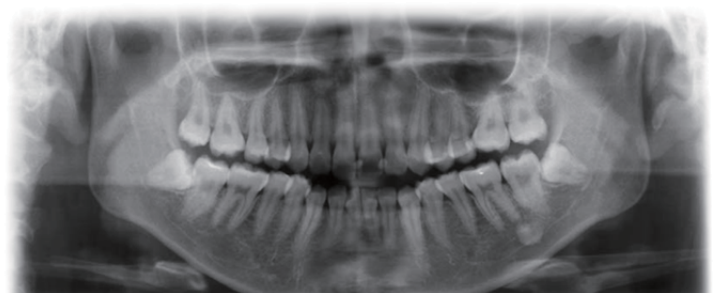
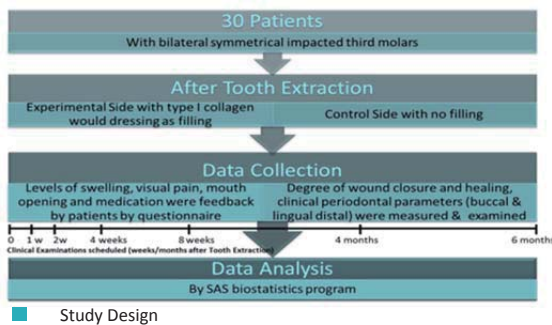


Evaluation of a Highly Purified Type I Collagen in Wound Healing of Post-extraction Sockets: Clinical Trial

