FACIAL SURGERY

CASE REPORT

Auricle Chondroma Excision With Contralateral Conchal Graft Reconstruction

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Level of Evidence: Therapeutic V
ABSTRACT

Extra-skeletal or soft-tissue chondroma is a rare benign, slow-growing cartilaginous tumor that originates in the soft tissues and does not invade the surrounding tissue or organs. The tumor is most often found in the hand or foot, but other sites have been reported. In this presenting case, the authors report a rare case of chondroma that developed in the auricle, which was treated with cartilage excision and reconstructed with a contralateral conchal graft.

Extra-skeletal or soft-tissue chondroma is a rare benign, slow-growing cartilaginous tumor that originates in the soft tissues and does not invade the surrounding tissue or organs. The tumor is most often found in the hand or foot, but other sites have been reported. The diameter is less than 3 cm in most cases, with a development in the facial area reported very rarely. The case presented here is of particular interest because of the exceptional location of the tumor, and a matter of reconstruction of a defect after the removal. To our knowledge, only three reports describe cases of extra-skeletal chondroma in the auricle. In this presenting case, we report a rare case of chondroma that developed in the auricle, which was treated with cartilage excision and reconstructed with a contralateral conchal graft.

CASE REPORT

The patient is a 23-year-old male, unknown to have any medical illness. He was referred to our department complaining of bilateral auricular painless mass for 2 years, increasing gradually in size and number. The physical examination revealed bilateral hard and painless masses, located on the scapha extended to the helix. Right scapha with 2 masses 1x1 cm each (Figure 1). Left scapha with 1 mass, 0.5 x 0.5cm. The general physical examination did not disclose any abnormalities.

Under general anesthesia, surgical exploration of right scapha and helix revealed the two masses were extending posteriorly reaching 1x4 cm (Figure 2), and was excised completely, the skin was spared (Figure 3). The graft was harvested from left cymba and cavum concha (Figure 4). Multiple fenestrations with punch biopsy of 1 mm and fixation of the graft to the defect edges with 5/0 PDS interrupted sutures. Fixation of the graft with multiple 5/0 Vicryl Rapide (Ethicon,
Inc., Raritan, NJ) to subcutaneous (quilting technique), to enhance the cartilage take and decrease incidence of hematoma. One negative drain was fixed bilaterally. Skin closure with 5/0 Prolene (Ethicon, Inc., Raritan, NJ) continuous suture. Vaseline (Englewood Cliffs, NJ) gauze with bacitracin was packed in the right scapha and applied retro-auricularly.

Also, the left concha was packed with Vaseline gauze with bacitracin and applied retro-auricularly. Bulky Dressing with 10 pieces of eye pads over each auricle and wrapped with crepe bandage. The drain was removed 5 days postoperatively. Skin sutures were removed 14 days postoperatively.

The histological examination revealed a chondroma with no malignancy and non-tumoral margins (Figure 5). There was no recurrence at the 12-month postoperative follow-up (Figures 6-9). Written consent was provided, by which the patient agreed to the use and analysis of his data.

DISCUSSION

Although extra-skeletal or soft-tissue chondroma is a benign tumor, it can cause functional or/and aesthetic issues. The tumor is most often found in the hand or foot, but other sites have been reported. Head and neck chondromas such as the tongue, and less likely in the cheek, neck, parotid gland, parapharyngeal space, masticatory space, and masseter muscle. The other differential diagnosis includes tumoral calcinosis, calcifying aponeurotic fibroma, ectomesenchymal chondromyxoid tumor, and chondrosarcoma. The etiology of extra-skeletal chondroma is uncertain. The following are three hypotheses that have been proposed. The first hypothesis suggests that migrating cartilage cells originated from the adjacent skeletal structure to connective tissue; the second proposes the conversion of the pre-cartilaginous tissues, which are in the ligament attachment area to the activation period; last, metaplasia of synovial cells differentiating to cartilages has been proposed. Treatment for chondroma is usually surgical by wide local resection, even in recurrent cases which occur in 10% to 15% of cases. Aesthetically, a wide local excision as in this presenting case, a conchal graft was needed to maintain the scapha and helix contour.

Many other techniques have been described to treat a defect of the helix secondary to tumor excision such as advancement of the helix by placing a Burow’s triangle in the scapha. In
the presenting case, the defect was 1x4 cm and was reconstructed with a contralateral conchal graft.

REFERENCES

Figure Legends

Figure 1. Pre-operative view of a 23-year-old male patient: right scapha and helix chondroma, 2 lesions 1x1 cm each (externally).

Figure 2. Intra-operative view of a 23-year-old male patient. The affected area in the right scapha and helix was found extending posteriorly reaching 4x1 cm.

Figure 3. Intra-operative view of a 23-year-old male patient: the right ear defect post excision.

Figure 4. Intra-operative view of a 23-year-old male patient: the contralateral conchal graft.

Figure 5. Histopathologically, the tumor in this 23-year-old male patient consists of hyaline cartilage. The hyaline cartilaginous tissue contains homogeneous chondrocytes with round nuclei and chondrocytic lacunae (hematoxylin and eosin [H&E] stain).

Figure 6. Right ear lateral view of a 23-year-old male patient, shown 1-year postoperative.

Figure 7. Right ear posterior view of a 23-year-old male patient, shown 1-year postoperative.

Figure 8. Left ear lateral view of a 23-year-old male patient, shown 1-year postoperative.

Figure 9. Left ear posterior view of a 23-year-old male patient, shown 1-year postoperative.
Figure 1A
85x102 mm (x DPI)
Figure 4
85x67 mm (x DPI)

Figure 5
85x86 mm (x DPI)