Introduction

It is becoming increasingly common for patients to have multiple skin cancers treated with Mohs micrographic surgery on the same day, and sometimes these lesions can be near one another. The final size of the adjacent defects along with the amount of tissue remaining between them will determine how to best repair both defects. We present a case of two large, adjacent postsurgical defects where intraoperative tissue relaxation allowed for primary linear closure of both defects.

Case Report

A 70-year-old male presented for treatment of two invasive squamous cell carcinomas located on left temple and left frontal scalp. Mohs micrographic surgery was performed on both lesions, and the final defect sizes measured 2.0 x 1.4 cm and 3.0 x 1.6 cm respectively. Different repair options were discussed with the patient including allowing one or both lesions to heal via secondary intention or utilizing a skin flap or graft. We also discussed using an intraoperative skin relaxation device in order to stretch the skin around both defects in order to perform linear closures, which is what the patient ultimately decided on.

A suture retention device was secured centrally over both defects at a 90-degree angle to one another for 60 minutes to provide intraoperative tissue relaxation (Figure 1).

The temple defect had adequate relaxation to allow primary linear closure. The scalp defect, while not completely approximated, was over 60% smaller and able to be closed at both wound edges. A central area approximately 4 mm wide was left to heal by secondary intention (Figure 2).

The patient tolerated the procedure well. Sutures were removed on day 14 without complication. The patient was seen one month post-operatively with excellent cosmetic results (Figure 3).

Discussion

The methods of repairing two adjacent post-surgical defects are numerous and vary depending on the size of the individual defects, the location of the defects, and the amount of normal skin remaining between them. Various methods of closure for the adjacent defects include healing by secondary intention, primary linear closure, skin grafts, skin flaps, creating one larger wound to be repaired, or a combination of these approaches. In our patient, closing the high-tension wound of the scalp would have prevented both wounds from being closed in linear fashion without first stretching the tissue. Many wounds will heal well by secondary intention despite a large size, but many patients prefer the cosmetic appearance and shorter healing time of wounds that have been closed with sutures. In our case, we closed the majority of the wound and left a small, central portion to heal in on its own. The overall outcome was excellent and healed much quicker than leaving the entire scalp defect to heal on its own.

Intraoperative tissue relaxation can be used to allow primary closure of adjacent wounds. Even in cases where the defects cannot be completely approximated, closing the wound edges to create a smaller central defect can decrease healing time and lead to an excellent cosmetic outcome without the need for a flap or graft.

References


Disclosures

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