*ÖN BÖLGEDEKİ ESTETİK SORUNLARDA KONSERVATİF TEDAVİ YAKLAŞIMLARI: 4 OLGU SUNUM

CONSERVATIVE TREATMENT APPROACHES IN AESTHETIC PROBLEMS ON ANTERIOR SIDES: 4 CASES REPORTS

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Özet

21. yüzyılda estetik diş hekimliğinde, kırık, malforme, malpoze ve renklenmiş dişler, üretilen yeni estetik malzemeler sayesinde son derece beğenilen formlarda restore edilebilirler. Bu olgu sunumlarında, kliniğimize diestema, persiste süt dişleri ve malpoze gibi anterior bölgedeki estetik problemler nedeniyle başvuran 4 hastanın tedavisi amaçlanmıştır.

Dişlerin mine yüzeyinde herhangi bir preperasyon yapılmaksızın, şeffaf matriks band dişlerin mezial ve distal kenarlarına uyumlandırıldı ve uygun kamalarla sabitlendi. Sonra sırasıyla, % 37 lik fosforik asit jel (Etching Gel, Kerr, USA) ve bonding ajan (Clearfil SE Bond, Kuraray, Japan) mine yüzeylerine uygulandı ve tabakalama tekniğiyle kompozit rezin (Arabesk, Voco, Germany) kullanılarak restore edildi. Son olarak restorasyon yüzeyleri bitirme diskleriyle (Sof-lex,3M ESPE,USA) cilalandı.

6 ay sonra hastalar değerlendirildi ve estetik olarak herhangi bir kırılma veya renklenme gözlenmedi.

Anahtar Kelimeler: Estetik diş hekimliği, konservatif tedavi.

Abstract

In 21st aesthetic dentistry, the broken, malformed, malposed and decaying teeth can be restored in a highly acclaimed form with the help of the new produced aesthetic materials. In these case reports, the treatments of four patients who applied to our clinic with the aesthetic problems on arterior side such as malpose, diestema and persistent milky teeth has been purposed.

Without making any preparation on the enamel surface of teeth, the transparent matrix band has been located on the mesial and distal ridges and has been fastened with apropriate wedges. Then, the phosphoric acid gel (Etching Gel, Kerr, USA) and bonding ajan have been applied to the enamel surface consecutively. And it was restored using composite resin by layering. At last, the restoration surfaces were polished with finishing discs (Sof-lex,3M ESPE,USA).

The patients were evaluated after six months and aesthetically not any broken or decaying teeth were determined.

Key words: Aesthetic dentistry, conservative treatment.

Introduction

Aesthetic is a subjective concept. By thinking that aesthetic can change from person to person, the doctor should know the aesthetic needs of the patient, the methods and the materials which must be used.(1)

The aesthetic expectations of the patients are increasing day by day and the doctors have to improve themselves scientifically and aesthetically to provide their expectations. Aesthetic problems are one of the case that the dentists encounter most. Especially the location, shape, dimension and color disorders cause big problems aesthetically.

The structural changes of shape and growth on permanent and milky teeth can derive from environmental factors, genetic factors, systematic or local changes or can happen as a total result of these combinations. (2, 3, 4) In the restoration of broken, malformed, malposed teeth etc., the direct composite method which is a kind of conservative treatment method, has been used.

In dentistry, in order to make a durable aesthetic restorative treatment, the connection of restorative substance and tooth is needed to be provided well. The used different materials, methods, techniques and systems with this purpose enable the restorations to be applied

* These cases are presented at the symposium in 18th Departments of Restorative Dentistry Meeting and Symposium on 26-28 October 2013 KAYSERİ.

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directly to teeth surfaces (5). Also after a well motivation that's given to the patient, these restorations which are applied to anterior side can clinically sustain in proper position in the mouth for a long time.

In this study, we aimed to make the treatments of four patients who applied to our clinic with the aesthetic problems on anterior side.

A Case Report

The materials used in this study has been demontrated in Table 1.

MATERIALS	PRODUCER FIRM	THE PURPOSE OF USE
Transparent Matrix Band	Kerr Hawe Stopstrip,China	Proximal Adaptation
Kama	Fixing Wooden Wedges,E.U	Excellent Filling Without Overflow
The Phosphoric Acid Gel of %37	Etching Gel, Kerr, USA	Roughen the Surface of the Enamel
Bonding ajan	Clearfıl SE bond, Kuraray, Japan	Increase Retention
Composite Resin	Voco Arabesk Composite Resin, Germany	More Resistant Aesthetic Restoration
The Finishing Discs	3M ESPE Sof-Lex,U.S.A	Smooth Surface
The Finishing Fresis (ankansas)	FG Diamond Bur Composite Finishing Kit	Smooth Surface Form

Table 1. Materials used in this study

In four case reports, the transparent matrix band has been located mesial and distal ridges of the teeth without making any preparation on enamel surface of the teeth and has been fastened with appropriate wedges. Then, the phosphoric acid gel (Etching Gel, Kerr, USA) and bonding ajan have been applied to the enamel surface consecutively. And it was restored using composite resin by layering. At last, the restoration surfaces were polished with finishing discs (Sof-lex,3M ESPE,USA).

