## COMMENTARY

## USE OF A MODIFIED OVATE PONTIC IN AREAS OF RIDGE DEFECTS: A REPORT OF TWO CASES Jeff Thomas, DDS\*

Liu reinforces a growing trend that emphasizes the importance of gingival tissues in esthetic dentistry. He concisely reviews the basics of pontic design, development, and use in addition to giving the clinician a reference table that can be used and added to in day-to-day practice. Since I am a periodontist, the reader might expect that I will be insensitive about the use of metal and porcelain described in this article, but the importance of Liu's message concerns the manipulation of soft tissue, which is my focus.

Liu's diagrams and photographs confirm my past clinical impressions that even though the ovate pontic has traditionally been described and illustrated, it usually is modified simply to meet patients' anatomic issues. In other words, we seldom see the ridge as depicted in Figure 1C, and when we do it is usually best managed by implant dentistry. However, if there is a gap with a ridge defect, we modify the *apical* (not coronal) aspect of the pontic to adapt to the existing ridge to provide the best result possible, as Liu has now formally described.

The reader may also suspect that the 1 to 1.5 mm subgingival pontic extension is a deviation from previously described ovate pontics, but it is the same as that in Spear's final pontic design,<sup>1</sup> and it is what Abrams hinted at regarding sounding a ridge for his ovate pontic technique to ensure adequate initial and residual tissue thickness.<sup>2</sup> Thus, Liu's technique is validated.

In 2002 I wrote a perspective feature in this journal about the importance of treatment planning the management of the socket before the extraction is performed.<sup>3</sup> If this step were done in every case, we would seldom have to worry about modifications to manage defects that we could have prevented. Unfortunately, these modifications will still occur, but we must realize two fundamental principles: first, there can only be one diagnosis; and second, we should apply the procedure to a patient's situation and not apply a patient's situation to a certain procedure. Clinically what this infers is that if we suspect a ridge defect, we must do our diagnostic work-up; if a defect exists, we graft if maximization of esthetics is required and is a *clinical goal*. We cannot change facial and lingual contours and/or axial inclinations of pontics, as is evident in Liu's excellent Figures 1A-D, and still idealize dental and soft tissue esthetics. Although we can use the modified ovate pontic to help remedy financial issues and surgical risks in medically compromised patients, it is not a substitute for grafting or achieving high-quality esthetics unless there has been minimal loss of facial plate and interdental papilla height. As Liu's images reveal, the use of a modified ovate pontic may give the illusion of an interdental papilla, but it does not restore its decreased height or volume. Additionally, if there is a Class I or III ridge defect and a smile line above the gingival zenith of a pontic, the modified ovate design does not prevent apical shadowing in the soft tissues, which is a significant esthetic concern. So, although it is clearly an option, the modified ovate pontic is not always the solution.

From a design perspective, we traditionally view the original ovate pontic to be one-half or three-eighths of a circle in the tissue contacting area.<sup>2</sup> Liu correctly points out that such a design can lead to difficultly flossing. We must however keep in mind two things: first, but contrary to what I endorse, there is inconclusive

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data demonstrating that an ovate pontic that does not violate the biologic thickness of gingiva and is not properly cleansed is really a health problem; and second, the pontic contacting surface is similar to the bottom of a casserole dish but maintains a definite, gentle convexity in the apical aspect. Such a design with a 1.5 mm subgingival extension is seldom a problem to properly clean.

We must be acutely aware of the soft tissue anatomy when the ovate pontic site is prepared, as is depicted in Figure 1D, so that we do not make our soft tissue preparation in such a manner as to leave only a thin shell or peak of epithelium on the facial aspect. If such is the case, there will be a loss of facial soft tissue height owing to an inadequate vascularized connective tissue base. The operator should leave a minimal facial thickness of at least 1 mm, even if this must be pushed somewhat facially with the pontic to maintain a look of emergence from the soft tissue.

As a periodontist, I appreciate the *Journal* for publishing this article and am most grateful to Liu for his efforts and for reconfirming the importance of addressing the gingival framework in esthetic restorative dentistry.

## REFERENCES

- 1. Spear FM. Maintenance of the interdental papilla following anterior tooth removal. Pract Periodontics Aesthet Dent 1999; 11:21-28.
- 2. Abrams L. Augmentation of the deformed residual edentulous ridge for fixed prosthesis. Compend Contin Educ Dent 1980; 1:205-214.
- 3. Thomas J. Simple extraction-antiquated term or needed paradigm shift?J Esthet Restor Dent 2002; 3:135-136.

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