Patient Factors Associated with the Use of Lidocaine for Mohs Micrographic Surgery: A Single-Institution Retrospective Study

Dreah Kuckelman, MS-2, Spencer McClure, M.D., Atieh Jibbe, M.D.
The University of Kansas School of Medicine-Kansas City, Kansas City, Kansas, Department of Dermatology

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Introduction. Mohs micrographic surgery (MMS) is often carried out in stages that require spaced injection of local infiltrative lidocaine for anesthesia. This study seeks to define what patient factors may predict the amount of lidocaine that a patient may require during MMS.

Methods. The authors analyzed O2 charts from patients who underwent MMS while using lidocaine as the anesthetic at KUMC from July 2022 through June 2023. Using t-test, ANOVA, and regression analyses to assess statistically significant differences in amounts of anesthesia, we assessed what patient factors had a significant impact on the lidocaine quantity.

Results. The dataset included charts for 149 patients, 21 of whom underwent MMS for two separate lesions on the same day. Weight, surgeon assigned to the case, number of surgical sites treated in one day, and size of the lesion had statistically significant impacts ($p < 0.05$) on the amount of lidocaine. Melanoma was observed to require more lidocaine on average than either Basal Cell Carcinoma or Squamous Cell Carcinoma ($p < 0.001$).

Conclusions. Type of skin cancer, surgeon, patient weight, number of surgical sites, and size of the affected area are variables that may influence lidocaine quantity during MMS. Additional studies are needed to further understand the relationship between these variables and MMS.