In a report, researchers of the Global Burden of Diseases, Injuries, and Risk Factors Study have recently shed light on the global dimensions of severe periodontitis, which now affects over 700 million people worldwide. This study is a major effort involving more than 1,000 scientists to systematically produce comparable estimates of the burden of 291 diseases and injuries and their associated 1,160 sequelae in 1990, 1995, 2005, and 2010.

Dental Tribune: Prof. Marcenes, from Barts and The London School of Medicine and Dentistry in London about the findings and why they are a cause for concern.

Dental Tribune: Prof. Marcenes, the prevalence of severe periodontitis on a global scale has not increased significantly in the last two decades, according to your report. Why are the numbers worrying nevertheless?

Prof. Wagner Marcenes: Having more than 700 million people suffering from severe periodontitis is really worrying. Although the proportion remained the same in 1990 and 2010, the number of people needing periodontal treatment has increased dramatically. This is because worldwide more than one in ten people suffer from severe periodontitis and the world population grew from 5.3 billion in 1990 to 6.9 billion in 2010. Moreover, severe periodontitis tends to develop during adulthood, showing a steep increase between the third and fourth decades of life. With more people living longer and retaining their teeth for life, the risk of developing severe oral health-related problems, particularly periodontitis, will be high. The world’s population is expected to almost double by the end of this century, implying that the number of people with severe periodontitis may at least double.

We use the measures adopted by the World Health Organization, which are considered by most as the most reliable indicators of severe periodontitis. We endeavored to reflect the measures adopted by the larger community of public health dentistry.

How do the results compare to the situation prior to the surveyed period?

We have updated the data from the first Global Burden of Disease (GBD) study and generated comparable figures in 1990 and 2010. Therefore, we were able to compare the current and the previous situation to our survey in 2010. Since the study is unique, we do not have global data before the first GBD study. However, we know that oral diseases have decreased significantly in most industrialized countries such as the UK and the US, in the last five decades.

Severe periodontitis appears to be most prevalent in South America and east sub-Saharan Africa. What could be the reasons for that?

Our study was not actually designed to test risk factors of periodontal disease, but based on pure reasoning, I would say that, in addition to demographic changes, smoking and poor oral hygiene may be the main factors associated with it. This is speculation, but what we see at the moment is a growing number of people smoking in developing regions contrary to the trend in most developed countries. Nearly 80 per cent of the more than one billion smokers worldwide live in low- and middle-income countries. With 1,500 new cases every year, Argentina for example has the highest incidence of severe periodontitis, which is almost double the global average, and high tobacco consumption. We cannot ignore that.

In your report, you mention how difficult it is to determine disease prevalence owing to different classification systems. Is your representation of the situation therefore a realistic one?

I am confident our report provides a realistic, comprehensive assessment of the global burden of severe periodontitis. After much consideration, we used a Community Periodontal Index of Treatment Needs score of 3, a clinical attachment loss of greater than 6 millimetres or a pocket depth of more than 5 millimetres as indicators of periodontitis. We used the measurements adopted by the World Health Organization, which are considered by most as the most reliable indicators of severe periodontitis. We endeavored to reflect the measures adopted by the larger community of public health dentistry.

Why is the situation so little addressed by the dental community, and how could it be better addressed?

The fact that a preventable oral disease is the sixth most prevalent of all 291 diseases and injuries examined in 2010 GBD is quite disturbing and should cause all of us to redouble our efforts to raise awareness of the importance of oral health among policymakers. It is reasonable to prioritize life-threatening diseases that have a greater impact on quality of life; however, it is unacceptable to neglect severe oral diseases. Untreated caries in the permanent dentition is the most prevalent of all oral diseases and periodontitis the sixth, and untreated caries in the primary dentition is the tenth most prevalent disease in the world.

It is possible that the prevention and treatment of periodontitis are neglected because most health strategies target children at school and severe periodontitis is uncommon before the age of 30. I believe we need to seriously consider a change in strategy and target the adult population. Also, we should focus on determinants of health rather than the disease itself.

We call this the common risk factor approach. For example, many dental practices in the UK run smoking cessation programmes. This will not only reduce the number of cases of periodontitis but also help prevent life-threatening diseases, such as cancer and cardiovascular disease. Adopting the common risk factor approach would lead to the inclusion of oral health in the top five most relevant diseases. This is because oral diseases and serious life-threatening diseases share the same determinants, for example smoking, hygiene and diet.

Thank you very much for the interview.

“With more people living longer and retaining their teeth for life, the risk of developing severe oral health-related problems, particularly periodontitis, will be high.”

— Prof. Wagner Marcenes