

**Relation Of Inter Implants / Inter Dental Papillae After Scalloping Of Crest Bone Of The Jaws (New Technique)**

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**Summary:**

**Background:** The aims of this study is to determine the success of creating an inter implant / inter dental papillae after scalloping the crest of the jaw bones before placement of dental implant and compare this new technique with other techniques for creation of inter dental/inter implant papillae

**MATERIALS AND METHODS:** A fifty five dental implantation were carried out for twenty one patients . Two stage dental implantation technique was done for all the patients .In this new technique scalloping of the bone was carried out before placement of the dental implant .

**RESULTS:** The results of the present study indicates that the scalloping of the crest bone is consider as a best method for creation of inter implant / inter dental papillae and achieving an esthetically satisfying result before placement of the dental implants..

**CONCLUSIONS:** Scalloping of the crest bone make a good foundations that are essential for maintaining/creating papilla.

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**Introduction:**

The use of dental implants to provide support for replacement of missing teeth is becoming an important part of recent dentistry. As a result of advances in study on implant design, materials, and techniques the use of these devices has increased noticeably in the past few years and is expected to expand further in the future. Many types of implants are now available for application to different clinical cases but unfortunately still the cost is considers a main problem for widely use and also another esthetic problem was found after dental implantation due to loss of dental papillae after dental implantation which considered the most difficult part in achieving an optimal esthetic result (1,2,3,4,5,6,7, 8)..

The existence of papillae filling the interdental spaces is a key indicator for prospect esthetic success ( 9,10,11).

In the present study anew technique is described so that esthetic fineness can be predictably achieved after scalloping of the bone before dental implant placement.

**Material and methods:**

A fifty five dental implantation were carried out for twenty one patients ( eleven males and ten females ) , ( thirty four dental implants in the upper jaw and twenty one in the lower jaw ).

The implant patient must be assessed preoperatively to evaluate patient ability to tolerate the procedure . After adequate information is obtained to allow formulation of a treatment plane , informed consent is obtained before surgery. A two stages dental implantation technique was carried out. Steps of Stage 1 Surgery (Implant Placement) 1  
..Patient Preparation

Under local anesthesia implant surgery can be perfonned.. Preoperative patient education and the use of sedation is beneficial to lessen anxiety .Although implant placement is less

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traumatic than tooth extraction. Preoperative antibiotic prophylaxis is usually recommended.

- An oral dose of 2g penicillin V 1 hour preoperatively or an intravenous dose of 1 million U penicillin G immediately preoperatively are both effective.

- Alternative medications include 300 mg clindamycin PO (last choice). No postoperative antibiotic administration is necessary.

Profound local anesthesia is required for precise implant placement. In the atrophic mandible, block anesthesia, as well as infiltration anesthesia, is sometimes required to achieve this goal.

Adequate aseptic technique minimized the risk for postoperative infection. The patient should rinse with 15 mL of a 0.12% chlorhexidine gluconate for 30 seconds immediately before the start of surgery.

## 2. Soft Tissue Incision and Flap reflection

The incision should be designed to allow convenient retraction of the soft tissue for unimpeded implant placement. It should preserve or increase the quantity of attached tissue and preserve local soft tissue esthetics.

When the quantity of attached tissue is adequate and the underlying bone is expected to be of adequate width, a simple crestal incision is the incision of choice. Closure of the skin must be done carefully, because the implants lie directly beneath the incision.

In the posterior mandible the incision may be placed toward the buccal aspect of the ridge to allow the flap to be retracted by the use of a retraction suture. A buccal incision has the disadvantage of placing the incision line immediately over the area where the bone may be the thinnest and where bony dehiscence may occur during surgery. An incision placed slightly palatal may be a better choice in the completely edentulous anterior maxilla.

## 3. Preparation Of Implant Site

The residual ridge may have areas of unevenness or sharp ridges that are best reduced with an

acrylic bur or rongeur before implant placement. Then scalloping of the crest bone is done by the

use of large round bur, a 5 mm depth of crestal bone scalloping was done

Atraumatic preparation of the recipient site requires the use of a low speed (1500 to 2000 rpm), high

torque handpiece with irrigation are necessary to prevent excess thermal injury to the bone.

