

TEXTO 1**CHRONIC PERIODONTITIS AND AGGRESSIVE PERIODONTITIS**

For most patients with gingivitis, the inflammation does not progress beyond the gingival margins; however, 10–15% of patients are susceptible to a more destructive process known as chronic periodontitis. In the most recent UK Adult Dental Health Survey (1998) it was found that 54% of dentate adults had some periodontal pocketing of 4 mm or more, and 5% had deep pocketing (6 mm or more); 43% had some loss of attachment of 4 mm or more and 8% had loss of attachment of 6 mm or more. The prevalence of pocketing and loss of attachment increased with age. For example, the proportion of dentate adults with some loss of attachment increased from 14% among those aged 16–24 years to 85% of those aged 65 and over.

The initiation of periodontitis in an individual is thought to be due to a gene polymorphism, which causes a change in the behaviour of cytokines, substances that regulate the movement of immune system defending cells. This behaviour change leads to the destruction of bone and connective tissue, which usually takes place very slowly, and is mostly asymptomatic, so that affected teeth may lose their attachment to the bone over a period of 30–50 years. The genetic element explains why chronic periodontitis frequently affects several members of the same family.

The most important known risk factor for periodontitis is cigarette smoking. Smokers have more periodontal problems than non-smokers, and the results of treatment are poorer in smokers. This is thought to be due to a reduction in gingival blood circulation (which results in a reduction in bleeding on both brushing and probing in smokers); impaired white blood cell mobility and function; impaired wound healing and an increased production of inflammatory substances (cytokines), particularly due to nicotine, which results in an increased production of collagenase.

Older patients are more likely to have periodontitis than younger patients due to many years of exposure to plaque and to the various risk factors known to be associated with periodontitis.

Among the relatively small proportion of the population who are susceptible to periodontitis, a small sub-group suffers more rapid bone destruction, so that by the age of approximately 35, they may have lost half of their total tooth attachment; this can be clearly seen on radiographs. This condition is known as aggressive periodontitis and it may affect all the teeth equally, only incisors and molars, or even just a small number of isolated teeth. This highly destructive form of periodontitis is characterised by rapid attachment loss with destruction of the periodontal ligament and supporting bone in an otherwise healthy young adult usually below the age of 35, but older patients may be affected. There is often a familial tendency and this condition is thought to be associated with high levels of specific bacteria, notably *Actinobacillus actinomycetemcomitans* and *Porphyromonas gingivalis*. There is some evidence of altered leucocyte function and also increased production of some immune system mediators.

Aggressive periodontitis, formerly known as early onset periodontitis, frequently presents with a lack of overt gingival inflammation, relatively good oral hygiene and low levels of visible plaque, which is inconsistent with the aggressive nature of the disease, and the diagnosis can therefore easily be missed. Clear signs of supporting bone loss are to be found on radiographs, however, and these should therefore be scrutinised in all cases. Vigilance is required on the part of the dentist, therapist and hygienist to ensure that aggressive cases are diagnosed as early as possible.

Aggressive periodontitis is rarely seen affecting children below the age of puberty. When it does occur at this age it is known as pre-pubertal periodontitis.

Localised and generalised forms of aggressive periodontitis are recognised corresponding to the older terms rapidly progressive periodontitis and localised juvenile periodontitis. Localised aggressive periodontitis (LAP) involves the incisors and molars, with onset around or soon after puberty, and is characterised by interproximal attachment loss on at least two permanent teeth, one of which is a first molar, and involving no more than two teeth other than first molars and incisors. Generalised aggressive periodontitis (GAP) usually has a later onset, before the age of 30, and is characterised by generalised attachment loss involving at least three permanent teeth other than first molars and incisors. There is a more episodic nature to the progress of GAP.

Most studies put the prevalence of aggressive periodontitis among 13–20-year-olds at well below 1%; however, this still represents a large number of people who may be affected and the disease is so destructive that early detection, by means of periodontal screening for all teenagers, is essential in the protection of those individuals who may develop this condition. Vigorous treatment, including mechanical plaque removal and systemic antibiotics, can be just as successful in controlling these conditions as it is in controlling the more common forms of periodontitis.

Fonte: Adaptado de: Ireland, R. **Clinical Textbook of Dental Hygiene & Therapy**. Oxford, U.K.: Blackwell Publishing, 2006, p. 104-7.

TEXTO 2

NEW TYPE OF BED NET COULD HELP FIGHT AGAINST MALARIA

The two-year clinical trial in Burkina Faso, West Africa involving 2,000 children showed that the number of cases of clinical malaria was reduced by 12 per cent with the new type of mosquito net compared to the conventional **one** used normally. Children sleeping under the new bed nets were 52 per cent less likely to be moderately anaemic than those with a conventional net. Malaria anaemia is a major cause of mortality in children under two years old. In areas with the new combination bed nets, there was a 51 per cent reduction in risk of a malaria-infective mosquito bite compared to areas with conventional nets.

Blood-seeking malaria mosquitoes (female *Anopheles* mosquitoes) are increasingly becoming resistant to the most common insecticides, called pyrethroids, used to treat traditional bed nets. Latest figures from the World Health Organisation (WHO) show that after a dramatic decrease in malaria since the start of the millennium, progress has stalled and the number of people infected with malaria is now going up in some areas, with insecticide-resistant vectors as one of the possible causes of **this**.

