Neurosurgical Forum LETTERS TO THE EDITOR

Local steroid application during anterior cervical discectomy and fusion

TO THE EDITOR: We read with great interest the article published by Haws et al.¹ (Haws BE, Khechen B, Narain AS, et al: Impact of local steroid application on dysphagia following an anterior cervical discectomy and fusion: results of a prospective, randomized single-blind trial. *J Neurosurg Spine* 29:10–17, July 2018). We commend the authors for performing this prospective study for a very common and pertinent clinical problem. The authors concluded that application of local Depo-Medrol does not significantly affect SWAL-QOL (Quality of Life in Swallowing Disorders) scores, as the effect was similar between single-level and 3-level anterior cervical discectomies. However, there are a few important points that we would like to bring to the attention of the readers of this journal.

All patients in the current study received oral steroids. In addition, the patients in the drug group received Gel-foam soaked with steroid. Systemic methylprednisolone administration was reported in a randomized controlled trial to reduce postoperative soft-tissue inflammation and dysphagia.² Hence, we think that administration of systemic steroids is a significant confounding factor. Because all patients received oral steroids as well, the positive effect of local steroid might have been missed.

The presence of an additional plate implant below the esophagus could impact the level of dysphagia in the postoperative period. Many studies have shown that an anterior cervical plate leads to an increased incidence of dysphagia.^{3–6} The current study does not mention if an anterior cervical plate was used in all patients. Since surgery for degenerative cervical spine disorders commonly entails performing an anterior cervical discectomy and plating, we believe that inclusion of this additional factor could influence results significantly.

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Disclosures

The authors report no conflict of interest.

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Response

We would like to thank Dr. Sreenivasan et al. for their interest in our study, and we appreciate their review and comments regarding the impact of local steroid use on patient swelling and dysphagia following anterior cervical discectomy and fusion (ACDF).

We would like to note that all patients in our study received 10 mg of intravenous dexamethasone intraoperatively. There exists conflicting evidence regarding the efficacy of oral steroids in reducing postoperative swelling and dysphasia following an ACDF. Some investigations have supported that systemic steroids may reduce postoperative swelling,^{5,7,9} whereas others have suggested that

systemic steroids have a minimal effect.^{6,4} Regardless of the current evidence, we made certain that both cohorts were given the same dose of intravenous dexamethasone intraoperatively as a control. In our study, we analyzed for any additional changes produced by the local steroid application. According to our findings, we can conclude that use of intraoperative local steroid application does not have an additive effect of reducing swelling or dysphagia postoperatively.

Dr. Sreenivasan et al. accurately commented on the potential for the increased incidence of dysphagia with the presence of anterior cervical plates, with some studies reporting an incidence as high as 79%.^{1–3,8} In addition, the risk of dysphagia has been reported for many reasons, including anterior plate thickness.² In regard to anterior cervical plate use, all patients in our investigation received the same anterior cervical plate during their operation. We describe the use of anterior plating under our *Surgical Technique* section within the *Methods* portion.

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