

## Original Research Article

# Our experience of auricular hematoma treatment in wrestlers

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### ABSTRACT

**Background:** Traditional Indian wrestlers, in contrast to wrestlers outside do not routinely wear protective head gear. So they are at increased risk of recurrent auricular hematoma, often resulting in severe auricular deformity like cauliflower ear or hematoma of ear.

**Methods:** This is retrospective study of analysing 40 cases of auricular hematoma in Wrestlers evaluating treatment and outcome in all cases carried out in our institute at JIUS IIMSR, Warudi, Badnapur, Jalna over period from September 2014 to September 2017 surgical technique used was incision drainage and mattress suture.

**Results:** The study material comprised of 40 cases all being wrestlers of auricular hematoma using the incision and drainage technique with mattress suture of pinna. All the wrestler were male as the game is predominantly played among men's in India the average age of patient study was 26 yrs range between 16 to 35 yrs. 16 wrestlers had very bad cauliflowering of the both ear after earlier treatment while 4 patient had cauliflowering of one ear before being seen us for the new auricular hematoma. 8 patients develop second hematoma on the same ear at different location after receiving the treatment after six month while 6 of the patient developed hematoma on the opposite site ear after six month of treatment.

**Conclusions:** In the management of auricular hematoma in sport person like wrestler's simple incision and drainage followed by mattress suture without any pressure bandage with antibiotic application appears to be prompt treatment.

**Keywords:** Auricular hematoma, Wrestlers, Pinna, Trauma

### INTRODUCTION

India is among the oldest civilization in the world. Wrestling in India dates back to the day of Ramayana and Mahabharata. Prince Bheem among the Pandawas is one of the greatest wrestlers even remembered today.<sup>1</sup> Traditional Indian wrestler's practices their tricks in place called 'Akhada' or 'Hauda' were red soil are used to prepare the base instead of carpet or mat.<sup>2</sup> Traditional Indian wrestlers, in contrast to wrestlers outside do not routinely wear protective head gear. So they are at increased risk of recurrent auricular hematoma, often resulting in severe auricular deformity like cauliflower ear. The skin of outer surface of auricle and meatus is tightly bound to underlying perichondrium, lacking the usual

loose subcutaneous layers. Hematoma of the auricle is frequent complication of blunt force trauma in wrestler as they have to engage each other by putting their hands on neck along the ears. as such auricular hematoma are often seen in contact sport such as boxing, wrestling, martial arts, rugby etc.<sup>2</sup> Hemorrhage from trauma to auricle, therefore, cannot easily diffuse and be absorbed. The hematoma that occurs can devascularize the cartilage, resulting in cauliflower ear.<sup>3</sup>

The usual treatment of the hematoma auris has involved incision and drainage follow by sterile pressure dressing, and eliminates the dead space to prevent reaccumulation of the hematoma. Auricular hematoma if not treated in time or properly can result in infection and neocartilage

formation with fibrosis leading to the morbidity like 'cauliflower ear'.<sup>1</sup>

## METHODS

This is retrospective study of analysing 40 cases of auricular hematoma in Wrestlers evaluating treatment and outcome in all cases carried out in our institute at JIUS IIMSR Warudi, Badnapur, Jalna over period from September 2014 to September 2017.

### Inclusion criteria

The entire male patient those who are wrestler and sport gymnastic patient have included in this study

### Exclusion criteria

Those patients other than this occupation were exclude those who are not willing to admit and not giving consent for procedure are excluded from our study.

Statistical method used was chi-square test to obtain the results

### Technique

The area of affected ear was cleaned and draped with sterile preparation, depending on the location of the hematoma. Local anaesthetic was injected over the area of hematoma (1:100000 lignocaine with adrenaline). Depending on upon the site of collection, 15 no blade was used to take 1-2 cm incision cosmetically placed, parallel to natural crease. A curette or haemostat may be needed to remove adherent clot or hematoma. The area was copiously irrigated with normal saline. A few mattress sutures were placed with 5-0 chromic to keep skin flap firmly in contact with cartilage by passing the suture from anterior to the posterior surface of pinna and back. Antibiotic ointment was applied to the incision site and wound was left open to facilitate additional drainage. The patients were discharged without applying dressing and were prescribed oral antibiotic and analgesic for one week.

