**New surgical Technique in Restoring the Chin lost Due Trauma by a Subperiosteal Problast Implant**

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**Abstract**

Bone grafts are the most common technique used in maxillofacial surgery in restoring any bone lost or defect. This novel surgical technique utilizes a new modified problast to restore the contour of the defected chin.

**Introduction**

The new modified problast implant [1] mostly used for cosmetic restoration, it is light in weight, ultra-porous (70-90%) porous by volume, can be scrapple to the required aesthetic shape, and auto calved at the operation room. The sub periosteal problast implant promote the tissue fibers to ingrown through the problast porosities, which give fixation to the implant (no need to wire fixation of the implant to the underling bone as in bone grafts). The problast implant has a low crushing strength; it is resorbs by external pressure. I found that it is not resorbed when restoring the nonfunctional bones such as the chin

**Surgical procedures**

Twelve patients been admitted to the maxillofacial center with partial or complete loss of the chin due to trauma.

Medical history taken demonstrated no drug allergy, clinical examination to all patients showed normal vital signs.

The surgical operations of the twelve patients were performed under general anesthesia with nasoendotracheal intubation.

The surgical operations of four patients were performed intra orally, local anesthesia with epinephrine injected in the synthesis area for hematomas.

Horizontal incision was made through the mucosa midway between the depth of the vestibule and the wet line of the lower lip.

By dissection the mentalis muscle incised, oblique incision posterior to the cusped-bicuspid root been made, the mental nerves been protected, the periosteum strapped and adequate pocket size to the implant been made, the implant then introduced, to stabilize the implant in position a resorbable suture through the lip and the periosteum performed, and two layers closer with interrupted resorbable suture been made to avoid post-operative infection, the tissue over the implant closed without tension to prevent resorption of the implant by pressure.

I performed one case intraorally with local Anesthesia only by two inferior dental block injection on both sides of the mandible together with mucosal infiltration Anesthesia.

I found that the general Anesthesia is more convenient to the patient and to the surgeon.

The other eight cases been performed by extra oral approach, through the skin and subcuteans fat, a carved incision performed in the submental region parallel to the interior border of the synthesis, to create a pocket over the synthesis, the mentalis muscle and the periosteum incised and reflected [2,3] and a pocket size been created to accumulate the implant over the pogonion, stabilization of the implant done by resorbable suture, the wound then closed in layers

**Discussion**

Two years clinical follow up showed that out of the twelve cases performed in this novel surgical technique only eight cases the problast retain it position , the other four cases the problast been moved out of its position due to direct facial trauma, resulting in a bad looking appearance [4], to give the patients a good permanent aesthetic appearance, I injected the problast by a mixture of a biocompatible material such as beta tricalcium phosphate containing oily calcium suspended in combination with a porous hydroxyl appetite to promote bone formation through the problast [5,6], three years clinical fellow up after injection showed a good permanent appearance. X-Rays examination showed bone been ingrowth through the porous problast resulting a good permanent aesthetic appearance due to the fixed problast to the underlining bone

**Result**

This new surgical technique found to be an easy, simple non traumatic technique as compared with the other techniques no wire fixation of the implant to the underlining bones needed, so less time consumed by the surgeon in the operating theater in this technique.

Three years fellow up after injection of the problast by the compatible material a good permanent aesthetic appearance result, more studies and fellow up are recommended.

 **References**

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