Application of Gengigel in the Treatment of Gingival Inflammation

SUMMARY

Introduction. Dental plaque is a major cause of gingival inflammation, which is, if not treated, transformed to periodontal disease. So, prevention and medication of gingival inflammation is focused on dental plaque control. Therefore, many professional pastes, gels or solutions are available at the market. We aimed to investigate the effectiveness of Gengigel® gel (Ricerfarma, Milano) in the treatment of gingival inflammation.

Material and Methods. The study encompassed 40 patients, divided in 2 groups: 20 of them maintained regular oral hygiene and applied Gengigel through gum massage twice a day after brushing their teeth, and 20 patients, who also maintained regular oral hygiene, did not apply the gel. Both groups were tested at the beginning of the study and after a month.

Results: Index values of dental plaque and gingival inflammation after the treatment were evidently reduced in both groups. Particularly good results were noted in the group of patients who practiced gum massage with Gengigel.

Conclusion: The comparative analysis of the index values pointed out statistically significant improvement in patients who used Gengigel - the reduced gingival inflammation, which is directly connected to the minimized plaque accumulation.

Keywords: Oral Hygiene; Gingival Inflammation; Gengigel Gel; Hyaluronic Acid

Introduction

Gingival inflammation is a result of the presence of local irritations and microbes and their products from dental plaque. Direct association among colonized microbes in dental plaque and inflammatory disorders of gingival tissue is an introduction in periodontal destruction, which results in loss of teeth at the end4. The evidence that dental plaque is the major responsible factor for initiation of gingival inflammation is shown in study of Loe, where experimental gingivitis is initiated at clinic health gingival tissue8. The disease can affect different age groups: children, adolescents and adults. Previous experiences proved that 90% of the adults faced problems with gingivitis in some period of live. If it is not treated on time and effectively, it can progress, and intake the other structures of the periodontal complex. In severe conditions, in cases of continuous bad oral hygiene, total destruction of the bone-connective complex may occur, which definitely leads to tooth lost.

The last epidemiological analysis showed that 90% of European population aged between 35 and 54 has some form of periodontal disease. After reaching 40 years of age, more teeth are lost as a result of periodontal disease then as a consequence of caries. In this sense, the fact that 6% of all children from 8 to 9 years of age have inflamed gums should be a concern of every dentist5,9.

Having this in mind, the necessity of direct control of dental plaque intrudes. Therefore, there are many antiplaque preparations at the dental market, which can be used with preventive and curative aims. Prevention and treatment of gingival and periodontal disorders, based on better cooperation with patients, becomes more and more important each day. Prevention of plaque control, and its timely elimination, may be carried out by use of
various products placed at the pharmaceutical market\textsuperscript{1,2,4,6}. The aim of this research was to confirm the effectiveness of Gengigel® gel (Ricerfarma, Milano, Italy) in reducing gingival inflammation in patients with gingivitis.

Material and Methods

At the Clinic of Oral Pathology and Periodontology, Faculty of Dentistry in Skopje, FYROM, 40 patients with clinically diagnosed gingival inflammation were followed-up. The patients were at age from 12-19 years. Diagnose was based on medical history and clinical examination. At clinical examination, the presence or absence of gingival inflammation and plaque dental accumulation were noted. Every patient was treated by conservative measures (elimination of dental calculus and soft dental deposits), and they were divided into 2 groups:

- the first group encompassed 20 patients, who applied Gengigel® gel (Ricerfarma Milano, Italy) through gums massage after brushing their teeth, twice a day;
- the second group of 20 patients held only basic oral hygiene without applying the gel.

All the examinees were motivated for regular maintain of oral hygiene during the study (2 times a day). The index of dental plaque (Sillness-Loe) of patients in both groups was determined, as well as the index of gingival inflammation (Loe-Sillness). Index values were determined in 2 occasions - at the beginning of the treatment and 1 month after the treatment. The results were processed statistically according to Student t-test and presented graphically.

Results

Index values of dental plaque and gingival inflammation in patients who did not used Gengigel gel in their first visit and after 1 month of the treatment are presented in figure 1. It is evident that at the first visit the index of dental plaque was 1.90 and the index of gingival inflammation 1.85. After a month, both indices were reduced, which was statistically highly significant.

Index values of dental plaque and gingival inflammation in patients who used Gengigel gel at their first visit and 1 month later are presented in figure 2. Index of dental plaque at the beginning was also 1.90 and the index of gingival inflammation is 1.85. After 1 month of using Gengigel gel, the index values of dental plaque was only 0.50 and the index of gingival inflammation is 0.45, which was statistically highly significant \((p<0.001)\).

Index values of dental plaque and gingival inflammation after the conducted treatment in both groups, i.e. in those who conducted gum massage with Gengigel and those who did not use it, at their first visit and 1 month after the treatment, are presented in figure 3. Patients who conducted gum massage with Gengigel beside the usual conservative treatment shown evidently better results compared with those who did not use gum massage \((p<0.001)\).
Discussion

The fact that untreated or badly treated gingival inflammation results in periodontal disease is indisputable. The incidence of this disease is continuously increasing. The main etiological factor responsible for the occurrence of gingival inflammation is dental plaque. Therefore, prevention of plaque accumulation and treatment procedures actually include its daily and continuous control. Today, the primates belong to preparations that contain hyaluronic acid. Its role is actually in prevention and treatment of gingivitis and periodontal disease, as well as different injuries and inflammatory processes in oral cavity. Therapeutic efficiency and compatibility of this medicament are confirmed in many countries in Europe and wider through controlled use on hundred thousand of patients, showing positive results concerning the occurrence of dental plaque and gingival inflammation.

From the obtained results of the present study, it is evident that all patients at their first visit had symptoms of gingival inflammation provoked by the existing dental plaque (the index of dental plaque was 1.90 and the index of gingival inflammation 1.85). After 1 month duration of treatment, the indices values in patients who did not use Gengigel were significantly reduced (IDP=1.15; IGI=1.02). This was the result of patients’ motivation for maintenance of oral hygiene.

However, in patients who used Gengigel, we noted statistically significant reduction of the values of both indices, which was even greater than in the previous group. Namely, in patients who used Gengigel the index of dental plaque was reduced to 0.50 and the index of gingival inflammation to 0.45 after 1 month of the treatment. Compared with the values at the first visit, it was highly statistically significant (p<=0.001). We consider that this finding was not just the consequence of good oral hygiene and motivation of the patient for proper implementation of the same, but also of the use of Gengigel gel and its therapeutic effect during gum massage treatment, as hyaluronic acid has anti-inflammatory, anti-swelling and reparatory effect. In fact, hyaluronic acid is essential component of the periodontal connective tissue, and acts as barrier for plaque bacteria.

The comparative analysis of the index values between the examined groups indicated the statistically significant differences; patients who where treated with Gengigel showed better therapeutic result, which is directly connected to the minimized plaque accumulation due to the use of Gengigel.

References


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