## RESULTS

This retrospective study was carried out in the dept. of otorhinolaryngology at JIUS IIMSR, Warudi, Badnapur, Jalna a tertiary centre between 2014 to 2017. The study material comprised of 40 cases all being wrestlers of auricular hematoma using the incision and drainage technique with mattress suture of pinna. All the wrestler were male as the game is predominantly played among men's in India the average age of patient study was 26 yrs (range between 16 to 35 yrs). All the wrestlers were having aural trauma during their practice session on the red soil.

In this present study most common age group presented was 26-30 (35%) and least common age group presented was 16-20 (15%) as shown in Table 1.

**Table 1: Showing age distribution of patient.**

S. no	Age of patient (in years)	No. of patients	Percentage (%)
1	16-20	6	15
2	21-25	10	25
3	26-30	14	35
4	31-35	10	25

**Table 2: Showing symptoms of patient.**

S. no	Symptoms	No. of patients	Percentage (%)
1	History of trauma	40	100
2	Pain	24	60
3	Pinna swelling	40	100
4	Fever	15	37.5

In this present study most common symptoms was history of trauma in almost all patients 40 (100%) second most symptom was swelling of pinna in 40 patient (100%) least common symptom was fever in 15 (37.5%) as shown in Table 2.

**Table 3: Showing signs of patient.**

S. no	Signs	No. of patients	Percentage (%)
1	Hematoma	26	65
2	Seroma	24	60
3	Pinna tenderness	24	60
4	Cauliflower ear	22	55
5	Perichondritis	20	50

In this present study most common signs was hematoma of pinna in 26 (65%) other common presentation was Seroma 24 (60%) least common sign was perichondritis 20 (50%) as shown in Table 3.

All patients were followed upon 3rd day, 6th day and 10<sup>th</sup> day after incision and drainage for re-examination and thereafter 3<sup>rd</sup> month and 6<sup>th</sup> month for follow up and evaluation. In all the cases there was no significant loss of contour or shape of and the ear returned to its original shape. There were no recurrence or perichondritis of the pinna postoperatively; all of the patients were satisfied with the cosmetic results and the shorter duration treatment.

## DISCUSSION

Auricular hematoma are frequent complication of blunt force to pinna, if the hematoma is untreated or poorly treated will result in acquired, severe cosmetic deformity,

'cauliflower ear', so particularly seen in wrestlers or sport person.<sup>4</sup> The clinical picture progress from

1. Injury to the ear causing persistent, throbbing pain that lasts long after the causative event,
2. Possible fibrocartilage fracture.
3. Swelling, local heat, tenderness followed by the development of a hematoma after several hours between cartilage and overlying skin.
4. Tissue hardening and the development of early fibrosis tissue in about 14 days.
5. The resulting keloid mass, development of new cartilage and permanent deformity of external ear characterized by skin wrinkling, thickening and contraction at the site of injury.

To prevent the formation of cauliflower ear, initial treatment of an acute hematoma should include ice pack and pressure bandage. Aspiration or drainage with application and frequent changing of pressure dressing may be needed.

Aspiration with a sterile needle is done an office procedure. Repeat aspiration may be necessary because of the tendency for the fluid to reform. Incision and drainage is to be carried out if the repeated aspiration fails. A pressure bandage or a compression may be required by which the pressure is applied directly to the involved portion of the auricle.<sup>5-9</sup>

Silicon splint/plaster molds have also been described as being very useful in the management of this condition.<sup>10</sup>

A corrugated rubber drain made of flexible soft rubber which causes no tissue reaction and has the ability to mold to the shape of the pinna is also used. Some uses dressing on both posterior and anterior to the ear so as to maintain pressure after incision and drainage of hematoma

In managing the patient who presented with this condition the author has used incision and drainage of hematoma followed by few mattress suture with no pressure bandage required postoperatively successfully.

## CONCLUSION

In the management of auricular hematoma in sport person like wrestler's simple incision and drainage followed by mattress suture without any pressure bandage with antibiotic application appears to be prompt treatment.

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