

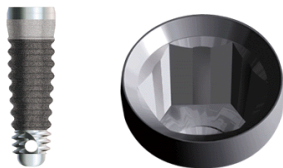
Rehabilitation of patients with congenital absence of upper lateral tooth through the internal connection dental implant (Paragon ®). Clinical case. Dr. Ivan Navarro *, Dr. John S. Moya T **, Dr. Carlos Ugalde M. ...

Summary

A 22 year-old female patient a congenital missing of the superior left lateral inciseive, which needs a previous orthodontic treatment for the implant placement. There is compromised vestibule-palatal bone width in the area because of the absence of bone growing stimulation from the missing tooth. A Tapered Screw Vent Paragon Implant, from Centerpulse, was selected, this type of implant reaches all the needs for this particular case, such as Internal hex connection, Tapered body and small diameter, all this features helped us enormously to the proper development and a very good final result of the case.

Introduction

The management of patients with partial anodontia mainly in the anterior region where esthetics are probably the main concern of the patient represents a challenge for us. In this choosing traditionally permanent prosthesis, through bridges, have been the main option, however many times our patients are opposed to sacrificing healthy tooth tissue structure at the time of carrying out preparations. This is where dental implants take on special relevance and among them the Paragon ® system allows us to place implants in critical areas where the buccal bone plate is poor and the mesiodistal space is minimum. The ***Tapered Screw Vent (TSV)*** is an implant that has a diameter of 3.7mm with a 3.5mm platform that allows us to work in critical mesiodistal areas, furthermore its conical shape and triple disposition of the threads helps preserve the thin vestibular bone plates.



Paragon® *Tapered Screw Vent (TSV)*. Inner hexagon connection.

At the time of implant placement osteotoms were used instead of surgical drills due to the following advantages.

- a. Preservation of the bone structure
- b. Condensation of bone tissue (especially in areas near the maxillary Sinus)
- c. Expansion of the bone plates mainly the vestibular

In our clinical case, young 22 year old patient, student, healthy, with congenital absence of lateral upper left tooth. Poor vestibular plate forming a concavity and critical mesiodistal space (see Rx panoramic). We used a Paragon implant of ***Tapered Screw Vent (TSV)*** type of 3.7mm in diameter with a 3.5mm platform. Below we will describe the surgical technique for the placement and the respective procedure for the prosthetic rehabilitation.

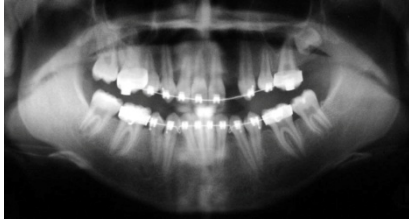
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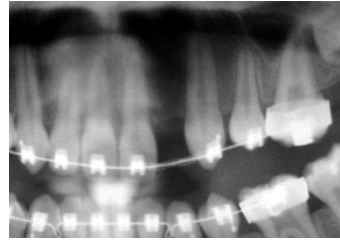
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Initial diagnostic x-ray.



Compromised mesio-distal space.



Initial clinical view



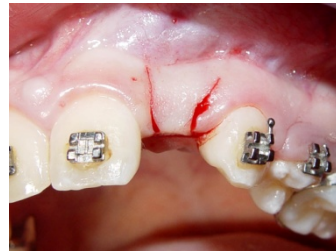
Occlusal view.

Materials and methods: We used a self-tapping endosseous implant with conical shape, Paragon type *Tapered Screw Vent* of 3.7mm in diameter and 13mm in length.

Surgical technique: We performed a surgical incision on the reborde with vertical component to achieve a flap that allows us to determine the exact amount of residual vestibular bone as this will determine the position of the vestibular-palatal implant.



Incision



Flap design

The surgical guide is always useful and sometimes necessary but in this case the clinical criteria of the rehabilitator in conjunction with the surgeon determined the three-dimensional positioning of the implant.

