

## Original Article

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# Management of Haematoma Auris by Minimal Access Surgery and Steroid Injection

Mahmudul Hassan<sup>1</sup>, Aftab U. Ahmed<sup>2</sup>

### Abstract:

*Haematoma auris is a collection of serosanguinous fluid between perichondrium and cartilage of pinna. Various method of aspiration / incision and pressure bandage used to treat the condition, here we are using steroid at the site after aspiration with a needle, no pressure bandage or drain used. Total 49 patients were treated with no untoward events.*

**Key word :** Haematoma auris, aspiration, steroid injection

### Introduction :

Haematoma auris is a collection of blood / serosanguinous fluid between the auricular Cartilage and perichondrium.

The haematoma is usually produced by trauma or occasionally spontaneously, Specially during sleep time there may be collection of fluid due to torsional affect of perichondrium & cartilage in the pinna.

This occurs almost exclusively on the anterior surface of the auricle where the skin is tightly adherent to the underlining perichondrium so that shearing force applied to the ear separates the Perichondrium form the cartilage. On the other hand on posterior surface intervening areolar tissue allows the skin to glide over the Perichondrium .

Rarely a tear through the cartilage can allow

haematoma to collect under the Perichondrium on both side<sup>1</sup>

Ohnsen et al<sup>2</sup> demonstrated the sub perichondrial site of the haematoma in rabbits and that while subcutaneous haematoma reabsorbs without consequence. sub-perichondrial serosanguinous fluid stimulates the proliferation of mesenchyma cells in the overlying perichondrium with these chondroblast forming new cartilage in 7-10 days which result in cauliflower ear deformity.

Schuller et al<sup>3</sup> stated there is usually a history of trauma after sports like rugby, like wrestling or occurs spontaneously. The haematoma is painless, after some time present with slight itching and inflammation is minimal. there is always a tendency of patient to palpate it, squeezes it, with the intention of recover away spontaneously, such a subperichondrial haematoma tends not to be absorbed but to persists unless drained or deformed ear.

If left untreated ,the natural out come is thought to be deformity of the pinna and the classic "cauliflower" or "wrestler"s ear, more

- 
1. Professor of Otolaryngology, National institute of ENT, Dhaka
  2. Associate Prof. of ENT, Green Life Medical College, Dhaka

**Address of Correspondence:** Dr. Mahmudul Hassan, Professor of Otolaryngology, National institute of ENT, Dhaka. Mobile: 01819211501

rarely supervening infection either spontaneously or iatrogenic, may lead to perichondritis and cartilage necrosis.

Pandya<sup>4</sup> demonstrated experiment in rabbits and found components of fibrosis, immature chondrogenesis and osteogenesis in the organizing haematoma.

Management option of the hematoma requires evacuation with strict asepsis. This is achieved through either aspiration, incision, either anteriorly or posteriorly to prevent recollection, use of pressure bandages or splints<sup>5</sup> of various materials applied on both sides of the pinna keeping them in place with long duration to prevent recollection; or a drain is left in incision site<sup>6,7</sup> a posterior incision with excision of a disc of cartilage and placement of a suction drain<sup>8</sup>. Through and through mattress or quilting sutures for compression, these include cotton wool bolster<sup>9</sup>, buttons<sup>10,11</sup> and silicon rubber splints<sup>12</sup>.

Most authors says, after seven to ten days aspiration is ineffective and that surgery for removal of the organizing hematoma of newly formed cartilage with/without overlying perichondrium is necessary. Giffin<sup>13</sup> described doing this through incisions parallel to the helix or antihelix.

#### **Aims and objective:**

The objective of this study was to treat Haematoma auris by completely evacuating and to prevent its reaccumulation and thus preventing known complications like cauliflower deformity and perichondritis by applied a very minimal surgical interference.

#### **Materials & methods:**

The present study was a prospective observational study carried out at the



department of ENT & Head-Neck Surgery, Shahid Suhrawardy Medical College, Dhaka, National Institute of ENT (NIENT), Tejgaon, Dhaka, and private Chamber of the author from January 2005 to December 2016 for a duration of eleven years. Total 49 Patients were studied, among them 13 were female & 36 were male. Age range was 15-45years.

#### **Selection of patients:**

- a. Inclusion criteria – Patient with Haematoma auris with in 2 week of duration and no acute inflammation were included.
- b. Exclusion criteria – Patients having perichondritis, thickened pinna or acute Inflammation were excluded eg; perichondritis.

