The goal of scaling and root planing is to remove both hard and soft deposits that contribute to inflammation. Subgingival instrumentation is generally done blindly by dental hygienists and with direct vision by periodontists during flap surgery. According to the research, removing all the Subgingival calculus deposits is difficult, if not impossible, for both hygienists and periodontists. The use of a periodontal endoscope has shown that calculus deposits can be smooth and as small as glitter.

Researchers at the University of Minnesota compared blind Subgingival instrumentation with endoscope aided instrumentation. A group of 26 patients with moderate periodontal disease participated. Following a split-mouth design, one quadrant was treated with hand and power instruments alone and a second quadrant was treated using hand and power instruments plus the aid of an endoscope. Subjects were evaluated again at six to eight weeks and then after three months.

The reduction in the gingival index scores was significantly greater for the endoscope group than for the control group. Bleeding upon probing was also reduced significantly more in the endoscope group.

Both test and control groups showed reduced probing depths: 1.74mm reduction in the endoscope group and 1.56mm reduction in the control group. Greater pocket depth reduction was anticipated, but according to the study authors, these study subjects as a group were generally not compliant with oral hygiene instructions. This may explain less than anticipated probing depth reduction.

Clinical implications: Use of the endoscope with scaling and root planing, compared to blind instrumentation, leads to improved oral health measured by bleeding and gingivitis scores.

Subgingival calculus needs to be removed as part of effective periodontal therapy. In order to successfully remove Subgingival calculus, it must first be detected. Since Subgingival calculus provides a porous retention site for bacterial biofilm, complete Subgingival calculus removal is desirable to achieve periodontal health. Complete detection and removal of Subgingival calculus is difficult using only tactile sensitivity. The periodontal endoscope provides a magnified view of both the Subgingival root surface and the opposing sulcular tissue. Images magnified from 24X to 48X provide more effective calculus detection before and after scaling and root planing.

Researchers at the University of Minnesota compared the traditional explorer evaluation of Subgingival surfaces to calculus evaluation using the endoscope. A group of 26 university patients with moderate periodontal disease each provided two quadrants for study. For each patient, one quadrant was evaluated with an explorer and the other quadrant was evaluated using the endoscope. Scaling and root planing were done with hand and power instruments. The sites evaluated with the endoscope were also instrumented with the aid of the endoscope. Patients were seen for three visits. Re-instrumentation was provided where indicated at the second and third visits.

Both the endoscope and the explorer detected significant changes from the first to the second visit, after initial instrumentation. However, the endoscope detected more calculus than the explorer at each evaluation. The visual and magnification aspects provided added benefits over tactile sense alone.

Clinical implications: A periodontal endoscope enhances Subgingival calculus detection with a magnified visual component. The financial investment provides a better tool to visualize Subgingival surfaces and detect calculus.

Patients value periodontal probing scores

Probing scores are part of the full periodontal examination. Dental hygienists provide this service for new patients and some repeat the probing scores at each visit while others provide it yearly.

A dental hygienist wanted to find out what patients thought about these probing scores and if they wanted or valued the information. One hundred consecutive patients in a general dental practice were asked to complete a short questionnaire after their regular dental hygiene visit, which included periodontal charting and discussion of the findings.

Patients varied in age from 20 to 83 years and were either new or had been with the practice for as long as 23 years. The periodontal examination included probing scores, recession, attachment levels, furcations, mobility, bleeding, suppuration and a review of the radiographs.

Measurements were taken with a Marquis probe and entered into the computer using the Dentrix program. Following data collection, the chart was printed for the hygienist to review with the patient. Health and disease were discussed and any change in oral hygiene was presented. Needed treatment was also presented at this time.

All of the 100 patients felt the periodontal charting was helpful to them and all wanted the measurements repeated at future dental hygiene visits. When asked about making changes to their daily oral hygiene, 93 percent found the probing scores helpful while 7 percent did not. Of these seven patients, four reported their numbers were good so no change was needed and three noted they were lazy and unmotivated to change.

Clinical implications: Periodontal probing scores taken at each hygiene visit and discussed with the patient provide a valuable service and roadmap for treatment.

Humphrey, L.: Do Patients Feel Gum Measurements at Hygiene Visits are Helpful for Them? OHU Action Research Project, 1B-14, 2014.

Appearance, interest of care giver predict special needs patient’s oral health

People with special needs are at higher risk of dental disease than others, and often have to be restrained to perform oral hygiene or dentistry.

Researchers at the Santiago de Compostela University in Spain wanted to know if the personal appearance of the care giver and their attitude toward oral health would predict the oral health status of their special needs patient. They evaluated the oral health of 60 patients coming for the first time to the Special Needs Dentistry Unit of the dental school. A non-invasive, visual examination was done on each of the special needs patients. The care givers were asked to complete a questionnaire. The care givers were also observed for cleanliness of their hair, finger nails, shoes, clothes and their anterior teeth. Another observation of five points was done as the oral health examination and oral hygiene instructions were presented to them, noting their interest, questions and attitudes.

More than half of care givers scored good or very good on the personal appearance evaluation. An even higher number, 72 percent showed a high level of interest in the oral health of the special needs person. No interest was shown by only 8 percent of the group. Only 20 percent of care givers had received formal instruction in how to provide oral hygiene to a person with special needs.

Clinical implications: The appearance and interest shown by a care giver can predict the oral health level of the person with special needs in their care.