INTRODUCTION

Auricular hematoma formation is commonly seen after blunt trauma to the head, whereby accumulating blood from the disrupted network of vessels, dissects the perichondrium off of the underlying auricular cartilage, leaving it void of blood supply.

Left untreated, auricular hematoma may result in infection, necrosis of the cartilage and eventually reshaping of the auricle secondary to formation irregular neofibrochondral layers commonly resulting what is commonly known as the cauliflower ear. As such, prompt drainage and prevention of reaccumulation are the primary goals of treatment in this process.

Traditionally the treatment has consisted of simple incision and drainage and tie-over bolstering with unacceptable rates of reaccumulation. Moreover, irregular contours of the auricle make accurate shaping of the bolster challenging which may affect resultant cosmesis. The complex sensory innervation of the auricle makes the use of through-and-through suturing for securing the bolster a painful option should comprehensive auricular block not be administered.

Herein we present the novel use of rapidly fixed dental impression material to quickly and easily achieve a more accurate bolster corresponding to the contour of the auricle and to avoid through-and-through suturing.

METHODS AND MATERIALS

After infiltration of small amount of local anesthesia, three patients with auricular hematoma underwent standard incision and drainage. Once the natural contour of the auricle was reattained, a cotton wick was placed in the external auditory canal and Blu-Mousse® Super-Fast (Parkell, Inc., Edgewood, NY) dental impression material was utilized to obtain a contour cast of the involved auricle. This material has the advantage of setting in about thirty seconds without the need for laboratory modification after casting. Additionally it can be applied with precision using an applicator gun.

Once poured and set, the cast was pressed firmly to the auricle for bolstering. Petroleum gauze was placed behind the auricle to maintain posterior pressure. The cast was then secured to the auricle using compression clips (household plastic peg) and circumferential mastoid-type dressing. Patients were instructed to keep cast and dressing on continuously until follow up visit in seven days.

RESULTS

On one week follow up, patients were asked to rate the appearance of their auricle using a 1-5 scale, with 1 indicating an “unrecognizable structure” and 5 indicating “identical to prior to trauma.”

All patients had a favorable cosmetic outcome with excellent ear contour, with all patients rating the ears as 5. No adverse effects or infections were noted. There were no incidents of reaccumulation.

Mastoid dressing had come off in all three patients but the compression clipings and bolsters were intact. Patients felt comfortable simply reapplying peg in instances where it had come off.

DISCUSSION

Based on our results, although limited by small number of patients, we believe this technique has the following advantages over traditional techniques:

• Dental impression material accurately conforms to irregular contours of the auricle.

• Setting time for these types of dental impression materials are generally less than one minute, with the majority around only 30 seconds.

• When set, the plaster-like firmness of impression material provides constant pressure over all portions of it thereby effectively preventing reaccumulation of blood.

• Dental impression materials are inexpensive and readily available.

• Simple plastic pegs are inexpensive, easy to use, safe and patient can easily reapply them at home should they come off.

• Plastic pegs obviate the need for extensive anesthetic blocks and painful through-and-through suturing of the bolster.

CONCLUSIONS

Optimal management techniques for auricular hematoma are not clearly defined. However few would argue against prompt drainage and bolstering. We present the use of dental impression materials and plastic pegs for bolstering of the auricle following incision and drainage of hematoma.

Although our study is limited by its small n, this technique appears to be a fast, safe, less painful, and inexpensive alternative to the generally more challenging traditional techniques of bolstering.

REFERENCES
