

PERIODONTITIS (POLYMORPHISM IL-1)

MICROBIOLOGY

Periodontitis is provoked by anaerobic gram-negative bacterium, such as *Vacteroides forsythus*, *Porphyromonas gingivalis*, *Troponema denticolata* and by facultative anaerobic bacterium, such as *Acrinobacillus acrinomycetemcomitans*. Germs that cause the periodontitis are identifiable through the IAI Pado Test 4.5 (see "Microbiological diagnosis in periodontology"). This method allows to classify periodontitis in 5 different types, depending on the bacterial flora and on quantities of different bacterium. This analyses gives an indication about the necessity of an antibiotic cure.

PATHOGENESIS

Even though just some factor at risk are known (sex, smoke, stress and diabetes), it's not possible to explain the violence of the immune answer or the development of periodontal forms resistant to treatments. Studies on homozygotes twins show that the individual variability in the development of the gingivitis, in the deep of periodontal pouches, in the loss of the attachment and in the formation of tartar depend from the 38% to the 82% of cases on genetic factors. Among these genetic factors it can be included the production (increased or decreased) of some mediators of the inflammation, such as the interleukin-1. A recent study on patients of private dental studies highlights a correlation between a particular genotype of the interleukin-1 (positive genotype, present in 29% of North European population) and the severity of the periodontitis. This genotype is associated to an increase of the IL-1 production, which could explain the tendency to get ill in these patients. One third of patients with positive genotypes had a case with a serious periodontitis (more than 7 interproximal sites, with more than 50% of bone low and a bone loss average superior to 34%), against less than 10% in patients with negative genotype. In healthy subjects a positive result of the genetic test shows a high risk to develop the illness. Hygiene is in this case very important, such as regular visits y the dentist, in order to discover immediately the illness. Patients with a positive genotype which already have a case with periodontitis must be considered as patients at high risk to develop serious forms of the illness. The Recal intervals will be shorter than normally.

TEST

Highlight of polymorphisms IL-1A-889 and IL-1B +3953 by means of PCR and restriction analyses.

SAMPLE TAKING

Blood/EDTA, 5 ml or mouth smear.

EXECUTION

Daily.

COST

Upon request.

*Laboratorio
di diagnostica
molecolare*

Further information or bibliographic references can be asked to the laboratory.