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日 時: 2006 年 4 月 17 日(月) 16 時 00 分~17 時 00 分

場 所: 実習館 2 階総合歯科医学研究所セミナールーム

演 者: **Professor Hans-Göran Gröndahl**

(The Sahlgrenska Academy at Göteborg University, Sweden Professor and Head)

タイトル: **Experiences of Cone Beam CT in Dental Diagnosis**  
(**歯科診断における小型 X 線 CT (3DX) の使用経験**)

A few years ago a new technique, called cone beam CT, or digital volume tomography, became available for the dental practitioner. This, no doubt, represented an important breakthrough in dental radiographic diagnosis. Conventional radiography has important drawbacks in that three-dimensional anatomical structures become "compressed" into a two-dimensional image and that surrounding structures, in the direction of the x-rays, become overlaid on them. Furthermore, conventional radiography results in different degrees of distortions. In an effort to overcome some of these disadvantages dentistry-specific conventional tomographs were constructed. They have been of great value not least for the pre-surgical evaluation of the implant patient but for acquisition of tomographic images in different planes several exposures are needed. In some cases computed tomography can be of value in dental patients. As a rule, however, most lesions in the dental regions are limited in size. Thus CT-examinations mean that large regions outside the region of interest become radiographed resulting in unnecessarily high radiation doses. In addition, CT examinations are expensive and often not readily available.

Equipment, small enough to fit into a dental office, providing radiographic information of jaws and teeth in all three planes by one exposure by means of a limited amount of radiation could only be dreamed of some years ago. Now, the dream has come true.

About two and a half years ago, a cone beam CT unit (Accu-I-Tomo, J. Morita Co, Kyoto, Japan) was installed at the Department of Oral and Maxillofacial Radiology at Gothenburg University, Sweden. The examinations that can be made with this unit are some of the most sought-after examinations of all from, for example, the departments of endodontics, orthodontics, pedodontics and oral surgery.

In the lecture, examples of examinations from many different types of patients will be presented and discussed. Several scientific studies are being performed to evaluate the significance of the 3D information yielded by the technique. However, from the point of view of a long-time clinical radiologist: this is a technique that will forever change the view we have on dental radiological diagnosis.