Implant

that are threaded require final thread preparation in the bone at very low speed (15 rpm). The implant

recipient site is prepared by series of gradually larger burs. The initial pilot hole is prepared with the

initial drill after the recipient site is marked. A paralleling pin is placed in the initial preparation, to

check alignment and angulation.

After the initial preparation for the implant is determined to be appropriate, it is sequentially enlarged to a dimension that precisely conforms to the dimensions of the implant.

## 4. Implant Placement

After the desired depth and diameter of the recipient site is accomplished, the implant is placed. After all the implants are placed, the wound is closed. A tension-free closure is important to prevent wound dehiscence. Horizontal mattress closure with monofilament suture will produce a watertight closure.

## 5. Postoperative Care

Postoperatively a radiograph should be taken to evaluate the position of the implant in relation to adjacent structures, such as the sinus and inferior alveolar canal, and relative to other implant. Patients should be provided mild to moderate analgesics. Patients should also be placed on 0.12% chlorhexidine gluconate rinses. The patient is evaluated on a weekly basis until soft tissue wound healing is complete (approximately 2 to 3 weeks). If the patient wears a denture over the area of implant placement, the denture can be relined with a soft liner after 1 week and may be worn.

## Stage II Surgery (Implant Uncovering)

Integration time varies from site to site and may require modification based on the individual patient. Longer times may be required if the bone quality at surgery was poor or if there was a question regarding the adequacy of bone to implant interface at the time of placement. The simplest method of implant uncovering is the tissue punch. This method of uncovering is easy to perform, only minimally disturbs the tissue surrounding the implant, and produces minimal patient discomfort. The disadvantage of this technique is not allowing visualization of the bone and not allowing assessment at the time of

uncovering and makes visualization of the abutment- implant body interface difficult. The operator must rely on tactile sense to determine if the abutment is completely sealed on the implant body. After that a restoration phase was done for loading of the fixtures.

**Results**

From the result of the present study we found that reshaping by scalloping of the crest bone which considered as a foundation of the gum tissue before placement of the dental implants lead to establishment of perfect appearance of inter implant / inter dental papillae .

**Discussion**

It has become obvious that changes in the soft-tissue contours in the post extraction resorptive process have the greatest upset upon the final restorative esthetic result and establishment of a soft tissue contour with intact papillae and a gingival outline that is harmonious with the gingival outline of the adjacent dentition is the most difficult factor in achieving an optimal esthetic result after dental implantation .

From the results of the present study we observed that bone support is the base for any soft tissue existence and with the scalloping of the crestal bone we can create an optimal esthetic appearance of dental implants .

**Conclusion :**

One of the main problem concerning dental implantation is the difficulty to get accepted esthetic results due to loss of inter implant / inter dental papillae but with the use of scalloping of the crest bone before placement of dental implant we can get a pleasant results

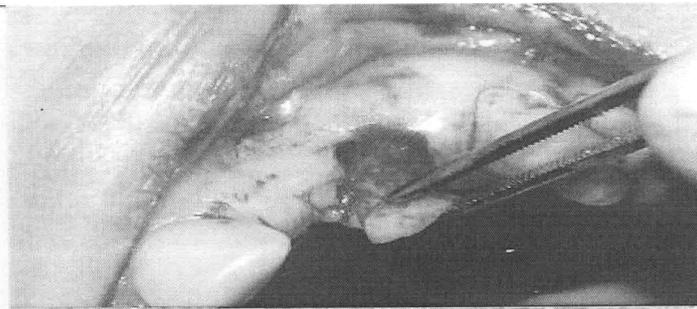


Fig. ( 1 ) simple flap reflection

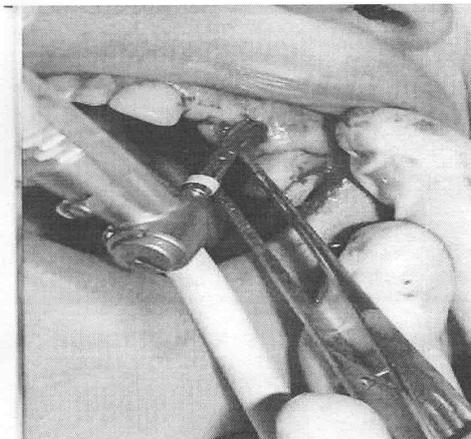


Fig. (2) Preparation of the implant site .

