

A New Numeric Classification System for Management of Auricular Haematoma - Haematoma Score

Hussain A, Vallamkondu V, Gomati A and Shakeel M*

Department of Otolaryngology-Head and Neck Surgery, Aberdeen Royal Infirmary, Aberdeen, AB25 2ZN, Scotland, United Kingdom

Introduction

To our knowledge no classification system is in existence today which describes the extent of auricular haematoma in a structured fashion. Auricular haematoma is a common complication of blunt trauma to the auricle. The most common cause of auricular haematoma is participation in contact sports especially Rugby, Wrestling, Boxing, Mixed martial arts and Cage fighting. Other causes include assault, self-harm and accidental trauma. There is some published literature documenting pinna haematoma developing within the cartilage and also between perichondrium and the underlying cartilage. The presentation and documentation of auricular haematoma in clinical practice is very imprecise and does not particularly describe sub-units of pinna involved in haematoma [1-4]. Consequently, planning of treatment does not take into account the anatomical subunits of the auricle with suboptimal drainage techniques used and resultant less than satisfactory functional and aesthetic outcome.

Aims

The purpose of this short communication is to describe a numeric classification of auricular haematoma (haematoma score). We aim to demonstrate that haematoma score correlates well with the extent of haematoma. It guides the surgical management with the principle goal of minimizing complications and achieving better functional and aesthetic outcome.

Scoring System

The auricle consists of elastic cartilage and tightly adherent skin. There are multiple anatomical subunits which are distinct and have a relevance to the aesthetic outcome after auricular reconstruction or management of auricular haematoma (Figure 1).

Here we describe a numeric classification system based on the involvement of anatomical subunits of auricle and demonstrate that such a classification can provide a very useful and effective clinical tool to grade the severity and complexity of the haematoma. Accordingly, based on the haematoma score appropriate intervention can be planned to minimize recurrence and enhance functional and aesthetic outcome.

The pinna is divided into 8 subunits (Figure 1) and each subunit is given a score of 1. Two anatomical subunits in particular i.e., helical crus and antihelical crus were identified as more challenging to manage. If these were not involved then the score was denoted with 'a' but, If one or both were involved in the haematoma the score was described as 'b'. We describe our experience of

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*Correspondence:

Muhammad Shakeel, Consultant Otolaryngologist-Head and Neck Surgeon, Otolaryngology-Head and Neck surgery, Aberdeen, AB25 2ZN, Scotland, United Kingdom.

Tel: 00441224552100

Fax: 00441224554569

E-mail: drshakeel@doctors.org.uk

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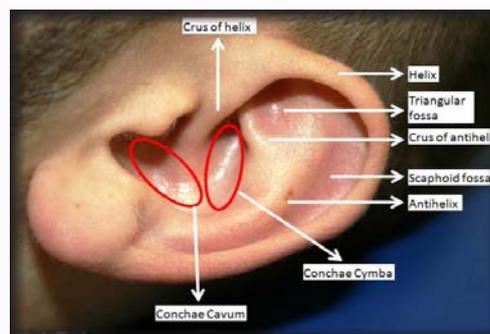


Figure 1: Anatomical subunits of pinna.

Table 1: Involvement of subunits of pinna in auricular haematoma.

Anatomical subunit of pinna	Code	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Helix	1	No	No	No	No	Yes	No	No	No	No	No	No	No	Yes	Yes	No
Antihelix	2	Yes	Yes	No	Yes	Yes	No									
Scaphoid fossa	3	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	No
Triangular fossa	4	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Crura of antihelix	5	Yes	Yes	Yes	No	Yes	No									
Crus of helix	6	No	No	No	No	Yes	No	No	No	No	Yes	No	No	No	Yes	No
Conchae cymba	7	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No
Conchae cavum	8	Yes	No	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No	No	No	Yes

Table 2: Haematoma score with previous failed interventions.

Case number	Age	Gender	Side	Pinna subunits involved	Total subunits involved	Haematoma score	Needle aspiration	Incision & Drainage	Bolster-Dental roll
1	19	M	L	2,3,4,5,7,8	6	6b	No	No	No
2	50	F	L	2,3,4,5	4	4b	No	No	No
3	27	M	L	2,3,4,5,7,8	6	6b	Yes x 1	No	No
4	19	M	L	2,4,5,7,8	5	5b	Yes x1	Yes x 2	Yes x 1
5	86	M	R	1,2,3,4,5,6,7,8	8	8b	Yes x1	No	No
6	46	F	R	2,3,4,5,7	5	5b	Yes x1	Yes x 1	No
7	20	M	L	2,5,7	3	3b	No	No	No
8	16	M	R	2,3,4,5,7,8	6	6b	Yes x1	No	No
9	50	M	L	3,4,5,6	4	4b	Yes x2	Yes x 1	Yes x 1
10	48	F	R	3,5,6,7	4	4b	Yes x2	No	No
11	30	M	L	2,3,4,5,7,8	6	6b	Yesx3	No	Yesx1
12	18	M	R	5,6	2	2b	Yesx4	Yesx1	Yesx2
13	30	M	L	2,3,4	3	3a	Yesx5	Yesx2	No
14	20	M	R	1,2,3,4,5,6,7	7	7b	No	No	No
15	23	M	R	8	1	1a	No	No	No



Case Figures:

15 patients (photos included for clarity and better understanding of the subunits involved in haematoma) who were given a haematoma score based on the involvement of the anatomical subunits (Table 1). The haematoma score allowed us to grade and extent of the haematoma. Higher haematoma score correlated well with extent of

haematoma and complexity of management.

Clinical Experience

In our practice we have found the haematoma score to be very helpful in terms of determining the severity of haematoma and tailor

our management based on the score. Low score allows us to predict successful outcome with relatively conservative approaches. Higher score correlated well with complexity and guided us towards open surgical management with a view to achieve better functional and aesthetic outcome and minimize complications [4].

Our patients underwent open surgical management and majority of them had undergone previous failed interventions (Table 2). This scoring system is very simple based on well-recognised units of the pinna and we employ this as a guiding principle for management of auricular haematoma. We have no hesitation in recommending this simple principle.

References

1. Ghanem T, Rasamny JK, Park SS. Rethinking auricular trauma. *Laryngoscope*. 2005; 115: 1251-1255.
2. Roy S, Smith LP. A novel technique for treating auricular hematomas in mixed martial artists (ultimate fighters). *Am J Otolaryngol*. 2010; 31: 21-24.
3. Kakarala K, Kieff DA. Bolsterless management for recurrent auricular hematomata. *Laryngoscope*. 2012; 122: 1235-1237.
4. Shakeel M, Vallamkondu V, Mountain R, Hussain A. Open surgical management of auricular haematoma: incision, evacuation and mattress sutures. *J Laryngol Otol*. 2015; 129: 496-501.