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Letters to the Editor

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The Shaw Hemostatic Scalpel in Parotid Surgery

Since most parotidectomies at our hospital are performed using the Shaw hemostatic scalpel, I read with interest the article titled "The Shaw Scalpel and Development of Facial Nerve Paresis After Superficial Parotidectomy" by Ramadan et al[1] in the ARCHIVES. The authors observed a 54% rate of temporary facial nerve paresis in patients who underwent superficial parotidectomy with the Shaw scalpel. Multivariate analysis showed there were no other risk factors for facial paresis including the surgeon performing the procedure. Because of this, they do not recommend use of the Shaw scalpel near the facial nerve. The 54% incidence of facial paresis reported by Ramadan et al is much higher than the rate of 31% reported by Fee and Handen[2] and also our experience with the Shaw scalpel for superficial parotidectomy. To explain this difference, one must consider that Ramadan et al may have used the Shaw scalpel differently; specifically, they may have delivered more thermal energy to the facial nerve with it.

There are 4 variables that influence the amount of thermal energy that is delivered to tissue with the Shaw scalpel.[3] These include the blade temperature, the contact time between the heated blade and the tissue, the contact area of the scalpel blade with the tissue, and the tissue type. Of note, Ramadan et al reported the use of a No. 10 blade at 220°C. We use a No. 15 blade at a similar temperature. Thus, the increased contact area of a No. 10 blade compared with a No. 15 blade, or an increased contact time of the blade with the tissue may be responsible for the higher rate of temporary facial nerve paresis observed by Ramadan et al. It is important to understand that both of these factors are under the control of the surgeon. The amount of heat delivered should be appropriate for the type of dissection being performed. The Shaw scalpel, if used properly by the surgeon, can be safely used in proximity to the facial nerve. The improved visualization of the operative field, a result of accurate and safe hemostasis, makes the Shaw scalpel an ideal instrument for parotid surgery as well as other head and neck surgical procedures.

David W. Eisele, MD
Baltimore, Md

1. Ramadan HH, Wax MAK, Itani M. The Shaw scalpel and development of facial nerve paresis after superficial parotidectomy.

Arch Otolaryngol Head Neck Surg. 1998;124:296-298. FREE FULL TEXT

2. Fee WE, Handen C. Parotid gland surgery using the Shaw hemostatic scalpel. *Arch Otolaryngol.* 1984;110:739-741. FREE FULL TEXT

3. Levenson SM, Gruber DK, Gruber C, Seifter E, Molnar J, Petro J. A hemostatic scalpel for burn debridement. *Arch Surg.* 1982;117:213-220. FREE FULL TEXT

In reply

We read with interest the comments by Eisele. Our 54% incidence of facial paresis is very well in line with rates reported in the literature. More specifically, Eisele mentioned that Fee and Handen had a 31% incidence but that was in only one arm; however, if you look at the other arm, it was a 43% incidence. Eisele mentioned that the temperature setting that was used by us was similar to what they used, so it does not seem that the hemostat is the cause. The only difference was the size of the blade. It is an interesting thought that the increased contact of the No. 10 blade compared with the No. 15 blade may have been responsible for the high rate of the temporary facial nerve paresis. We agree that the amount of heat delivered should be appropriate to the type of dissection being performed. We agree fully that the improved visualization of the operative field that resulted from accurate and safe hemostasis is important and makes the Shaw scalpel a good instrument for head and neck surgery; however, we still would be reluctant to use it close to the facial nerve.

Hassan H. Ramadan, MD
West Virginia University
Morgantown

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