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# The impact of the COVID-19 pandemic on dermatologists' suture preferences for epidermal approximation

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To the Editor:

In the setting of the SARS-CoV-2 (COVID-19) pandemic, dermatology practices have taken measures to reduce transmission rates including optimizing use of personal protective equipment, implementing teledermatology, and reducing the need for follow-up visits for services such as suture removal. The aim of this exploratory survey study was to assess in board certified dermatologists both the effect of the COVID-19 pandemic on suture preferences for epidermal approximation and their perceived impact on procedural outcomes and patient satisfaction.

An anonymous survey was distributed between August 2020 and November 2020 to board-certified dermatologists through private Facebook groups. Participants were asked about suture preferences before and after onset of the pandemic for anatomic sites categorized into three groups. Perceived change in patient satisfaction and outcomes metrics were also assessed. Group 1 was composed of the scalp, neck, hands, and feet; group 2 of the face, ears, eyelids, nose, and lips; and group 3 of the trunk, and extremities. A total of 62 dermatologists (13 academic, 12 private practice, 31 private group single specialty, 6 other) responded to the survey. McNemar Chi-squared test was used for statistical analysis.

Overall, there was a statistically significant increased rate of absorbable suture use for all anatomic sites reported by dermatologists when compared to their

suture preferences prior to the onset of the COVID-19 pandemic (**Table 1**). The most common absorbable suture used by dermatologists in our study was 5-0 fast absorbing gut (FG). Usage rates of FG increased for all anatomic sites compared to before the onset of the pandemic (group 1: 34.4% versus 65.6%, group 2: 27.4% versus 51.6%, and group 3: 11.3% versus 25.8%). The majority of dermatologists in our study reported no observed change in patient outcomes or patient satisfaction since the COVID-19 pandemic.

The most likely explanation for increased absorbable suture use is the conscious effort by dermatologists to mitigate the risk associated with face-to-face time required for suture removals. Such measures, along with use of store-and-forward photographs of surgical sites or video technology platforms, reduce the risk of virus transmission by limiting low priority face-to-face visits.

Fast absorbing gut suture is typically used where suture support is needed for 5-7 days, an appropriate advantage for facial sites [1]. Smaller diameter sutures such as 5-0 and 6-0 are commonly used to decrease inflammation and introduction of foreign material. In a randomized comparative effectiveness trial of 5-0 and 6-0 FG, no significant difference in wound cosmesis was found on the head or neck [2]. Prolene, a monofilament, was another commonly reported suture used for epidermal approximation and benefits from low coefficient of friction and from being the least inflammatory nonabsorbable suture

**Table 1.** Suture preferences before and after Covid-19 pandemic.

|  | Pre-COVID<br>N (percentage) | Post-COVID<br>N (percentage) | P value |
|--|-----------------------------|------------------------------|---------|
| <b>Group 1: face, ears, eyelids, nose, lips: N=62</b>    |                             |                              | <0.001  |
| Only non-absorbable sutures                              | 37 (59.7%)                  | 15 (24.2%)                   |         |
| Mixed (sutures, glue, staples)                           | 18 (29.0%)                  | 22 (35.5%)                   |         |
| Only absorbable sutures                                  | 7 (11.3%)                   | 25 (40.3%)                   |         |
| <b>Group 2: scalp, neck, hand, feet, genitalia: N=62</b> |                             |                              | 0.026   |
| Only non-absorbable sutures                              | 35 (56.5%)                  | 24 (38.7%)                   |         |
| Mixed (sutures, glue, staples)                           | 19 (30.6%)                  | 21 (33.9%)                   |         |
| Only absorbable sutures                                  | 8 (12.9%)                   | 17 (27.4%)                   |         |
| <b>Group 3: trunk and extremities: N=61</b>              |                             |                              | 0.008   |
| Only non-absorbable sutures                              | 43 (70.5%)                  | 30 (49.2%)                   |         |
| Mixed (sutures, glue, staples)                           | 10 (16.4%)                  | 13 (21.3%)                   |         |
| Only absorbable sutures                                  | 8 (13.1%)                   | 18 (29.5%)                   |         |
| <b>Rate of fast gut suture use</b>                       |                             |                              |         |
| Face, ears, eyelids, nose, lips: N=62                    | 21 (34.4%)                  | 40 (65.6%)                   |         |
| Scalp, neck, hand, feet, genitalia: N=62                 | 17 (27.4%)                  | 32 (51.6%)                   |         |
| Trunk and extremities: N=61                              | 7 (11.3%)                   | 16 (24.8%)                   |         |

[3]. Prior direct comparison studies of FG to Prolene indicated that Prolene had a small but statistically significant improvement in cosmetic outcome to 5-0 FG at three months [4]. Nylon is another monofilament that is frequently utilized for epidermal approximation given its low cost and low tissue reactivity. However, like Prolene, nylon's major drawback is its poor knot security [3]. A small subset of dermatologists additionally reported using Vicryl Rapide for epidermal approximation. Vicryl Rapide features the same chemical structure as standard Vicryl but differs in that the suture is irradiated, resulting in a quicker rate of absorption (50% at 5 days), [5].

Prior studies have also demonstrated that use of absorbable compared to non-absorbable suture does not lead to increased rates of wound dehiscence or infection [6]. Additionally, high satisfaction rates by patients have been

demonstrated with use of absorbable suture, with no difference in perceived cosmetic outcomes compared to non-absorbable suture [7].

This social media survey study highlights ongoing changes in technical practices and operations of dermatology practices related to the pandemic, namely a collective change in suture preference to absorbable sutures given convenience for the patient and a means to limit unnecessary face-to-face follow up visits. Absorbable sutures are a safe alternative to non-absorbable sutures and do not appear to affect dermatologists' perception of outcomes or patient satisfaction, although further studies are needed to measure those outcomes directly. As the COVID-19 pandemic continues to progress, the use of absorbable suture is one of many tools dermatologist can use to reduce risk to patients by avoiding repeat visits and limiting community virus exposure and transmission.

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