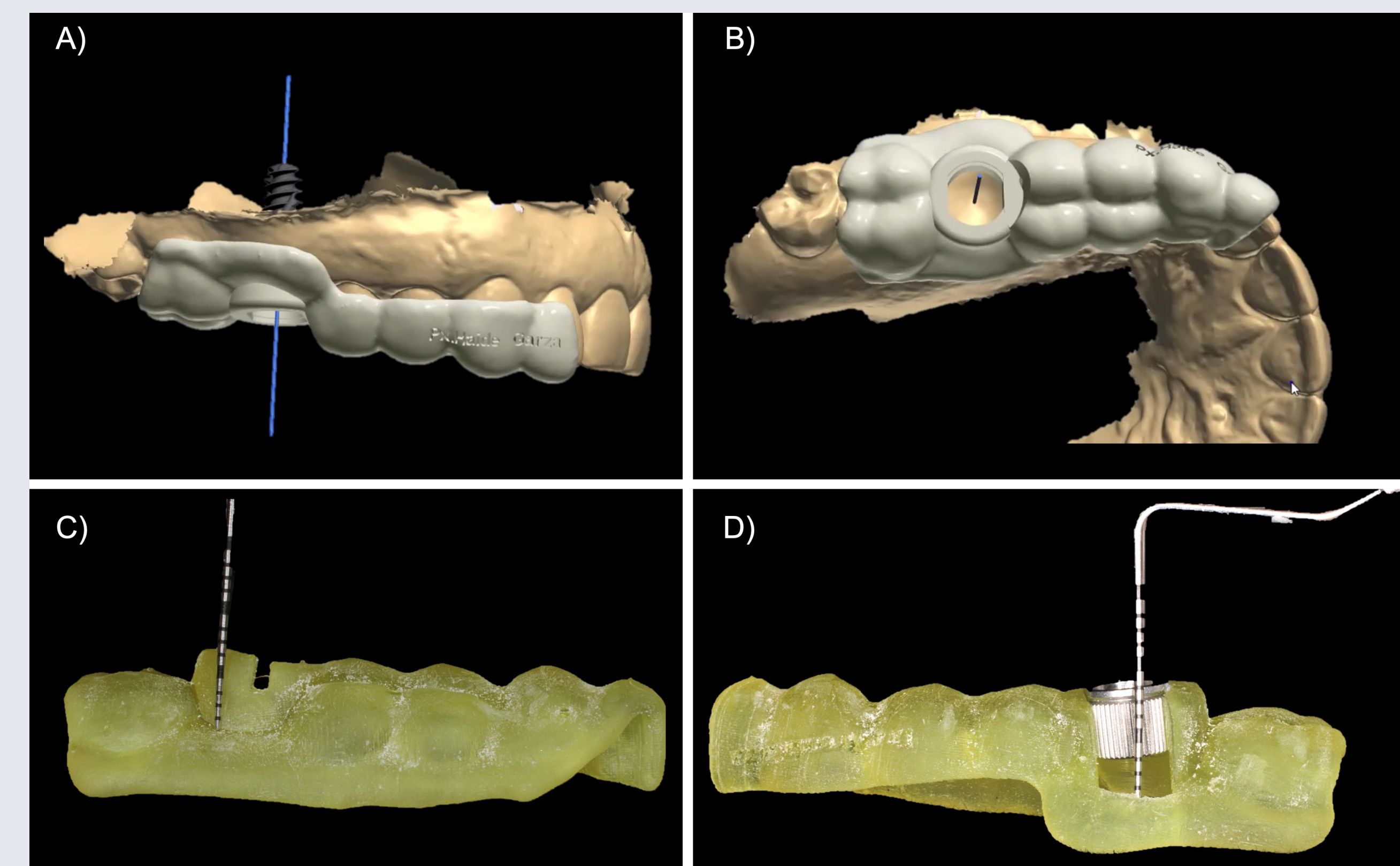


Figure 2. A-B) Surgical guide design, C-D) Surgical guide with open sleeve

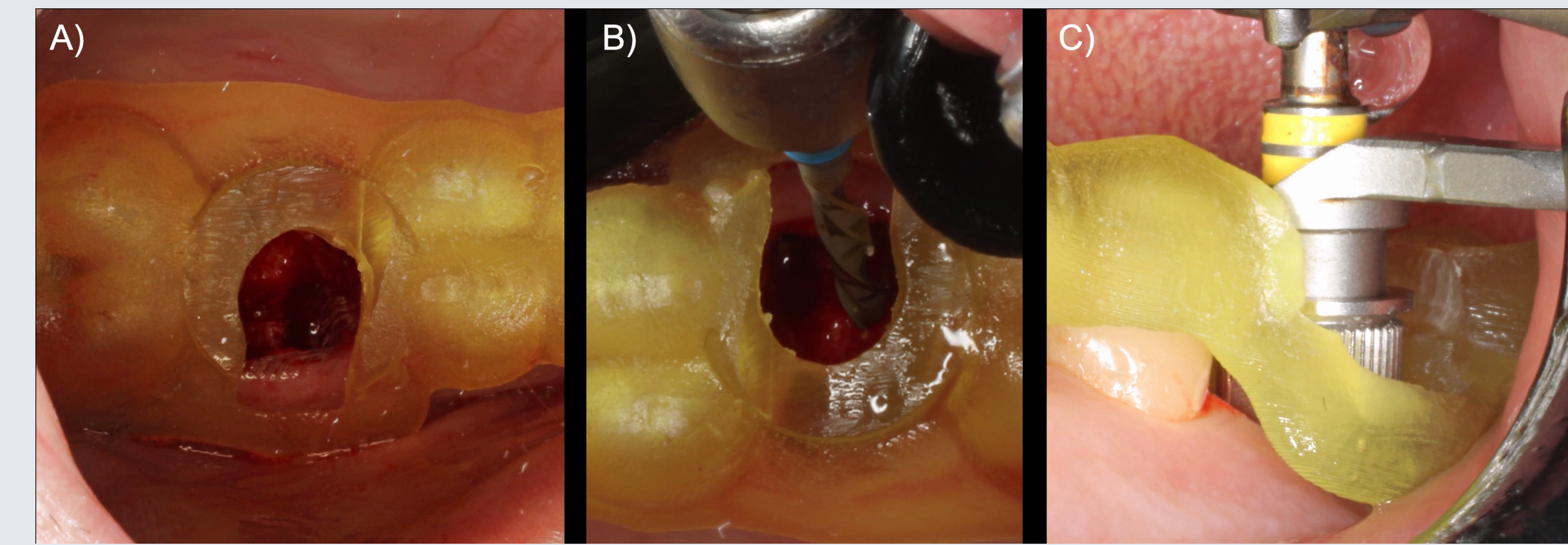


Figure 3. A) Surgical guide after extraction, B) First drill, C) Drilling with sleeve

The atraumatic extraction was carried out by means of odontosection, later the surgical guide was placed, and the first drill was inclined throughout the vestibular template access to avoid slip of the drill. The sleeve was placed, and the following osteotomy was performed thought the key handle. A 4.5x10mm implant was placed, 30N of insertion toque was achieved, and an allograft was placed for filling the gap with the Dual Zone technique. A digitally designed resin-printed customized healing abutment was placed.