#### **Procedure with Equipment :**

1. Syringe -3ml- (2) for aspiration.
2. 5 mg/ml Dexamethsone.
3. 10% povidone iodine solution for cleaning.
4. Positioning:- patient in sitting position or in the lateral decubitous position on the unaffected side.

**Preparation :**

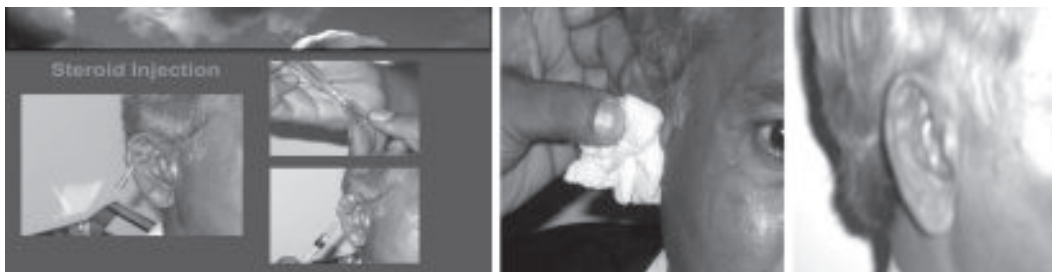
- 1) Clean the pinna skin over the Haematoma with 10% povidone iodine solution and let it dry.
- 2) Put on sterile gloves by surgeon.
- 3) Now in one syringe draw dexamethasone 3 cc.
- 4) Needle aspiration –use an 18/20 gauge needle to aspirate blood/serum from the most non dependant side of swelling till there is no fluid inside the swelling after aspiration. Take out the syringe along with fluid keeping needle in situ, the other syringe with Dexamethasone inject it gently into the site exactly the same amount of fluid drawn from hematoma auris thorough the previous needle kept in situ, after injecting the Dexamaethasone at the site take out the syringe & needle,

give light pressure at the penetrating site with sterile cotton then flucloxacillin 250 mg x 6 hourly for 5 days along with analgesic paracetamol given with advice to come after 2 weeks and not to palpate it.

**Results :**

The average amount of fluid /blood aspirated 2.5 ml. Post operative complications were nil, only 2 patients required repeated aspiration and injection dexamethasone twice. only one patient required 3 times aspiration & injection. patients were followed up after 2 weeks.

No perichondritis or thickening of pinna noticed in any case. It was noticed all the case were almost normal pinna after 2 weeks and rest 3 cases also noticed normal pinna after 2<sup>nd</sup> & 3<sup>rd</sup> injection.

**Fig.-2 :****Fig.-3 :**

**Discussions :**

There is little evidence about currently recommended intervention and there is no well designed trial comparing intervention for acute Haematoma or even a study documenting the outcome of a given treatment or the success of late surgical removal of hematoma

As before evacuation were achieved by either aspiration with a wide bore needle or if this is inadequate, an incision. Such an incision can be hidden on the anterior surface by placement parallel to natural contour<sup>13</sup> Alternatively a posterior incision with removal of a small window of cartilage has been advocated. Aspiration alone however, results in a very high incidence of Re-collection till the perichondrium is again firmly adherent . In order to prevent this Various pressure materials /bandage/splints<sup>5</sup> applied on both sides of the pinna keeping them in place long enough to effectively prevent Re-collection.

A drain left in the incision site<sup>6,7</sup> through and through mattress or quilting Sutures to apply compression<sup>9</sup> cotton wool bolsters<sup>10</sup> buttons<sup>11</sup> silicone rubber splints<sup>12</sup> But in our technique there is no recollection in 45 cases, only 3 cases there were recollection & after 2<sup>nd</sup> + 3<sup>rd</sup> time aspiration that went away.

Haematoma of the Auricle should be Aspirated early & Dexamethason injection should be given under wirh aseptic precaution. The fluid collection after aspiration & injecting Dexamethasone no pressure bandage and/ or a drainage system is not required to prevent Re-accumulation and with this technique no perichondritis or couliflower ear deformity encountered. The pinna came to normal shape.

**Conclusion:**

Aspiration of Haematoma and with injection of dexamethasone at the site provides patient

as normal pinna with in 7-15 days without way incision, drain, pressure bandage.

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