We proceed with the use of osteotoms instead of surgical drills for the reasons stated above, in addition to not producing necrosis of the bone cells (osteocytes) because of overheating, whether because of the high speed or the inadequate cooling of the saline solution. The bone is marked with a round bur # 8 and the sequence of the osteotom I, II, and III are used, until we achieve the proper width of the osteotomy, 3.0mm in diameter, it is important to lubricate each osteotom in a sterile saline solution at the time of its use. A probe implant helps to confirm the working length. Once the desired osteotomy is achieved we place the tapered screw vent type implant of 3.7mm in diameter and 13mm in length in the hand piece with its respective implant holder to be placed inside the bone.

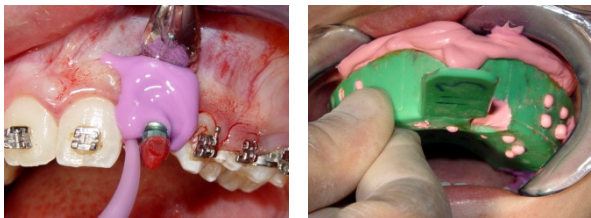


Use of osteótoms instead of surgical drills.



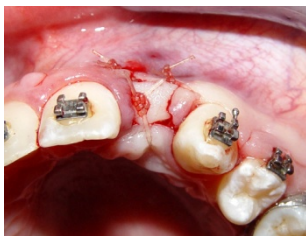
Implant placement.

In our case the implant holder is also the impression post which we can use to take the print and send it to the laboratory so they can make a temporary crown, and in the second stage surgery we can perform an immediate timing which saves us time and money in buying of some of the equipment.



Taking the print

We proceed to place the screw cap and suturing the flap with individual stitches with absorbable suture 3-0 (catgut). A provisional Maryland was placed as the healing time went on (osseointegration) which was of 3 months. The Rx panoramic was taken and the patient was medicated with painkillers and antibiotics.



Flap stitching



Post surgery x-ray

Second stage surgery:

After 3 months we proceeded to make a flap respecting the gingival papilla of the adjacent teeth with an incision slightly to the palatine to preserve as much of the keratinized tissue. The prepared pillar was laid ready, implant holder, and the plastic crown was temporarily cemented, this procedure is known as immediate timing and allows us to model the gum to achieve a proper emergency profile. It is again sutured and then measured in two weeks for

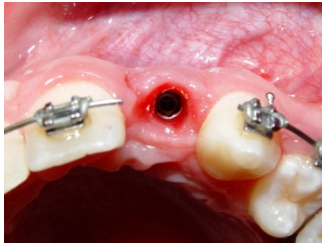
the placement of the final crown, which took place in metal-porcelain and cemented with polycarboxylate cement.



Immediate timing



Gum two weeks later



Remodeling of the gum two weeks later



Placement of the final crown



Discussion:

The Paragon system has been proved, by reliable studies, to possess characteristics that make it an ideal implant in various numbers of circumstances and especially in critical situations where other systems do not offer the versatility of these implants, which leads us to modify the treatment and compromise the final result. The anterior region has always been and will be a challenge even more when the vestibular bone plates are thin and there are buccal cavities, in which in many cases a bone graft is the proper choice, Paragon showed that by their shape and surface types they may be placed preserving these walls. Besides its connection system, internal hexagon with parallel walls of 1.7mm high, with a seal between the parts we wish to connect known as cold welding, provides a retention between the implant and the prosthetic attachments by itself, without having to trust the retention of the parts to the screws, downgrading the screw loosening to practically zero, allowing us to turn our attention to esthetic aspects which are relevant in the esthetic zone.

Conclusions:

When choosing the ideal implant we should take into account certain conditions such as the connection type (internal or external), shape of the implant (screw or cylinder, conical or with parallel walls), type of surface, cost, number of components, clinical time(number of appointments) and esthetic possibilities of rehabilitation.

In our clinical case, the Paragon tapered screw vent implant not only met our expectations but also allowed us to establish a point of comparison with other existing systems using real

and reliable parameters. However, only time will show us whether the long-term success was achieved.

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