The researchers suggest the use of bed nets with a combination of chemicals should be explored for areas where mosquito resistance is a problem. The new combination nets used in the study contain a pyrethroid insecticide which repels and kills the mosquitoes as well as an insect growth regulator, pyriproxyfen, which shortens the lives of mosquitoes and reduces their ability to reproduce. In combination, the ingredients on the nets kill more mosquitoes and reduce the number of infective bites than conventional nets treated only with a pyrethroid. **As** it is less likely that mosquitoes become resistant to both chemicals in the combination bed nets, they are considered a better alternative to tackling malaria in areas where mosquitoes have become resistant to the single chemical used in traditional bed nets.

Professor Steve Lindsay, from the Department of Biosciences at Durham University in the UK, said: "This study is important because malaria control in sub-Saharan Africa has stalled, partly because the mosquitoes are adapting and becoming resistant to the pyrethroid insecticides used for treating the old bed nets. In our trial in Burkina Faso we tested a new type of net that had a pyrethroid plus an insect growth hormone, which was significantly more protective than the old net type. If we had scaled up our trial to the whole of Burkina Faso we would have reduced the number of malaria cases by 1.2 million. Malaria still kills a child every two minutes so we need to keep working to find the best ways to stop this from happening. It is clear that conventional methods used for controlling malaria mosquitoes need to be improved and new additional tools developed."

The latest **figures** from the World Health Organisation show that in 2016 malaria infected about 216 million people across 91 countries, up five million from the previous year. The disease killed 445,000 which was about the same number as in 2015. The majority of deaths were in children under the age of five in the poorest parts of sub-Saharan Africa.

This study is the first clinical trial that has compared a bed net with two active ingredients, a pyrethroid plus an insect growth hormone, against the traditional widely-used nets treated with the pyrethroid insecticide alone.

Principal investigator in the field trial, Dr. Alfred B. Tiono, from the Centre National de Recherche et de Formation sur le Paludisme in Burkina Faso, commented: "We have seen our gains in the battle against malaria progressively lost with the emergence and spread of resistant mosquitoes. The results from this trial gave us a new hope."

"This new invaluable tool would enable us to tackle more efficiently this terrible and deadly disease that affects many children. If deployed correctly, we could certainly prevent millions of cases and deaths of malaria. On behalf of our team, we would like to thank our health authorities and the trial participants for helping us towards reaching this major milestone."

Bed nets are crucial to protect people from malaria and the researchers stress that people in affected areas should always sleep under a bed net, whether that is a conventional or a combination type.

Fonte: Adaptado de: **New Type of Bed Net Could Help Fight Against Malaria**. Disponível em: <https://medicalxpress.com/news/2018-08-bed-net-malaria.html> Acesso em: 08 ago 2018.

QUESTÕES

As questões de 1 a 5 referem-se ao TEXTO 1:

1) Os dados da pesquisa mencionados no primeiro parágrafo mostram que

- (A) mais da metade dos adultos dentados não apresentou bolsa periodontal.
- (B) mais da metade dos adultos dentados apresentou perda de fixação de 6 mm.
- (C) o percentual de adultos dentados com bolsas profundas foi maior do que o com perda de fixação.
- (D) o percentual de perda de fixação foi maior entre os adultos dentados de 65 anos ou mais.

2) Pode ser decorrência do tabagismo o/a

- (A) diminuição da inflamação gengival.
- (B) diminuição da formação de placas.
- (C) diminuição de sangramento gengival.
- (D) aumento da mobilidade dentária.

3) O que pode dificultar o diagnóstico da periodontite agressiva?

4) Quais características distinguem a periodontite agressiva localizada da periodontite agressiva generalizada?

5) Sobre a periodontite crônica e a agressiva, podemos afirmar que

- (A) o fator genético pode ser uma das causas de ambas.
- (B) os adolescentes e jovens são os mais afetados por ambas.
- (C) o diagnóstico precoce não evita a perda do dente em nenhuma das duas formas da doença.
- (D) bactérias específicas não estão presentes em nenhuma das duas formas da doença.

As questões de 6 a 10 referem-se ao TEXTO 2:

6) As afirmativas abaixo são resultados da pesquisa, EXCETO:

- (A) As crianças que usam o mosquiteiro convencional correm mais risco de desenvolver anemia.
- (B) Os novos mosquiteiros ajudaram a reduzir em mais da metade o risco de picadas infecciosas.
- (C) A anemia decorrente da malária é a maior causa de mortalidade entre crianças até 2 (dois) anos de idade.
- (D) Os casos clínicos de malária diminuíram em 20% após o uso do novo mosquiteiro.

7) Qual o diferencial do novo mosquiteiro?

8) Analise as seguintes afirmativas sobre a malária, de acordo com as informações constantes no texto.

- I. O número de casos diminuiu no início do milênio.
- II. Uma criança é vítima fatal da doença a cada dois minutos.
- III. O número de casos aumentou, possivelmente, devido a vetores resistentes ao inseticida.
- IV. Seu controle estagnou na África Subsaariana.

São VERDADEIRAS:

- (A) apenas I e II.
- (B) apenas II e III.
- (C) apenas I, II e III.
- (D) TODAS.

9) O que o Dr. Alfred B. Tiono espera alcançar a partir do novo experimento?

10) É CORRETO o que se afirma em:

- (A) *one*, destacado no 1º parágrafo, refere-se a mosquiteiro.
- (B) *this*, destacado no 2º parágrafo, refere-se a inseticida.
- (C) *As*, destacado no 3º parágrafo, pode ser substituído por *like* sem prejuízo de significado ao parágrafo.
- (D) *figures*, destacado no 5º parágrafo, pode ser substituído por *pictures* sem prejuízo de significado ao parágrafo.

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