



Practice Expansion Through Clinical Specialization

SEPTEMBER 1992 • VOLUME 1
NUMBER 9 • PAGES 129-144

Tooth-Supported Overdentures Offer Conservative Treatment Option

Overdentures — full dentures partially supported by teeth, roots of teeth, or implants — are an increasingly utilized treatment alternative for many patients who have experienced problems with conventional prosthetics. For those patients who are only partially edentulous, however, tooth-supported overdentures often are the treatment of choice.

Although general dentist **Larry D. Herwig, DDS**, of Dallas, TX, finds numerous advantages of tooth-supported overdentures over such alternatives as fixed bridges, full dentures, or implant-supported overdentures, his primary reason for using them is basic. "The best implants in the world are natural teeth or their remaining roots," he says. "Why go through the process of extracting teeth and replacing them with implants if you still have some good, strong roots you can use?"

"Years ago, dentists frequently assumed that older patients were going to lose their teeth anyway, so they pulled all of them and made full dentures," Herwig continues. "Patients were often happy with this solution because they no longer had the trouble they once experienced with their teeth."

Unfortunately, however, many patients can wear dentures for only a limited time because the bone resorbs so much that the prosthesis becomes unstable. "If you can

(Continued on page 133)

Tooth-Supported Overdentures

(Continued from front page)

just choose the teeth that you know you can retain for awhile, you can keep patients happier longer," says Herwig, who devotes approximately 75% of his practice to restorative dentistry. "And you can always go to a full denture later. This is the real beauty of an overdenture. You may save something that you know you're going to lose eventually, but you're buying time. And then the transition is an easy one."

Moreover, Herwig predicts that practitioners will see increasingly fewer completely edentulous patients in the future. "As more people retain their teeth well into their later years, I think dentists are going to treat a lot more patients with tooth-supported overdentures."

New systems offer increased retention

In the past, overdentures meant fitting one or two teeth with gold copings or trimming endodontically-treated teeth at the gumline so that a regular full denture could rest on top. Now, however, newer and superior systems are available which offer increased retention and stability and which make it easier than ever to provide overdentures to your patients.

These designs range from *Hader* and *Dolder* bars (APM-Sterngold) to magnets, *CEKA* (J.F. Jelenko & Co.), *Zest* (APM-Sterngold), and *ERA* (APM-Sterngold) attachments.

"Even swing-lock type designs or precision-milled subframes can be used in overdentures," says Herwig. Some attachments can be cemented directly into a canal's endodontically-treated roots while others must be cast into copings or bridge frameworks and cemented onto the abutment teeth.

Herwig says the determination of which type of overdenture to use must be made on a case-by-case basis. "For example, some attachments are more rigid than others," he says. "These are the types you might use if you have strong, stable teeth."

If the teeth are weak, on the other hand, an extremely rigid attachment may torque them. In such cases, Herwig recommends using a *Hader* or *Dolder* bar, which allows rotation in one plane. "This type of attachment is more forgiving," he remarks, "making it useful in situations where you need some retention and stability, but you also want to reduce stress on the teeth."

Soft tissue pressure reduced

For Herwig, the advantages of overdentures are many. First, he says, pressure on soft tissue is reduced. "Overdentures decrease the pressure on soft tissue and transmit it to underlying bone," he explains. As a result, stability during function is greatly increased, as well as patient comfort.

Ridge integrity also can be retained. "When teeth are extracted, as is the case when full dentures are placed, the bone resorbs and 'caves in,'" he says. If the roots of teeth are left intact, however, ridge integrity can be preserved.

"It's not even necessary to hook anything to the tooth," Herwig remarks. "You can simply trim it to the gumline and build the denture over it." Although this offers no additional retention, it serves to keep the bone intact.

Finally, he says facial contours and tooth length are better reestablished with overdentures than with many other alternatives, including fixed bridges. Enhanced aesthetics are a result.

According to Herwig, some endodontic or periodontal treatment may be required prior to placing tooth-supported overdentures in order to salvage the teeth or roots to be used. Ridge augmentation also is sometimes required in order to rebuild some of the area that has deteriorated under an existing denture.