One of the most important subject which affects the success of the restorations in these cases is the effect of the used adhesive materials. Being consistent with teeth tissues, having minimum stotocsicity, having a strong connection, having a low level of microleakages, being more resistant against masticatory forces are the most preferable features of adhesive systems (6).

Clearfil SE Bond (Figure 1), the fifth generation, is a system including acidic primer and connective factors. The Primer includes HEMA, hydrophilic dimetacrilat, N,N-diethanol-ptoluidine, D,L-camphor quinone and water; but in its connective part, it has colloidal silica, HEMA, Bis-fenol A and water (7). Clearfil SE Bond, the watered primer has been prerared and was applied to the enamel and dentine surface at once without washing and was dried after waiting 20 seconds. Then it was provided to emit everywhere with the help of air by applying connective factor. Then it was polimerized with light for ten seconds. At last, the tooth was fullfilled.

Figure 1. Clearfil SE Bond

The prefered composite material will enhance the quality of restoration and the success of the adesion. In this study, in all events, Voco Arabesque Composite Material have been used. The microhybrite composite (Arabesque, Voco, Germany) which has been used, includes seramic glass filling. This material has a high quality for all cavities, for a good polishing, for an excellent aesthetic and

tooth compatibility and has a high stability and endurance against abrasion (8).

Two female patients of 29 and 34 years old colsulted to our clinic owing to the cavities among teeth on anterior side (Figure 2-3). They informed that they had problems while speaking because of these cavities among teeth. They told that they heard irritable sounds coming from these spaces because the tongue get within them. The patients were treated after being given the necessary information.

Figüre 2. The 29-year-old female patient

Figure 3. The 34-year-old female patient

There are various reasons of diastemas among teeth. If the teeth next to the front sharp teeth are small, diastemas can form. The frenilium on anterior side, the loss of teeth on backward of the mouth and the cases in which the teeth push back, can cause diestema.

There are different treatments according to the reason of diestema. For example, if the reason is frenilium, the connective tissue and frenectomy are removed or the cavity is fullfilled with ordodontic treatment. These two patients offered to cover the diastemas with aesthetic fill material without getting any different treatments for their teeth.

In these two female patient's treatments, without making any preparation on the enamel surface of the teeth, the transparent matrix band was located on the mesial and distal ridges of teeth and were fastened with appropriate wedges. Then, the phosphoric acid gel of % 37 (Etching Gel, Kerr, USA) and bonding ajan have been applied to the enamel surface consecutively. And it was restored using composite resin by layering. At last, the restoration surfaces were polished with finishing discs. (Figure 4)

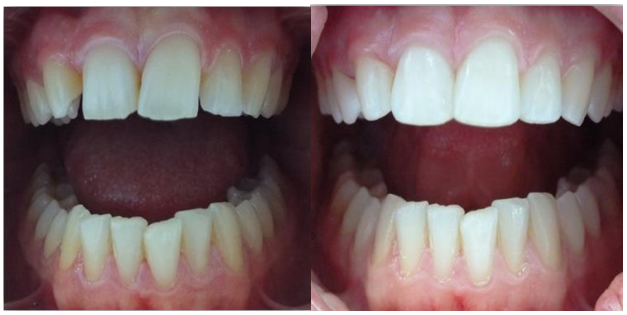

Figure 4. Before Treatment and After Treatment (29-year-old Female Patient)

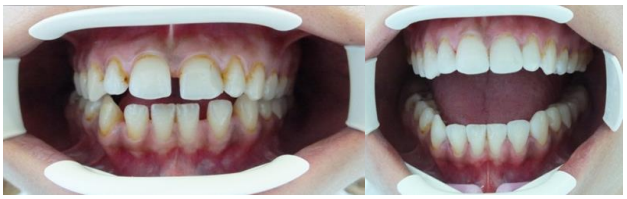

Figure 5. Pre-treatment and post-treatment of 34-year-old Female Patient (Diestema treatment was applied to 14 teeth of central, lateral, canine and I. Premolars on upper jaw and central, lateral, canine teeth on lower jaw in total.)

In our other case, the 23-year-old patient pointed that she had no permanent teeth on lower front segment, but she had her milky teeth, and the long and insizal parts of her teeth on upper front segment were jagged (Figure 6). But not any findings were determined in the radiograph taken from the patient (Figure 7).

