

The clinical assessment of mobile teeth stabilization with Fibre-Kor

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Abstract

Purpose: A glass fiber tapes are used in periodontal diseases to stabilize mobile teeth. The purpose of this project was to make a clinical appraisal of teeth stabilization which were using Fibre-Kor splinting.

Material and method: 56 patients 35-67 year old were examined. There were made 162 teeth blocks using Fibre-Kor as reinforcement and Flow-It material as matrix. After 10 months clinical parameters such as: PI, SBI, GI and periodontal pocket were checked.

Results: Periodontal pockets depth decreased average by 0.58 mm after teeth stabilization. Bleeding index and inflammation of gums fall average by 2.55 and 1.95. The average oral cavity hygiene improved and achieved 1.46.

Conclusion: The Fibre-Kor splint is an esthetic and functional solution of mobile teeth stabilization, and is a part of the specialist periodontal treatment.

Key words: periodontal diseases, pathological teeth mobility, splinting, Fibre-Kor.

Introduction

Teeth mobility is one of the periodontal disease symptoms. This mobility comes as a result of bone destruction which causes disfunction, traumatic occlusion and in the end loss of the teeth. Stabilization is one of the conditions which allow to save our

own teeth. There were used many methods of stabilization in the history of dentistry. This methods were not efficient because they didn't last for a long term. Through that they didn't help to heal the structures of the periodontal tissues which were still mobile [1-3,5-7,10].

Glass fiber came to dentistry in the 90's of the XX century. It revolutionized the treatment of the mobile teeth. There are many different solutions in dentistry. It is difficult to choose appropriate one because of a wide range of the materials and different clinical situations [2-4,6-8,10,11].

The Aim

The purpose of this clinical study was to make an appraisal of the clinical parameters of stabilized with Fibre-Kor teeth.

Material and methods

The research concerned 56 patients (32 female and 24 male). They were 35 to 67 year old. 47 of them had chronical periodontal diseases, and 9 of them aggressive. There were made 162 teeth blocks which connected from 2 to 6 teeth. There were qualified to splinting teeth with IIO and IIIo mobility Entin scale. The stabilization was made by connecting mobile teeth with stabile onces on both sides. One of the rules of stabilization says that we should connect maximum amount of teeth. The splint should be settled in static balance points. It should consider changes of the biostatic caused by lengthen of clinical crown. The splint cannot lay on the gums to allow hygienic procedures being made. The ability of keeping in good condition dental hygiene and esthetic expectation were estimated before treatment. All of the patients were motivated and trained in dental hygiene care. The tartar was removed, root planning and initial bite correction was made. The assessment such as: Silness and Löe PI index, Mühlemann and Sone SBI index, Löe and Silness GI index and depth of the periodontal pocket was made. Fibre-Kor splint which consists

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Table 1. Average clinical parameters before and after 10 months of stabilization

Indexes	Initial assessment	Assessment after 10 months
PI	2.62	1.16
SBI	4.42	1.87
GI	2.93	0.98
Pocket depth	5.11	4.53

of a group of parallel preimpregnated with resin glass fiber was used for splinting. Stabilized group of teeth was prepared on the occlusion surface of molars and premolars and lingual surface of incisors and canines. The next step was etching of contact and prepared surfaces, then the bonding was made with Bond 1 from Pentron. Appropriate length of Fibre-Kor was settled with Flow-It from Pentron in prepared groove and light cured. Then then splint was willed again with flowable composite. The last step was the bite correction. After 10 months the assessment of clinical parameters was made. In mean time the patients came for a monitoring visits.

Results

Results of the research was shown in the *Tab 1*. Average value of the clinical parameters before and after 10 months from stabilization. All of the parameters decreased:

- PI – from 2.62 to 1.16;
- SBI – average decrease of SBI index was 2.55
- GI – average decrease of GI index was 1.85.
- Depth of the periodontal pockets decreased average about 0.58.

Discussion

Clinical revives says that more esthetic, acceptable and functional are inside teeth splints. The same opinion had patients who were using both kind of stabilization. A significant thicken of teeth surface after using Fiber-Splint, especially in the front of the upper jaw. This situation may raise the occlusion height which causes destruction of the splinting [6,7,10,8]. Fibre-Kor splinting is an excellent solution because it's preimpregnated fibres connects with great strength with flowable material (Flow-It). This materials in our experimental examinations had the best mechanical properties [4,9,11]. The fault of this splint is preparation of hard tooth tissue. All of the monitored parameters had improved in all cases. Starting PI was twice higher so worse. Despite of frequent dental hygiene training and monitoring visits we didn't reached as low values as the other researchers who reached lower then 1 PI index [6,10]. GI and SBI indexes were also higher than at the other researchers patient's. However, the monitoring examinations shown good treatment results. Average decrease of SBI index was 2.55; GI decreased about 1.85. Those

effects are excellent in comparison with the other researchers patient's. Average values which they noticed were: 0.4 to 1.09 (SBI); 0.14-0.15 (GI). We have noticed average reduction of the depth of periodontal pockets about 0.58 which is correlated with the other authors raports, who noticed values about 0.17 and 0.65 [6,10]. The clinical improvement of the examined patients cases was possible because of intensive hygienic treatments often monitoring visits and specialist periodontal treatment. We focused our attention on a bite correction before and after splinting. This is a part of interdisciplinary periodontal diseases treatment which helps us make it successful. We should remember, that the teeth stabilization should be the beginning to the next steps of the specialist periodontal treatment, because it eliminates just the symptoms not the cause. When we leave infected periodontal pocket, we condemn unaware patient for further development of the illness [1,5-9].

Conclusions

1. The shown method is modern, effective, durable and esthetic which gives back the function of mobile teeth. It is exemplary in selected clinical situations.
2. The repair and hygiene care is very easy.
3. Stabilization of mobile teeth with specialist periodontal treatment significantly improves periodontal clinical parameters.

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