

A USEFUL INDEX TO EVALUATE THE DEGREE OF PERIODONTAL GUM DAMAGE

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ABSTRACT. The condition of the iatrogenic parodontium defines the lesions aspects generated by the potential iatrogenic factors along with determinant microbial factor. To evaluate the clinical and etiopathological aspects, of the iatrogenic periodontal determinations, we conceived an modified index that cumulates: the irritation index witch express the magnitude of iatrogenic irritation, with the plaque and tartar index meaning the retention and deposit of tartar, as well as the gingival index witch includes the evolutive aspects of gingival inflammation. In the same time the index allows an individual opinion in epidemiological studies of the qualities of dental restorations and oral hygiene.

KEY WORDS: cumulated index, dental restorations, periodontal disease, objective clinical examination, useful.

When adaptive capacity of marginal periodontitis is exceeded, along with the presence of lesions and morphoclinical issues, as a result of the iatrogenic factors action, in association with determinant microbial factor, we have as a result an iatrogeni periodontal condition.

In order to explore and evaluate the pathological aspects that defines iatrogenic periodontal condition, we resorted to an objective clinical examination based on inspection and palpation, as well as ordinary investigative means and at a range of well known indexes. Among these we mention: Silness and Loe's Plaque Index, Schous and Massler's Acute Marginal Parodontitis Index (PMA), Oral Hygiene Index (IHB) and Silness and Loe's Gingival Inflammation Index. Along with the indexes mentioned before, we also used an original index proposed by us: Index Of Irritation in association with Plaque and Gingival modified Index.

By this index we wanted to point out the iatrogenic factors and the microirritations leaded by them. We use the term of microirritation because the clinical and histopathological studies revealed the presence of progressive lesions passing from early forms into the worst, that reflects the permanently aggression of different intensity, during time.

In the structures of iatrogeni factors, we include direct and indirect microirritations witch frequently acts in association, on a periodontal ground with cannot adapt insults in a certain evolutionary stage.

This situation explains the large variety of iatrogenic forms of periodontal diseases, beginning

with low inflammation clinical forms leading to forms that implies total exhaustion of the tissues involved.

Morphological and clinical aspects of the periodontium coating are present in the area of irritation of the iatrogenic factors and reveals changes of color, volume, contour, consistence of the gums as well as the presence of periodontal pockets. It's important to know that not their genesis only establish the patogenicity of the bacterial plaque. This interpretation justifies why names such as „irritation gingivitis” or „gingivitis of tartar origin” are not accepted (Dumitriu).

From this point of view the direct microirritation generated by ebullient obturation or unadapted crowns, including dental plaque, can initiate an increase in volume with incremental deployment of marginal gum and interdental papila, without representing the main cause of inflammation, microbial factor being decisive and sometimes specific.

The above consideration have led to the development and use of our Irritation Index, Plaque Index and Gingival Index, modified in it's structure, each component defines it's own aspects.

Irritation index: embodies the characteristics of each iatrogenic factor expressed by intensity and aggressivity of the microirritations that affects marginal parodontium.

Modified plaque index: appreciates the value of deposit retention of plaque and tartar.

Modified gingival index: reveals gradually the macroscopic gum modifications

I.I., P.I., G.I. 0	
Irritation Index	0 = the absence of iatrogeni microirritation factors, in the area of irritation of the gums

Plaque Index	0 = the absence of iatrogeni microirritation factors, of the absence of plaque and tartar the gums
Gingival Index	0 = the absence of iatrogeni microirritation factors the normal appearance of the gums

I.I. , P.I. , G.I. 1	
The Irritation Index 1	The edge of the cavity filling or the crown penetrates up to 1 mm subgingival
The Plaque and Tartar Index 1	Supragingival tartar and plaque presence that extends more than 2 mm of the gum and subgingival residential up to 1 mm
Gingival Index 0 - 1	Mild inflammation of the gums with discreet color without bleeding edema

I.I. , P.I. , G.I. 2	
Irritation Index 2	Filling edge and Crown penetrate up to 1 mm subgingival
Plaque and Tartar Index 2	The presence of plaque and supragingival tartar halfway through the clinical or artificial crown and subgingival up to 2 mm.
Gingival Index 1-2	Moderate inflammation of the gums swelling redness caused by bleeding

I.I. , P.I. , G.I. 3	
Irritation Index 3	A filling or a crown edge in excess that penetrates more than 3 mm subgingival
Plate Index 3	Supragingival Bacterial plaque and tartar which is present in more than half of the clinical crown height and subgingival more than 2 mm
Gingival Index 3	Advanced inflammation, congestion, stasis, ulcerations, spontaneous bleeding.

