

# Resuturing of Avulsed Pinna: A Case Report

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## ABSTRACT

Ear trauma is complex, as different parts of the ear can be affected by different harmful agents, which can affect esthetics, as well as loss of function (hearing). Causative agents for ear trauma are mechanical factors, thermal factors, chemical injuries and pressure changes. Proper recognition and treatment are critical to avoid complications, and improve treatment results. The present report outlines the case of suturing of an avulsed pinna to restore the esthetics of the patient.

**KEYWORDS:** Avulsed pinna, Resuturing, Esthetics

## INTRODUCTION

The external ear is commonly involved in trauma of the head and/or the face. 40% of the cases of trauma to the ear include an injury to the pinna.<sup>1</sup> Injuries to the pinna range from simple lacerations to total avulsions, with the most common causative agents being motor vehicle accidents, recreational activity mishaps, brawls and job related injuries. The pinna heals in a vast majority of cases if usual precautions are observed. The goal of treatment lies in restoration of normal contour of pinna and preventing infection.<sup>2</sup> Some of these injuries can lead to hematoma and chondritis, causing cosmetic disfigurement. The external injuries to the pinna can be managed by Oral and Maxillofacial surgeons, otolaryngologists as well as plastic surgeons. The present report outlines the case of avulsion of the external ear, which was sutured back to its position to restore the esthetics of the patient.

## CASE REPORT

A 35-year old male reported to us with a history of roadside accident 45 minutes ago. On initial examination, the pinna of the patient was found to be avulsed (Fig No.1). No injury on any other part of the body was found upon a thorough examination. The patient was heparinized to prevent microvascular clotting. The wound was thoroughly washed with saline and foreign bodies found were removed. The avulsed edges were approximated (Fig No.2). The irregular margins of the cartilage were trimmed to smoothen them out. Initially, the cartilage, along with the perichondrium, was sutured in interrupted fashion, using 4-0 prolene sutures. The suturing commenced from the posterior side, going onto the anterior side, to provide a rigid framework over which the skin could be sutured. The skin over the cartilage was then approximated (Fig No.3), and was sutured giving interrupted sutures using 4-0 prolene

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sutures, starting posteriorly, coming onto the anterior surface (Fig No.4). Povidone-iodine ointment was put on a gauze piece and gently pressed onto the external ear to match with the shape of the ear. A few dry gauze pads were



Figure No.1: Avulsed Pinna



Figure No.2: Approximated Avulsed Edges



Figure No.3: Approximated skin over cartilage



Figure No.4: Final suturing performed

placed around the ear, filling the contours of the ear with gauze. Some gauze was also placed behind the ear. The head and ear of the patient were gently wrapped with a bandage for 24 hours. The patient was discharged after an hour. There was no hematoma formation when the patient reported back on recall visit after 24 hours.

## DISCUSSION

Although the unprotected pinna is readily accessible to trauma, any significant physical injury to pinna is less common.<sup>1</sup> This is because the auricular framework is made up of elastic cartilage, deflecting the pinna in case of any trauma, rendering it difficult to fracture.<sup>3</sup> Injuries to the pinna might well result from blunt or sharp trauma and/or also thermal injuries.<sup>3-5</sup> any sharp trauma to the pinna may range from minor lacerations of the pinna or ear lobule, to total avulsion of the auricle. Prompt repair and prevention of infection are essential for minimizing any cosmetic disfigurement. Copious irrigation to remove contaminants and foreign bodies are essential. The cartilage should be approximated with suturing posterior perichondrium or inter-cartilaginous sutures with 5-0 catgut.<sup>6</sup> Skin is closed with 5-0 or 6-0 prolene or nylon sutures. All the remaining viable tissue should be preserved.<sup>7</sup> Use of local

flaps and skin grafts to preserve and cover perichondrium and exposed cartilage has also been suggested by previous authors.<sup>5,7</sup> Stenting of the wound, with a light contoured dressing with antibiotics, is recommended for preservation of the contour.<sup>8</sup> Partial or total avulsed pinna can be reattached after thorough washing and debridement. Survival of the pinna depends on an establishment of capillary circulation. Microvascular re-anastomotic techniques can also be employed.<sup>4,8</sup>

Reconstruction of avulsed pinna may also be done by composite grafting from opposite ear, costal cartilage or local pedicled flaps.<sup>9</sup> Re-implantation can also be considered by dermabrading the avulsed part, reattaching and placing it in a post auricular pocket. Nowadays, performing reattachment with microvascular anastomosis is being preferred.<sup>10,11</sup>

Chondritis, which may result in disfigurement, is a solemn complication.<sup>9</sup> Initial symptoms are red, hot and painful pinna. Later, abscess may form between the perichondrium and the cartilage, along with necrosis of the cartilage, requiring prompt removal of pus and necrotic cartilage. The most frightful complications of auricular lacerations include chondritis and poor cosmetic results.<sup>6,11</sup>

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