THE IMPACT OF ALIMENTATION AND FOOD IN THE FORMATION OF BACTERIAL PLAQUE

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Abstract

In the present paper was analyzed the ensemble of measures by which we can establish more exactly the action of the food and alimentary associations in the formation of bacterial plaque in conjunction with the crisis period, with the time of exposure of the food on the level of the dental tissue, and with the scarce dental brushing. The operation is very important in the prophylaxis of the bacterial plaque that statistically affect a very high percentage of population no matter the age and in the efficient treatment of this affection, because a major impact in the development of the teeth, the resistance of the dental bone and the health and integrity of the gum tissues is that of the foods and alimentation (Mencinicopschi and collab., 2010). By this analysis we try to contribute to the informing of the population about the minimum demands of nutrition and rational alimentation and about the oral hygiene, factors with which we can intervene and with which we can reach a good prophylactic level at the dentistry medical practice without major interventions and with high costs. The diet has a predominant effect on the integrity of the teeth depending on the oral micro-flora.

Key words: *bacterial plaque, prophylactic alimentation, bacteria, dental bone, gum tissues*

INTRODUCTION

In the specialty literature is affirmed all the time and any time it is necessary and useful that the alimentation represents the area in which are made the most serious errors, especially nowadays when the modern man is eating in an unhealthy manner, eats irrationally, defective and much more, thus a person from two suffers from weight excess with bad impact on the bone system, of the bones and of the dentition and on the locomotor apparatus and of other apparatuses and systems from the body.

The greatest mistake made in the area of alimentation as a point of departure in the formation of bacterial plaque is the consumption and afterwards the excessive absorption of hydrates of carbon from sugar, sweets, flour, alcoholic drinks that are in fact the inculpative factors in the formation of bacterial plaque. A healthy food is a fresh food, varied, rich in vital substances, alkaline, with many vitamins, with mineral salts and oligo-elements that reduce the incidence of the periodontal diseases as local affections or systemic caused by the nutritional deficiencies.

MATERIAL AND METHOD

The methods of analysis are based on the prophylactic control of the persons registered at the dentistry medical practice, individually registered on the list from the practice on categories of age, determining the saliva pH on a period of 6 months, once per month, according to the known methodology of determination.

Another element of analysis in this study was represented by the questionnaires of food frequency by which were followed and analyzed the food habits and the life style resulting from here the high content of the diet in fermentable sugars and questionnaires regarding the notions of oral hygiene. Another element necessary for the establishing of the impact of food in forming the bacterial plaque is their classification from the point of view of the appearance of the dental decay in cariogenic, cariostatic and anti cariogenic food and the informing of each patient on this aspect and the informing of each patient regarding the correct combination of the food with favorable impact on the prevention of the bacterial plaque.

By applying these methods was followed the more precise underlying of the factors involved in the etiology of the carious lesions, the comparing of the level of affecting by the carious disease and the cariogenic risk.

RESULTS AND DISSCUSIONS

In the present paper I wanted to underline on the basis of the methods of investigation mentioned, a series data based on science and ration regarding the varied factors of risk involved in the appearance of the carious processes by which it can be explained in fact the relation between the sweets, diets and bacterial plaque incriminated in the appearance of dental decay, as it is seen from the perspective of the unfavorable impact of the unbalanced alimentation. Following the determination of salivary ph at the patients that were studies and registered on the lists of the dentistry individual medical practice was observed that for the persons with increased incidence in forming the bacterial plaque the salivary pH was for the analyzed period with an average of 5,2 for the group of age of 9-12, of 5,36 for the group of age of 25-30 and of 5,25 for the group of age of 40-50. (figure 1).

In figure 1 is observed that the greatest value of salivary pH for the group of age 9-12 was registered at the prophylactic control from the third and sixth month, being of 5,3, value corresponding to the tests 3 and 6 and the smallest value was of 5, corresponding to the prophylactic control from fourth month. The average value of the salivary pH at this group of age was of 5,2 which in percentage represents a value with 20% smaller than the

recommended value, resulting here a significant impact of the acidifying alimentation in forming the bacterial plaque, with cariogenic risk.

For the group of age 25 – 35 (figure 1) the greatest salivary pH value was registered at the prophylactic control from the third and fifth month, being of 5,5, value corresponding to the tests 3 and 5 and the smallest value was of 5,2, corresponding to the prophylactic control from second month. The average value of the salivary pH at this group of age was of 5,36 which in percentage represents a value with 17,5% smaller than the recommended value, resulting here a significant impact of the acidifying alimentation in forming the bacterial plaque, with cariogenic risk.

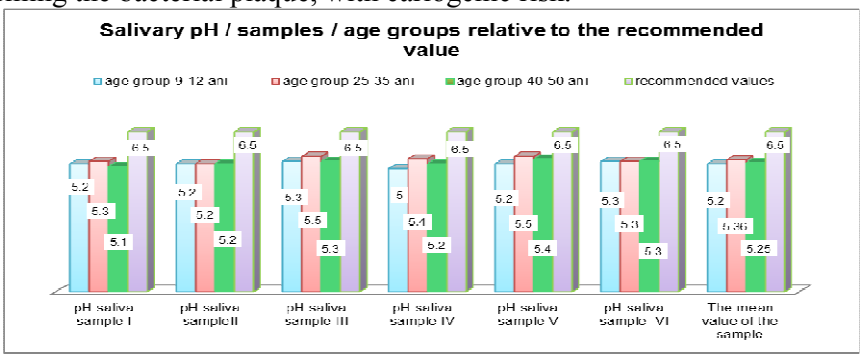

Fig. 1. Salivary pH by age group compared to the recommended value

The salivary pH can be maintained in the normal limits if on the level of the oral cavity are accomplished those cushion systems represented by bicarbonates, phosphates, proteins, mucin, with role of opponents on the modifications of pH that appeared for the introduction of the food in the oral cavity, respectively the substances of acid or alkaline type on the level of the oral cavity. Following the numerous researches was observed that the decrease of the salivary pH under 6,5 favors the appearance of the dental decay.

CONCLUSIONS

Following the study regarding the impact of the alimentation and food in forming the bacterial plaque, analyzing the salivary pH in relation with the type of alimentation was concluded that today more and more the alimentary combinations are predominantly of acidifying type, thus cariogenic and cariostatic alimentary combinations that induce the forming of bacterial plaque, affection that that as result the destruction of the dental calcified tissues, no matter the age.

The progression of the disease is made by a series of exacerbations and remissions, the exacerbations being characterized by a period of intense production of acid, responsible for the progressive destruction of the hard dental tissues and which finally leads to the infection of the dental pulp, the septic mortification of the pulp and then the focus disease, that can be sustained very well by an unbalanced alimentation, rich in sugars, carbohydrates and food products with acid potential. The alimentation and the food have an impact on the dental affections affecting the function of mastication that leads to the elimination from the daily diet of the food of stronger consistency as for example some fresh fruits and vegetables, this fact having a negative effect also on other apparatuses as it is, first of all, the digestive apparatus and implicitly on the health of the entire body.

The defective oral hygiene induces the spreading of the colonies of microbes with negative effects on the health condition of the oral mucous.

In the dentistry were researched a series of factors among which also the acid stress, but the researched regarding the impact of the alimentation of the bacterial plaque by the reducing of the nutrients that favor the increase and spreading of the bacteria was less analyzed, because the alimentary inquiries need time and seriousness from the patients in giving the information regarding the history, habits and the registering of the food most frequently consumed.

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