We will reveal the cumulative index (Irritation Index, Plaque Index and Gingival Index), used to appreciate the iatrogenic parodontal state. We have patients with mono or bridge restorations.

II.I., I.P., I.G. 0

Irritation Index, Plaque Index and Gingival Index 0 = the absence of iatrogenic microirritation factors, in the area of irritation, and also the absence of plaque and tartar; the normal appearance of the gums. (Fig 1,2)



Fig. 1

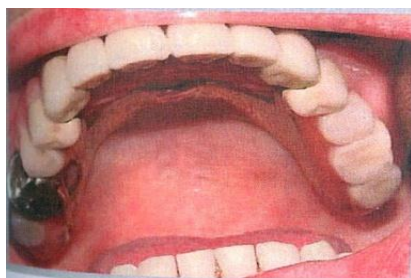


Fig. 2

I.I., I.P., I.G. 1

The Irritation Index 1

The edge of the cavity filling or the crown penetrates up to 1 mm subgingival. (Fig.3)

The Plaque and Tartar Index 1

Supragingival tartar and plaque presence that extends more than 2 mm of the gum and subgingival residential up to 1 mm.(Fig. 4)

Gingival Index 0 - 1

Mild inflammation of the gums with discreet color without bleeding edema debut (Fig. 5)

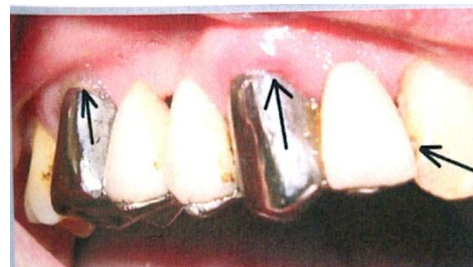


Fig. 3



Fig. 4



Fig. 5

I.I., I.P., I.G. 2**Irritation Index 2**

Filling edge and Crown penetrate up a 1 mm subgingival (Fig. 6)

Plaque and Tartar Index 2

The presence of plaque and supragingival tartar halfway through the clinical or artificial crown and subgingival up to 2 mm. (Fig. 7)

Gingival Index 1-2

Moderate inflammation of the gums swelling redness caused by bleeding

This plaque and supragingival tartar until halfway through the clinical crown or artificial and subgingival up to 2 mm. (Fig. 8)

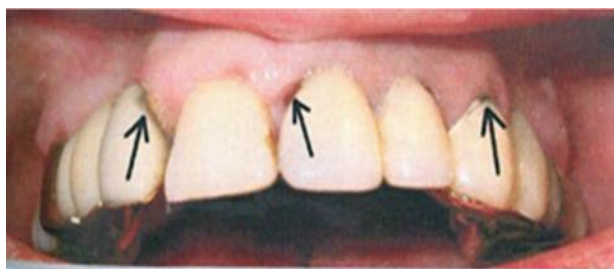


Fig. 6



Fig. 7



Fig. 8

I.I., I.P., I.G. 3**Irritation Index 3**

A filling or a crown edge in excess that penetrates more than 3 mm subgingival. (Fig.9)

Plaque Index 3

Supragingival Bacterial plaque and tartar which present in more than half of the clinical crown height or artificial and subgingival more than 2 mm. (Fig. 10)

Gingival Index 2-3

Advanced inflammation, congestion, stasis, ulcerations, spontaneous bleeding. (Fig. 11)



Fig.9



Fig. 10



Fig. 11

As we can notice, the index we propoused cumulates the primary iatrogeni and direct

microirritation factors such as unadapted fillings or crowns associated with bacterial plaque and tartar, as well as the characteristic lesions in an evolution scale noted from 0 to 3.

CONCLUSIONS

The modified irritation index, plaque index and gingival index assures the identification of the iatrogenic factors which have an irritative potential of the determinant, cumulative and correlate microbial factor with periodontal pathogenic lesions.

It is easy to use in clinical cases, with the possibility of being used in epidemiological studies which involves the modalities and qualities of the fillings and protetical crown restorations.

It is useful in appreciation and interpretation of periodontal stage damage, along with other indexes which define inflammation at this level.

It allows the appreciation of the way we should maintain a good oral hygiene in specially in the areas with protetic restorations.

Taking into consideration all of these elements, Irritation Index, Plaque and Tartar Index and modified Gingival Index we proposed, can be appreciated on a

valorical scale from 0 to 3, based on the data we obtained by clinical exam using the periodontal instruments such as pocket explorers.

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