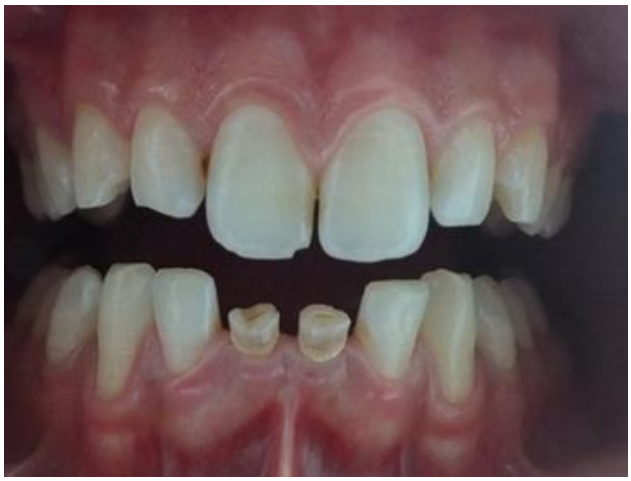

Figure 6. The persistent case of milky teeth

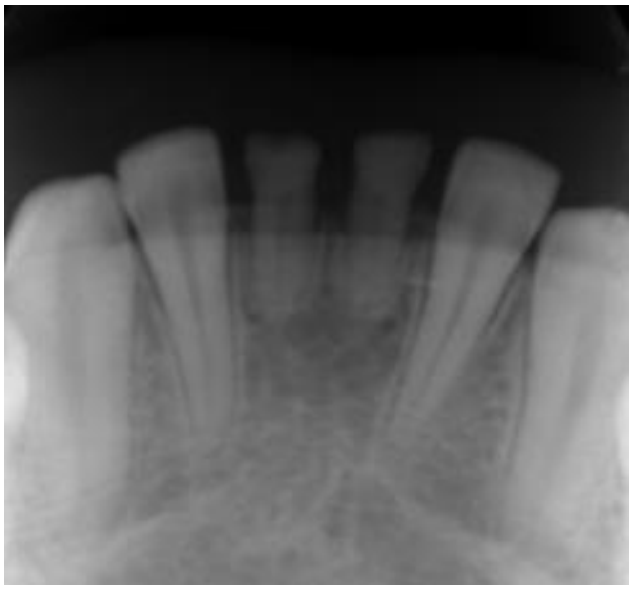

Figure 7. Periapical radiograph of the patient belonging to 23-year-old patient.

The lack of some teeth are called as hypodontia (7,8). Hypodontia is more common among milky teeth on upper jaw and we can often see the lack of lateral incisors. The researchers point out that hypodontia is seen in Caucasus Race at a rate of % 1 and % 9. The hypodontia among permanent teeth can be observed in the same frequency on lower and upper jaw, and also the lack of 3rd molar tooth was determined. In addition to these, severe hypodontia and microdont, hypohydrotic ectodermal dysplasia related to X, otosomal dominant ectodermal dysplasia, otomosal recessive chondroectodermal dysplasia can be seen, too (9).

In the individuals with cleft lip and palate, hypodontia and microdont can frequently be seen. In Down Sendrome (trisomi 21), the correlation of hypodontia is quite high. Also, depending on the rubella factors, the presence of hypodontia in the people who use thalidomide was informed (9). We did the same treatment, which was applied to the former patients, to our new patient (Figure 8).

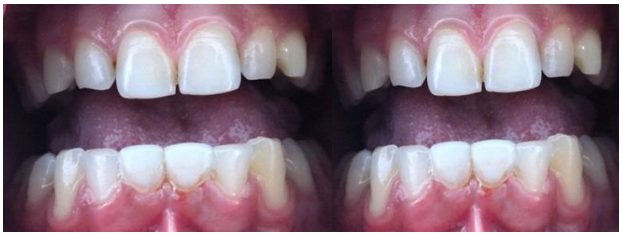

Figure 8. Pre-treatment and post-treatment of the patient

But, in our last case; the 19-year-old male patient consulted to our clinic owing to his broken and malpositioned central tooth (Figure 9). These kinds of anomalies are seen as a result of bad habbits. These bad habbits can be defined as thumb sucking, putting foreign objects into the mouth which stop physiological development in between 3 and 6 years or leads to pathology in dentition or are sometimes part of psychosocial development (10).

The habbit of lip biting or sucking can cause different anomalies depending on upper or lower lip biting. As a result of upper lip biting, retrusion, malalignment and diestemas can be seen within upper incisors (11).

