FRONTAL FIXED PROSTHETIC RESTORATION IN EDENTULOUS SPACE MODIFICATION

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Abstract
This study case presents a 53 years old patient with severe aesthetic dysfunctions due to an ectopic maxillary canine associated with a frontal edentulous space. Orthodontic treatment proposition was refused by the patient. After canine extraction, metalo-ceramic fixed partial prosthesis successfully restored the aesthetic damage in the conditions of a non-gingival smile.

Adapted abutment teeth preparations were made in order to provide necessary space for aesthetic alignment of artificial teeth in the pontic.

Keywords: frontal edentulous space, fixed partial prosthesis, aesthetic

Introduction
A frontal edentulous space is a prosthetic emergency because of the serious aesthetic and phonetic disorders that affect the socio-professional life of the patient. The clinical situation is favorable for a dental supported fixed prosthetic restoration when the extractions are recent, without significant resumption of the ridge and convenient mesiodistal space for aesthetic alignment of artificial teeth [1].

An ectopic canine is usually accompanied by teeth migrations as well as ancient edentulous spaces which had no prosthetic treatments. In these cases we are faced with aesthetic framing difficulties. The orthodontist and the surgeon interventions are demanded to create optimal conditions for an aesthetic prosthetic restoration. In cases with gingival smile and gum line asymmetries, surgical intervention by coronary elongation or flap surgery is recommended [2].

Frequently, an ectopic canine in an adult patient has deficient bone support and extraction may be the best therapeutic option in these clinical situations.

The aim of this article is to present a practical fixed prosthetic option in a difficult clinical situation.

Case presentation
Patient O.V 53 years-old, male, presents to our service for aesthetic disorders due to the maxillary ectopic canine 23 position and maxillary central incisors missing (figure 1). No phonetic dysfunctions are present because of a provisional restoration, that doesn't satisfy him esthetically (figure 5)

Figure 1. Ectopic canine and frontal maxillary edentulous space (initial situation)

We retain from the interview that he is suffering of type 1 diabetes.

The loss of the frontal teeth occured in a sport accident, 17 month ago.

Aesthetic analysis follows several criteria [1,3]:
- Visibility of teeth in leisure position of the mandibula and the upper incisal margins rapport with lower lip;
- Amplitude and line of the smile;
- Occlusal plan and intercommissural line;
- Interincisive line and medial sagittal axis;
- Free vestibular lateral space

Frontal examination of the face shows upper lip asymmetry due to the ectopic position of the canine 23 (figure 2). Smile examination reveals favorable upper lip position because the patient does not have gingival smile. Postextractional bone defect is not visible, so there are no
Orthodontic treatment was recommended to the patient in order to correct 22, 24 positions and create necessary proper space for prosthetic restoration, but he refused. He also refused a fixed prosthetic treatment over implants, but the prognostic of this therapeutic proposition was anyway limited by diabetes and low hygiene. Case analysis and wax-up showed us sufficient space for aesthetic fixed reconstruction if tooth preparation of 22 and 24 was extensive.

Fixed partial metalo-ceramic prosthesis was chosen in order to restore the frontal maxillary arch. The abutment teeth 12, 13, 22, 24 were prepared conserving the pulp vitality. Extensive preparation of the distal crown surface of the 22 and mesial crown surface of the 24 was performed to create sufficient space for the artificial symmetric canine 23 (figure 7).

After canine extraction a 4 mm gingival recession is present on mesial root surface of 24 but this region is not exposed in patient smile (figure 7). This favorable situation permits us to maintain the cervical prosthetic limits in the enamel on this tooth, which is favorable for resin cement adhesion. Provisional fixed prosthesis verified wax-up aesthetic results, lateral group guidance and convenient anterior guide concerning the length and positioning of the maxillary incisors margins [1,4].
Concerning the esthetic analysis of the case, 1.26 mm – 1.91mm visibility of the upper incisors in a medium age male is recommended when the upper lip is relaxed [3]. The patient has 1.26 mm of upper incisors visibility after final prosthetic reconstruction.

Color choice was guided by the natural aspect, in harmony with present teeth on the arches (figures 10, 11).

In the finalized restoration, ridge resorption is restored with rose porcelain which improves the aesthetic appearance [5] (figures 8, 9).

Group left laterality guidance was improved in fixed metalo-ceramic partial prosthesis.

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