

## The use of bone wax for protection from sharp ends of interdental wires

Sir,

Mechanical irritation interdental loop wiring and intermaxillary fixation causes inflammation of oral mucosa, marginal gingiva and lips is virtually unavoidable in maxillofacial surgery.<sup>[1]</sup> Filippi *et al.* compared different types of splints (composite wire splinting, button bracket splinting, resine splinting and titanium trauma splinting) by means of irritation on gingival mucosa and lips. In their experimental study, they found that more irritation was caused by buton bracket splints on lips and by resine splint on gingival mucosa.<sup>[2]</sup>

We thought of using bone wax in order to cover the protrusive components of wires [Figure 1]. In this way, we aimed to attenuate the mechanical irritation of intraoral mucosa and gingiva. Furthermore, it is obvious that this will also improve oral hygiene.

Bone wax, which is made of softened beeswax, has been widely used for haemostasis in orthopaedic surgery, neurosurgery, cranio-facial surgery and cardiothoracic surgery.<sup>[3,4]</sup> Rarely bone wax causes side effects, some of which are inhibition of bone healing, increased infection rates and chronic inflammatory reactions.<sup>[4,5]</sup> These side effects are observed in the *in vivo* utilisation of bone wax. Besides, we did not encounter reports on the external use of bone wax, such as in covering the protrusive components of wires, in the literature.

Repetitious use of bone wax during splinting may be regarded as a drawback. On the other hand, it is a low-cost material

that could be easily obtained and applied by the patients whenever necessary.

We recommend the use of bone wax as it is a practical and efficacious method to prevent mucosal injury from wires.

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## REFERENCES

1. Lello JL, Lello GE. The effect of interdental continuous loop wire splinting and intermaxillary fixation on the marginal gingiva. *Int J Oral Maxillofac Surg* 1988;17:249-52.
2. Filippi A, von Arx T, Lussi A. Comfort and discomfort of dental trauma splints-a comparison of new device (TTS) with three commonly used splinting techniques. *Dent Traumatol* 2002;18:275-80.
3. Prziborowski J, Hartrumpf M, Stock UA, Kuehnel RU, Albes JM. Is bone wax safe and does it help? *Ann Thorac Surg* 2008;85:1002-6.
4. Wellisz T, Armstrong JK, Cambridge J, An YH, Wen X, Kang Q, et al. The effects of a soluble polymer and bone wax on sternal healing in an animal model. *Ann Thorac Surg* 2008;85:1776-80.
5. Angelini GD, el-Ghamari FA, Butchart EG. Poststernotomy pseudo-arthritis due to foreign body reaction to bone wax. *Eur J Cardiothorac Surg* 1987;1:129-30.

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**Figure 1:** Covering protrusive components of wires and arch bar by bone-wax