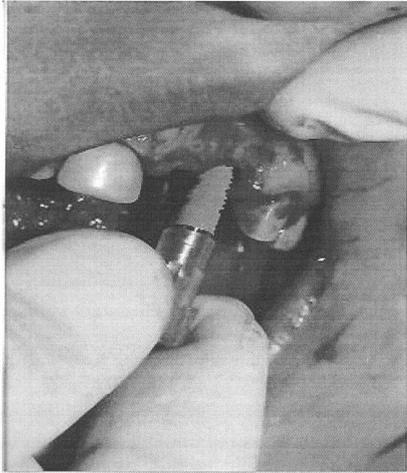


Fig. (3) insertion of the dental implant .

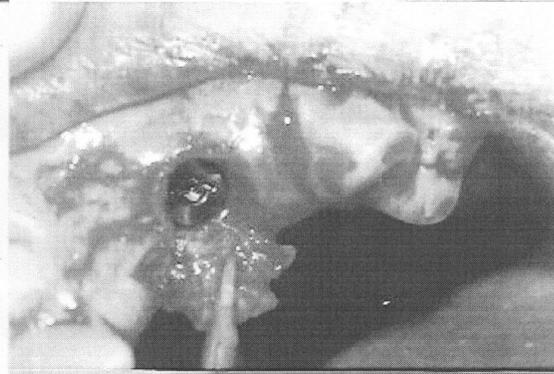


Fig. (4) placement of the dental implant , covered with a sealing screw .

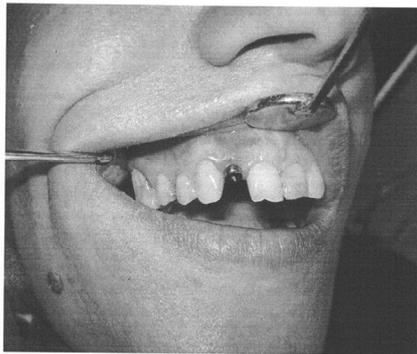


Fig (5) Gingival former screwed over dental implant for three weeks .

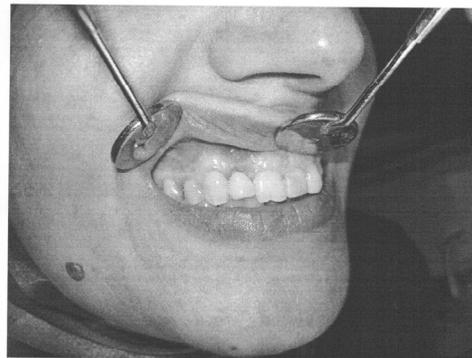


Fig (6) construction of the crown , perfect inter implant / dental papillae , one year postoperatively .

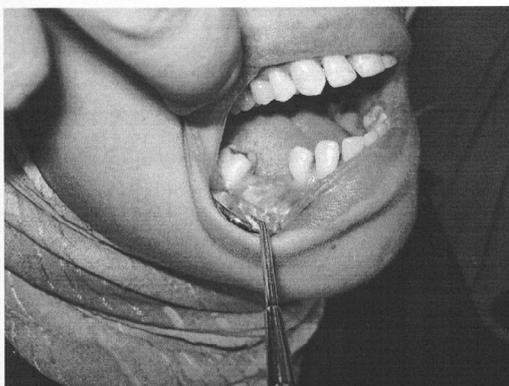


Fig. (7) another case , before dental implantation .

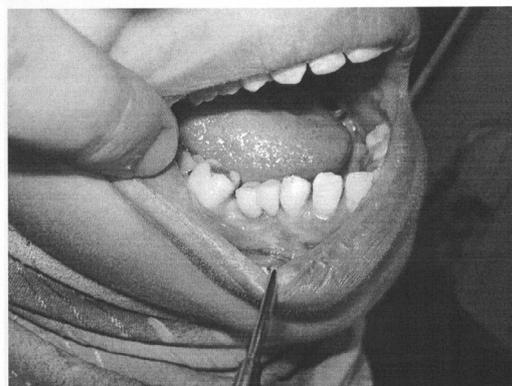


Fig (8) After construction of two crowns , perfect inter implant / dental papillae , one year postoperatively .

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