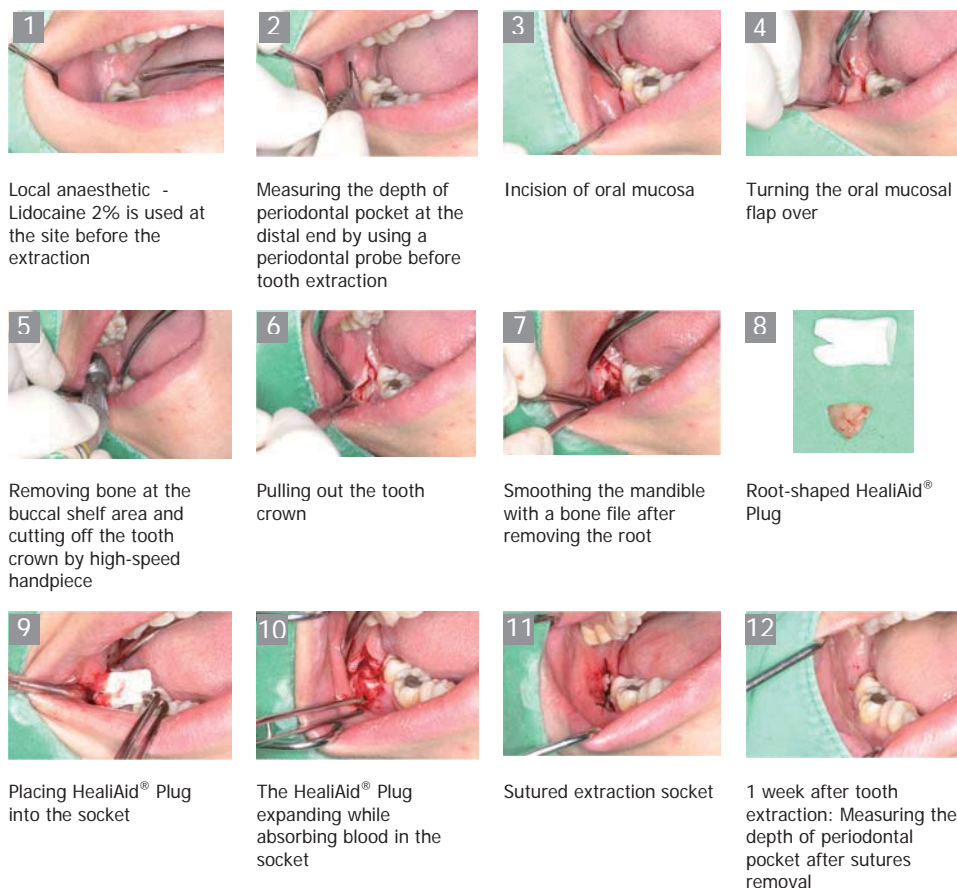
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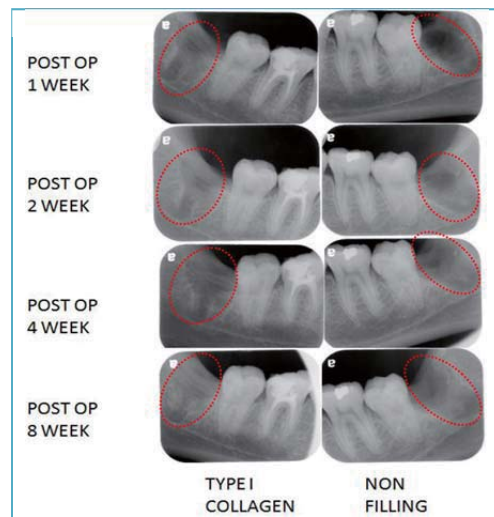
- Aim:** To evaluate a highly purified type I collagen dressing in wound healing of bilateral impacted third molars post-extraction sockets by means of clinical trial, questionnaire, clinical examination, and biostatistics to confirm the effect of post operation symptom relief and bone healing promotion
- Methods:** Thirty patients with bilateral symmetrical impacted third molars were enrolled in this study. All received one side with type I collagen would dressing as experiment side and the other side without any filling as control side following tooth extraction. Levels of swelling, visual pain, mouth opening and medication were feedback by patients by questionnaire. While degree of wound closure and healing, clinical periodontal parameters (Buccal and Lingual Distal) were measured and examined. The results were analysed by SAS biostatistics program
- Results:** Patients with type I collagen dressing filling side had lower visual pain scale score 2.60 ± 1.23 than control side 4.65 ± 2.01 and had discrepancy -2.05 ± 1.76 with statistically significant. Patients with type I collagen dressing filling side had lower pain duration 2.70 ± 1.38 days than control side 3.70 ± 1.84 days and had discrepancy -1.00 ± 1.97 with statistically significant. Patients with type I collagen dressing filling side up to 11 sites (55%) experienced no limitation of mouth opening comparing to control side only 2 sites (10.0%). Radiographic bone density analysis indicated that experiment side had better new bone formation ratio up to 10.16% than control side with statistically significant
- Conclusions:** Type I collagen dressing in extraction sockets can raise life quality following surgery by relieving of pain, shorten of pain duration and reduction of open mouth limitation and promote bone healing with coincidence in statistically results. Results of this investigation inspired clinical dentists' effort in raising life quality of post extraction patients and provided a good resolution to post extraction site bone healing and pre-implantation alveolar bone preparation



Panoramic X-ray image: Classification of 3rd Molar (Wisdom Teeth) Impaction before removal



- Local anaesthetic - Lidocaine 2% is used at the site before the extraction
- Measuring the depth of periodontal pocket at the distal end by using a periodontal probe before tooth extraction
- Incision of oral mucosa
- Turning the oral mucosal flap over
- Removing bone at the buccal shelf area and cutting off the tooth crown by high-speed handpiece
- Pulling out the tooth crown
- Smoothing the mandible with a bone file after removing the root
- Root-shaped HealiAid® Plug
- Placing HealiAid® Plug into the socket
- The HealiAid® Plug expanding while absorbing blood in the socket
- Sutured extraction socket
- 1 week after tooth extraction: Measuring the depth of periodontal pocket after sutures removal



Conclusions

- Reduction in patient's postoperative pain. Visual scale average reduced by a minimum of 2 points in average
- Reduction in patient's postoperative days of pain by 0.75 day in average minimum
- Improvement in smoothness of Trismus (mouth opening)
- Promotion of bone healing, bone volume density of increases 10.16% according to the periapical x-ray images
- Better effect for usage in the mandible compared to the palate under controlled conditions. Bone volume density enhances by 5.38%