## COMMENTARY

RADIOGRAPHICAL EVALUATION OF THE GAP AT THE IMPLANT-ABUTMENT INTERFACE

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This study dealt with the effectiveness of radiographic detection of marginal gaps at the implant-abutment interface. Using two different standardized gaps the authors then changed the angulation of the X-ray beam to see when the gap was detectable from multiple angles. This is an article that helps show the readers that it is very important to make sure that the angulation of the X-ray beam be as parallel as possible to the long axis of the abutment implant connection.

Although the conclusion was already known, in that the clinician should always use a paralleling device in order to achieve greater detection of the presence of the gap, it is always nice to have this verified by solid research protocols. The main problem with this study is that there were too many variables: two different gap distances, two different types of implants (internal and external connection), three different levels of visual inspection, and 13 different angles of the radiographs. However, it was clearly done despite all of these multiple variables superimposed on each other.

The other aspect that was mentioned in the article, but certainly needs to be emphasized for the readers, is the difficulty of getting parallel X-rays in some patients. Anatomic problems such as a large torus, a shallow palate, an unusually shaped ridge, or severe ridge resorption can all contribute to this problem. In fact, when we first started doing implants in the 1980s we were mostly treating fully edentulous cases with severely resorbed ridges. One of the key problems with the fitting of the bridges on these cases was to get X-rays that were parallel to the implants. This was because the floor of the mouth was blocking the proper placement of the X-ray and the paralleling device. This is a perfect example of the problem that the clinician faces in practice every day. My congratulations to the authors for showing us the necessity of trying to get as parallel as possible in order to evaluate the gap at the implant-abutment interface.

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