

Introduction

Inflammation: is it a threat to your patients?

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In this special issue we publish the content of the lectures that were presented at the FDI Symposium “Inflammation: is it a threat to your patients”, in September 2008 in Stockholm, Sweden. The location of this 2008 FDI meeting in Stockholm coincided with the centennial anniversary of the Swedish Dental Association.

Early on in the planning of this symposium I was engaged as the chairman, and in that capacity it was my pleasure and duty to keep in contact with all the speakers. This distinguished group included Professor Emeritus Harald Löe. Eighty-two years young, he was compiling new data, in preparing the manuscript “Gingivitis as a risk factor in periodontitis” Lang et al. (2009) with his co-authors. During this period I had several e-mail and telephone exchanges with Dr. Löe, and I was amazed by his unbounded enthusiasm. He confided to me that his presentation at this FDI meeting, and the symposium on inflammation, would be his opportunity to submit his professional will and testament, in relation to the role of dental plaque biofilm, chronic gingivitis and resulting tissue destructive periodontitis. We were all

awaiting this occasion with high expectations.

Nothing is known of one's destiny. Just a few weeks before the FDI meeting, the news reached us that Harald Löe had passed away suddenly, at his home in Norway.

A few years back I had an opportunity to visit Harald Löe in his home, just outside Oslo in Norway, to conduct an interview for the *Journal of The Swedish Dental Association* (Klinge 2006). To help memorize the interview I recorded our conversation on tape. In the process of writing this introduction I manage to find the recording and Harald Löe's voice now fills my study, answering my question about how the whole gingivitis story began: “I must say that the conception that oral hygiene should improve gingival and periodontal health was a very simple principle. As a matter of fact it was so trivial and down-to-earth that there were many who did not want to participate in such a simple project. I had both feet firmly on the ground from my days in Oslo with Jens Waerhaug, to understand there was a missing piece in the jigsaw puzzle. Something has to happen from a healthy gingival condition to the pathologic tissue destructive situation in periodontitis. We just have to find out and understand what this is all about”. Much of the rest now is history, but still some pieces are lacking in this jigsaw puzzle.

The Symposium on Inflammation at FDI 2008 and this special issue, sponsored by Johnson & Johnson Ltd. (Maidenhead, UK), is dedicated to Harald Löe and to his never-ending energy and enthusiasm in the search

for deeper understanding of the seemingly simple biologic principle of gingivitis and destructive periodontal tissue inflammation.

The first paper in this special issue is consequently the report by Lang et al. (2009) The report suggests that clinically healthy gingiva is a prognostic indicator of tooth longevity. In contrast to this, it is clearly established that gingival inflammation be considered a risk factor for tooth loss. Teeth that were consistently surrounded by gingivitis at all observations during the 26-year observation period, were at significantly higher risk of being lost when compared with teeth with no or only minute inflammation.

In the next paper, Renvert and Persson (2009) address the issue of periodontitis as a potential risk factor for peri-implantitis. The available data are limited as yet, but the authors conclude that subjects with a history of periodontitis may be at greater risk for peri-implant infections. It is stressed that new studies in this area must include larger study populations than hitherto available.

Periodontal inflammation (i.e. periodontitis) has been associated with increased risk of cardiovascular events. In his article Maurizio S. Tonetti (2009) explores this relationship from the perspective of intervention trials. This survey indicates that intensive periodontal therapy results in decrease in parameters of systemic inflammation. Since periodontitis has been shown to also exert systemic influence, the prevention and treatment of periodontal inflammation may reduce factors criti-

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cal in the initiation and development of cardiovascular pathology such as atherosclerosis.

The review by Öhrn and Sanz (2009) deals with preventive and therapeutic approaches to effect gingival inflammation. In general, it seems as if dentistry has been quite successful in conveying a health-promoting message. However there is limited knowledge on how best to deliver preventive regimens in order to achieve the best outcome. To prevent inflammation and to treat established gingivitis, chemical and mechanical plaque control approaches are used. Various aspects of these methods are presented in this review.

Looking back at three decades of clinical activities it is my impression that we are at risk of weakening our preventive and therapeutic approach in dealing with gingival inflammation. The introduction of new reconstructive therapies seems to have shifted our focus away from early intervention to reduce inflammation. Prevention and treatment of gingivitis seems less 'high fashion', if the expression is interpreted correctly. Hopefully I will be proven wrong. However, to make my point clear I have subjectively selected one publication; Abrahamsson et al. (2006), in an epidemiological survey analysed the periodontal conditions of 19-year-old individuals in an urban area of Sweden.

The individuals in this randomized sample were clinically examined with regard to oral hygiene, gingivitis, periodontal pockets, probing attachment loss (PAL) and gingival recession. A questionnaire-based interview regarding oral hygiene habits was included. The subjects showed a mean plaque score of 59% and a gingivitis score of 44%. Seventy per cent of the adolescents had a plaque score of $\geq 50\%$, whereas the corresponding figure for gingivitis was 37%. If these data do not only represent a significantly aberrant population, the figures are worthy of our thoughtful and constructive ideas and action, not least from the perspective of long-term local and systemic effects.

It should not be forgotten that inflammation is a biologic reaction to protect us and it has at least two faces: one in relation to tissue destruction and another related to healing and tissue regeneration. So inflammation is not simply and entirely bad.

As is elegantly shown in the articles of this special issue, most available data point in the direction of significant impact on the role of gingival inflammation, for local tissue destruction and also for exerting systemic influence. The way I interpret the available scientific data today: Yes – inflammation is a threat to our patients.

This is now all the past. You can have the future. We all have a responsibility to manage the legacy.

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