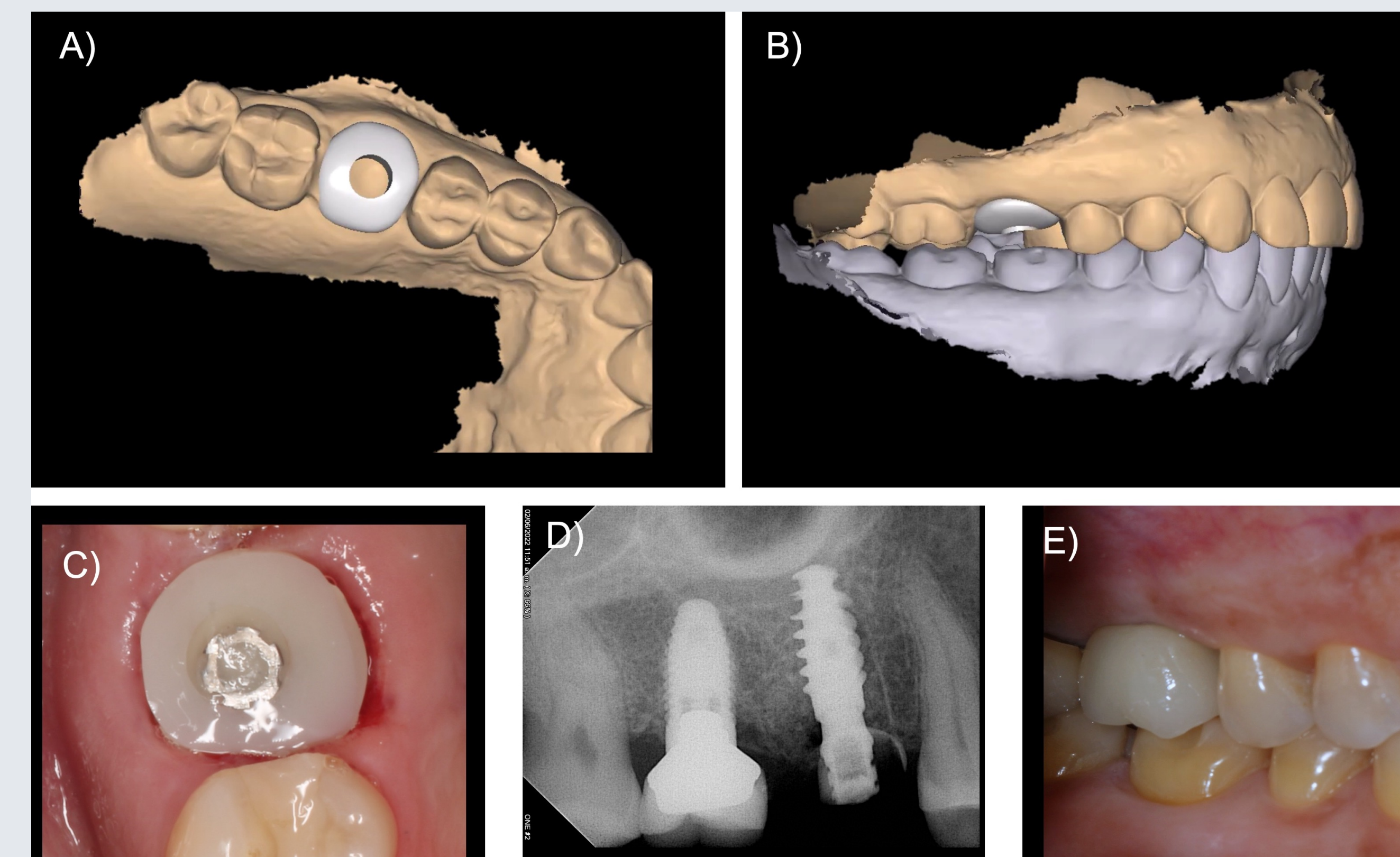


Figure 4. A-C) Customized healing abutment, D) Final radiograph, E) Definitive screwed crown

RESULTS

A partially guided protocol with the design of the hybrid surgical guide facilitate the immediate molar placement and soft tissue architecture preservation in a more predictable way. Six months after placement, the definitive screwed crown was performed and placed.

CONCLUSION

- The distance from the alveolar crest to the sleeve, must be previously check in immediate implants.
- The buccal access allow proper initial osteotomy
- Hybrid guides could be an option in guided immediate implant placement.

CONTACT INFORMATION AND REFERENCES