Therefore, depending on the extent of treatment required, Herwig works with specialists as needed in an interdisciplinary approach. Typically, however, he says he handles cases from start to

finish and believes GPs can perform most of the treatment required when working with overdenture cases.

"Sometimes, it's only necessary to prepare a couple of teeth," he explains. "Or a patient with a partial denture may have lost a couple of teeth, forcing you into a more extreme alternative. I'll then try to keep any good teeth and place some type of framework."

Working with a laboratory that has experience in this area also is critical. "I've recently starting working with two labs — one for cast restorations and another for acrylic," says Herwig, who notes that labs that fabricate simple cases such as full dentures may not necessarily be labs that work well with overdentures.

"When you get into overdentures, it's much more precise," he says. "You're working with attachments,

"There is a definite positive psychological aspect to retaining any natural teeth. Patients don't feel like total failures or dental cripples."

— Larry D. Herwig, DDS

which is a step up from a regular denture. This is on a micro, rather than a macro, scale."

Although Herwig notes that overdentures cost more than regular, full dentures because of the framework or attachments involved, they are a less costly alternative than implant-retained bridges or other fixed bridgework.

Moreover, patients seem pleased with the results obtained with tooth-supported overdentures. "There is a definite positive psychological aspect to retaining any natural teeth," he comments. "Patients don't feel like total failures or dental cripples." In addition, both the aesthetics and comfort obtained with tooth-supported overdentures are typically far superior to that previously experienced by the patient.

Proper home maintenance critical to success

Herwig says the most common problem practitioners experience with tooth-supported overdenture patients is poor home maintenance which can lead to abutment decay and periodontal deterioration.

"These patients must understand and commit to proper home maintenance," he says, "particularly realizing that their situations exist because of previous tooth loss which is often the result of their lack of oral hygiene."

Unfortunately, however, dentists' best hopes sometimes fail to materialize. "You're in between a rock and a hard place," says Herwig. "These people have already lost a lot of teeth and often just aren't that interested in or committed to proper dental care. Yet, if you go ahead and take out all of their teeth so that they have nothing to maintain, they tend to neglect brushing their dentures."

Because of this general mind-set, Herwig says these patients often fail to make or keep recall appointments. Although he would ideally like to see them every three to four months, he finds this is often little more than wishful thinking.

"Typically, I see these people drift in and out of the practice," he says, "and I often don't see them for a year or more. That's why I think it's so important before going into this that you impress upon patients that they still have teeth, and that they need to maintain them on a regular basis."

Home care tools that can help these patients maintain good oral hygiene include the *Proxibrush* (Butler), *Stim-U-Dents* (Johnson & Johnson), and *Superfloss* (Butler). "Regular floss doesn't work well because there are no contacts to floss between," he says. "*Superfloss* does a good job of sponging underneath the bars where food and debris often accumulate."

Herwig says electric toothbrushes also can be helpful, but only if patients are motivated and truly understand how to use them properly. "The problem

is that these patients are often looking for a quicker, easier way out," he explains, "and they tend to use these appliances incorrectly."

This, in turn, may result in the very conditions that practitioners were trying to avoid. Herwig, therefore, typically recommends that patients brush manually rather than with electric appliances.

Failure doesn't spell disaster

Despite often heroic efforts, abutment teeth sometimes fail under an overdenture. Fortunately, transition into other prostheses is simple and virtually imperceptible, according to Herwig.

"If you lose every abutment, you can just relin the bottom of the overdenture and have a full denture than needs only minor modification," he says. "You can also transition well into implant-borne prosthetics."

For example, modifications can be made underneath the overdenture to accommodate osseointegrated implants. Or, in cases where full implant bridges will be used, the overdenture can serve as a temporary prosthesis while implants are healing.

"Basically, overdentures are a good place to start from several standpoints," Herwig concludes. "For the patient, it's a cost-effective alternative, and from a treatment planning aspect, it's a conservative approach that allows the dentist to transition into other, more extreme treatments later including implant-supported fixed bridges and overdentures." (See related story, page 129.) ■