

their discovery, many investigators world wide have defined the morphogen receptors, signal transduction pathways, and their role in several organs. Recently, the use of recombinant human BMPs in the regeneration of long bones and the craniofacial skeleton in patients with bone non-unions have been approved in Europe, USA, Canada and Australia. In pre clinical studies it has been demonstrated that locally applied BMP-7 initiates cementogenesis, and the regeneration of periodontal ligament and the alveolar bone. CDMPs have a promising role in articular cartilage regeneration and are also good candidates for clinical trials in humans.

16. Prosthodontics in the Third Millenium

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The current trends in Prosthodontics will doubtless continue to develop. Can these trends, as regards central areas of prosthodontics, then be identified as community aspects, biological aspects, biomechanical aspects and quality of life aspects?

We can consider Prosthodontics in a micro perspective - the treatment of the individual patient or oral cavity or in a macro perspective - the use of prosthodontics on a population basis, or even on a global basis. Can we expect the developing countries to catch up with the industrialised countries, and can we expect the highly developed countries to have less need of prosthodontic services during the new millenium just started?

Many other questions can be raised when we try to look into the future:

- Will the speciality of Prosthodontics develop and be approved in more countries, and will the need for these specialists increase or decrease?
- Will the character of Prosthodontics as an academic discipline change?
- Will EPA still be an important society in the future?
- Will mankind survive the next millenium shift in 1000 years' time?

We can dream about the far future, but perhaps it is wiser to be realistic and only try to make forecasts for the next few decades - which seems difficult enough in itself.

Are there any high mountains to climb or deep ravines to cross before we meet again in Geneva in September 2003?

ORAL PRESENTATIONS

17.

Overloading of Dental Implants: a Myth or Reality?

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INTRODUCTION: Dental implants have reported success rates of over 90% over long periods of time. However, failures still occur and seem to be unpredictable. One factor that is increasingly considered a strong candidate in failure of dental implants is occlusal loading. Overloading of dental implants during functional and parafunctional activity has been extensively discussed from the clinical point of view, but little scientific evidence.

AIM: The aim of this article is to review literature related to loading and overloading implants through masticatory and parafunctional activity, in order to attempt to clarify causality of overload in relation to implant failure. **Materials and Methods:** All types of publications, published in English up to December 2001 were included. Pubmed search was done using various keywords and the "related article" feature. All identified publications and *in vivo* studies were reviewed but case studies were excluded.

RESULTS AND DISCUSSION: Osseointegrated implants can fail due to very high occlusal load under experimental conditions. However, the safe and the overload levels are not known. What is clear is that loss of osseointegration is more frequent in early implant loss in the presence of micromotion. Apart from this, it is difficult to find a clear relationship between loading and *in vivo* tissue response.

CONCLUSION: Within the context of the published literature, the consensus on overloading of dental implants is still an unresolved issue. It can be concluded that more research is required to reach a better understanding on the relationship between overload and interfacial biomechanics. Nevertheless, the clinician should be aware that increased loading, associated with parafunctional activities, has a higher risk of biomechanical complications.