When assessing for peri-implant disease, “bleeding on probing” (BOP) is invaluable in the diagnostic process for peri-implant mucositis, and probing depths are valuable in assessing loss of bone support around osseointegrated implants. An important yet controversial component of the assessment is probing the dental implant. Some implant surgeons recommend not probing the implant, or waiting three to six months following abutment attachment to avoid disrupting the perimucosal seal. The perimucosal seal is fragile, and penetration during probing can introduce pathogens and jeopardize the success of the implant. Recent studies show that 0.15 N may represent the threshold pressure to be applied in order to avoid false positive BOP readings around oral implants. Currently, clinicians are using 0.15 N–0.20 N of pressure, but most agree that probing around dental implants is more sensitive than probing natural teeth; thus, caution should be used.

Emerging research holds that probing is not harmful, however, and is actually essential to the overall health of the implant. Complete regeneration of junctional epithelium and establishment of new epithelial attachment has been studied, revealing that probing around osseointegrated implants does not appear to have detrimental effects on the perimucosal seal. Peri-implantitis infections occur in 28 to 56 percent of implants after five years. An increase in reported cases of peri-implant diseases (collective term for inflammatory lesions, mucositis, and peri-implantitis) is a significant reason for monitoring and probing dental implants.

The hygienist needs to know baseline measurements to be able to distinguish health from disease, or loss of osseointegration. This can give the hygienist a way of determining at recall visits whether detrimental changes have occurred. Also, if more than one hygienist is employed in the office, measurement with compatible probes in millimeters for all inflammation, exposed threads, or bone loss on films allow for more accurate monitoring and consistency.

There is a recommended protocol for probing dental implants. First, the complexity of implants makes the flexibility of the probe essential. Now with more platform-switching implants, narrow implants, and fixed prostheses, the tip needs to be flexible to follow the anatomy of the implant and get an accurate reading. Using a flexible plastic probe reduces the potential for trauma to the perimucosal seal and the risk of scratching the implant’s surface (Fig. 1).

Figure 1: Note difference in flexibility between metal probe (left) and plastic probe (right)

Courtesy of PDT Inc.
Second, record a probe baseline measurement, at a specific location, to establish a clinical parameter for the patient’s record (Fig. 2). Place the probe parallel to the long axis of the implant, six measurements per implant, and identify a location on the restoration as a monitor marker. Record this baseline measurement in the patient notes at the first maintenance appointment after the allotted three months.7 Ideally the measurement should read 2.5 mm–5 mm or less, depending on soft tissue depth, with no other signs of inflammation.8 Compare this measurement to the baseline, and if the probe depth changes, note this in the chart. If the implant has a probing depth of 5 mm–6 mm or greater, bleeding, or a presence of exudate, a radiograph should be taken to assess the implant, and the doctor needs to evaluate for bone loss.9

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Third, probe using only 0.15 N of pressure so as not to jeopardize the success of the implant by possibly introducing pathogens into the peri-implant sulcus, or by damaging the delicate fibers that surround the implant (Fig. 3). The perimucosal seal of the implant is fragile and more susceptible to trauma from probing than a natural periodontal ligament. If the tissue is healthy, the probe will stop at the coronal level, and if inflammation is present, the probe tip will penetrate close to the bone.

Finally, use the probe as a measuring device for documenting inflammation and measuring exposed implant threads for monitoring. Continue to record and monitor by comparing the measurement to the baseline at every implant maintenance appointment. If probe depths have changed or inflammation, bleeding on probing, cement, or exudate are present, bring this information to the dentist’s attention per proper protocol for probing of implants.

Using proper protocol, probing is one of the key monitoring tools in evaluating the health of the tissue surrounding the dental implant. Inflammation or bleeding on probing should not occur with healthy peri-implant tissue. Keep in mind that peri-implant infections can progress more rapidly than an infection in a natural tooth. Therefore, monitoring the tissue surrounding the dental implant is critical in the overall long-term success of the implant. IM
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REFERENCES


