ORAL PATHOGENIC MICROBIOME TEST

MICROBIOLOGICAL TEST for PLAQUE BACTERIA

Analysis number:	xxxxxx
Patient:	xxxxx
Date of birth:	xxxxxx
Sex:	xxxxxx
Collection Date:	xxxxxx
Dental Practice:	xxxxxx

In the aetiology of periodontal disease, bacteria play a fundamental role. As the classification of the very large number of existing bacterial species is very broad, they have been grouped, considering their common genes, into 'families' or 'complexes' defined with a colour, and which, in the table below, are identified with the letters A, B and C according to the colour of the complex they belong to.

Each stage of periodontal disease corresponds to a complex or group of bacteria, which are distinguished both qualitatively and quantitatively.

Each of the five periodontopathogenic bacteria listed in *Table 1* is physiologically present in the oral cavity. But when their quantity exceeds the threshold limit shown in the last column, we move towards a pathological condition that will lead to the development of periodontal disease.

Table 1

COMPLEX	BACTERIUM NAME	THRESHOLD LIMIT
🟢 A	**Aggregatibacter actinomycetemcomitans (Aa)**	1,E+04
🔴 B	**Tannerella forsythia (Tf)**	1,E+05
🔴 B	**Porphyromonas gingivalis (Pg)**	1,E+05
🟠 C	**Prevotella intermedia (Pi)**	1,E+06
🔴 B	**Treponema denticola (Td)**	1,E+05

Table 2 shows:

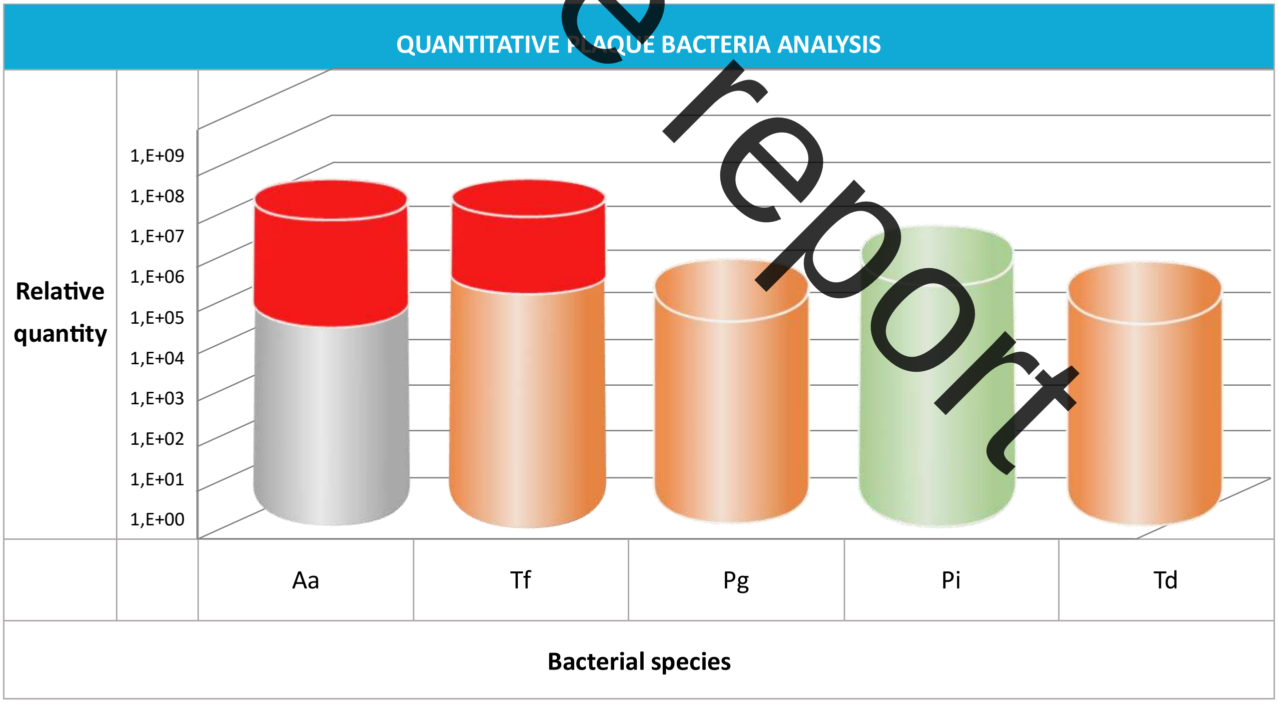
- the absolute quantities of the individual bacteria present,
- the prevalence of each individual bacterium (i.e. the amount of the bacterium in relation to the patient's total bacterial load),
- significance: by how many logarithms the prevalence exceeds the threshold limit (each '+' represents log10)

Table 2

COMPLEX	BACTERIUM NAME	QUANTITY	% DNA VS TOTAL BACTERIAL DNA	SIGNIFICANCE
🟢 A	**Aggregatibacter actinomycetemcomitans**	6,34E+06	6,34E-01	+++
🔴 B	**Tannerella forsythia**	7,11E+06	7,11E-01	++
🔴 B	**Porphyromonas gingivalis**	6,15E+05	6,15E-02	+
🟠 C	**Prevotella intermedia**	1,44E+06	1,44E-01	+
🔴 B	**Treponema denticola**	1,44E+06	4,13E-02	+

Table 3 shows, in graphic form, the results of Table 2:

Table 3



RESULT: **POSITIVE**

2 pathogenic species detected above threshold limits. Evidence of ongoing infection or reinfection.

Table 4 shows the clinical significance, derived from evidence in the international scientific literature, of associating PREVALENCE (amount of the specific bacterium normalised for the patient's total bacterial load) with a specific form of periodontal disease:

Table 4

PATHOGEN	CLINICAL SIGNIFICANCE
Aggregatibacter actinomycetemcomitans COMPLEX A	Strong association with MP. Invasive. Pathogen with relatively low bacterial load. Associated with aggressive, even juvenile or localised forms of the disease.
Tannerella forsythia COMPLEX B	Strong association with MP. Pathogen with proteolytic activity. Frequently associated with refractory periodontitis.
Porphyromonas gingivalis COMPLEX B	Strong association with MP. Invasive. Pathogen with relatively low bacterial load. Associated with aggressive forms of the disease.
Prevotella intermedia COMPLEX C	Strong association with MP. Detected in case of refractoriness of pathology. May be associated with ulcer-necrotic gingivitis.
Treponema denticola COMPLEX B	Strong association with MP. Invasive. Suspected to be an endogenous source of reinfection.

The scientific officer