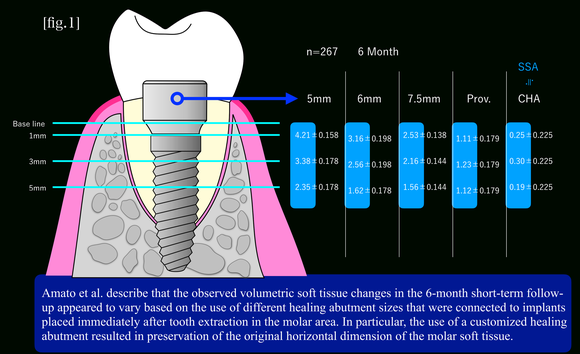
Immediate implant placement using sealing socket abutment in molar site : five case reports.

Hirokazu Chikawa D.D.S, Ph.D

[fig.1]



Amato et al. describe that the observed volumetric soft tissue changes in the 6-month short-term follow-up appeared to vary based on the use of different healing abutment sizes that were connected to implants placed immediately after tooth extraction in the molar area. In particular, the use of a customized healing abutment resulted in preservation of the original horizontal dimension of the molar soft tissue.

[fig.3]

Width of keratinezed gingiva

Buccal-lingual bone width

Aim)

Immediate implant placement in molar extraction socket might be considered a predictable technique as demonstrated by a high survival and success rates, with minimal marginal bone loss.[1] However, it contain the complexity of obtaining coverage of the extraction site and various methods have been tried. Amato et al. describe that the observed volumetric soft tissue changes in the 6-month short-term follow-up appeared to vary based on the use of different healing abutment sizes that were connected to implants placed immediately after tooth extraction in the molar area. In particular, the use of a customized healing abutment resulted in preservation of the original horizontal dimension of the molar soft tissue. [2] [fig.1]

The aim of these reports is to Evaluate the technique developed by Finnele et al. for sealing extraction sockets with custom-made sealing socket abutment (SSA). [3]

Materials & Methods)

Five patients were considered for single extraction and immediate implant placement in molar area. After curettage of extraction socket, the CO2 laser was irradiated on the marginal gingiva. Implants with high torque type were used, and in all cases, they were inserted with a torque of 20N or more. The sockets were filled with deproteinized bovine bone mineral. SSA placed the same day were made by temporary abutment and low-flow type right-curing resin composite. As own innovation, I gave the high contour to fill the bone material over the platform, and the height of the SSA's margin 1mm to retain the marginal gingiva. [fig. 2] After 6 months, I performed a custom impression, and then set the final prosthesis. Peri-implant bone changes and health were measured width of buccal-lingual dimension at 1mm apical to the implant platform on the CBCT images. Moreover, actual measurement were performed to monitor keratinized gingiva dimensional changes at the center of buccal margin. Volumetric changes were compared between baseline and 6 months.[fig. 3]

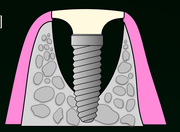
Results)

Peri-implant bone changes were within 0.45 mm and width of buccal keratinized tissue retained 72.5%.

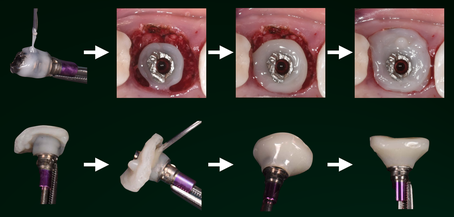
conclusion)

These case reports showed that immediate implants in molar region using the SSA resulted in promising implant outcomes with limited hard and soft tissue dimensional changes while decreasing the overall treatment time.

[fig.2]



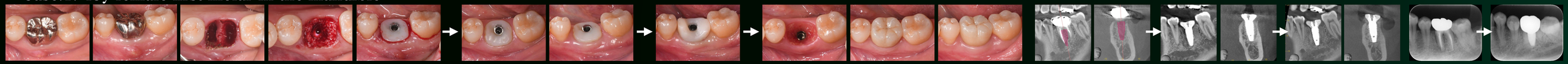
SSA had high contour
and the height of the SSA's margin 1mm.



The procedure of making SSA

The procedure of custom impression

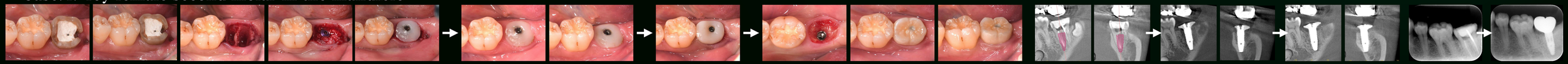
Case.1: 45y female first molar in the mandible



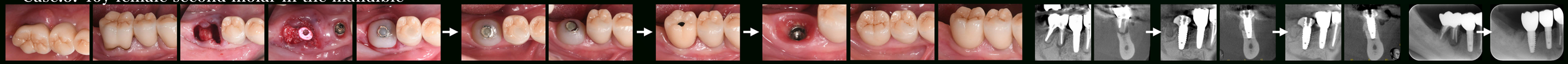
Case.2: 55y female first molar in the mandible

Case.3: 65y female second molar in the mandible

Case.4: 46y female second molar in the mandible



Case.5: 46y female second molar in the mandible



[1] Immediate implant placement combining socket seal abutment and peri-implant socket filling: A prospective case series. Romane Lilet , Martin Desiron , Gary Finelle , Geoffrey Lecloux , Laurence Seidel , France Lambert Clin Oral Implants Res. 2022 Jan;33(1):33-44
[2] The Role of Different Healing Abutment Sizes in Tissue Volume Preservation of Molar Sockets After Immediate Tooth Extraction and Implant Placement: A Multicenter Clinical StudyAmato, Francesco; Amato, Giulia, et al. International Journal of Oral & Maxillofacial Implants,2022, Vol 37, Issue 5, p892
[3] Immediate implant placement in molar extraction sockets: a systematic review and meta-analysis Ragucci et al. International Journal of Implant Dentistry. 2020 6:40

CHIKAWA DENTAL