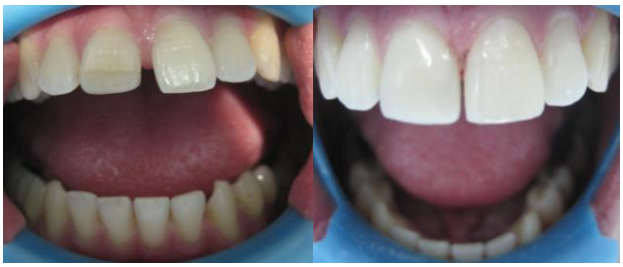

Figure 9. The pre and post-treatment condition of teeth given.

The habbit of lip biting or sucking can also cause labial position of teeth and nail biting. Nail biting causes various problems such

as gingival ressecion, vestibule or lingual position, diestema and rotations resulting from the pressure to upper and lower jaw (11). Also, if the tongue moves within upper and lower incisors, it can cause anterior open bite in the mouth (12).

Discussion

In modern dentistry, one of the materials that we often use is composite. Today composites are quiet popular restoration kinds with the advantages of removing less materials from tooth surface, not being affected of oral fluids, having biocompatibility and high color stabilities (13-15). Even if the results seem to be successful, simple mistakes in implementation stages can affect the survival rate and quality of the restoration. The development of such restorations is parallel to the development of adhesive dentistry. Thefasten of restorasion to teeth tissues with the development of adesives is gradually getting better (16).

The essential points in restorations should be paid attention. If you can't correct the mistake, it can be irreversible. The three biggest biological mistakes are done on periodontal segments, edges and fields related to post-operative sensitivity (17).

In the treated cases, one of the most faced problem is post-operative sensitivity. Post-operative sensitivity is among the most irritable problems which may occur in adhesive implementations. The bacterias remaining on dentin after adhesive implementation can be one of the basic reason of post-operative sensitivity. With the aim of preventing such problems and in order to obtain a clean and bacteria-free dentin, we should care about the clean surface of the teeth (18).

In the cases, when the diestemas are covered, after the overpresence of restorative materials on gingiva papillary segment, periodontal problems might occur on these regions resulting from food impaction. As a result, color changes can be seen on these parts of the teeth (19).

An excellent isolation during restoration is very important. But, if the periodontal health is not in a good condition or if the tissues were given harm during the preparation of restoration surface, no matter how much precaution you take for the isolation of the region, the bleeding tissues can create a negative effect on connection. Mechanic forces, chemical stimulants can cause bleeding, as well. This will not only lead to micro leakage which affects connection, it will also cause decaying and color changing (20).

The aesthetic dentistry is based on team-work including dentist, surgeon and patient. If the correct diagnosis and the needed treatment plans can not be done, it will possibly fail in a short time.

In every aesthetic case, the most important factor is the smile-concept. If the surgeon doesn't know the fundamental principles of smile-concept and doesn't imagine the result of the aesthetic operation, the treatment is exposed to fail without starting. The dental surgeon must take the face of his/her patient as a whole and must concentrate on the relation of teeth with the face and lips. In order to prevent the failure, the aesthetic dental surgeon must have knowledge about aesthetic installation, insizal edge position, gingival asymmetrics and the form of tooth-arch (21).

In polymerization with light, the right timing is very important. Owing to the heat coming through the source of halogen light, the pulb can be affected in a bad way. Even if one suggests the implementation of polymerization with light for 30 or 40 seconds, because it is implemented to only one point, it can cause irreversible damage of pulpa. For this reason, the dental surgeon must be careful about this.

The microleakage, which turn up as post-operative sensitivity, usually results from the adaptation of weak edges. In fact, when the edge of restoration is located on the root surface or dentin and when the edge compatibility isn't provided enough, the microleakage can also cause rotten lesions (22).

Color incompatibility and color change may be reasons of the failure. A correct choice of color should be done in order not to have any incompatibility in the color of natural teeth and in the restorative fill materials. We can benefit from the color of adjacent teeth. The teeth color which taken from excessively dry tooth can cause aesthetic problems. A dry tooth seem lighter that its original color and it can clearly be observed in dark coloured teeth (23). In an lightened place where the refractor lights are off, the color choice should be done in daylight. Meanwhile, the patient mustn't have any make-

up on her lips. Color choice should be done at once without hurting eyes and the dental surgeon should be level with the patient.

Conclusion

In the aesthetic and functional problems seen on anterior segment, the appropriate aesthetic has been provided in terms of color and contur with the help of microhybrid composite resin reinforced by natural layering and nano-particules without needing any radical or protetic reinforcement. In the later 6-months controls, the pleasure of the patient and the obtained natural appearance have been stated to be clinically acceptable in terms of edge coloring, edge compatibility, post-operative sensitivity and sekonder decay.

The failures are the part of all Works. If a careful treatment plan is done, the correct case and material are choosen, an effective communication is set up with the patient and if you pay attention to every clinic step, the failures can be reduced to a large scale.

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