

## Treatment of pinna haematoma with compression using Leonard buttons

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### Abstract

The standard treatment of a pinna haematoma involves drainage and compression to prevent recurrence and subsequent disfigurement. Compressive methods can be non-invasive or invasive, utilising a head bandage or through and through sutures, respectively, to keep compression in place. Leonard buttons are effective alternative compressive devices. They are simple to use and easily available.

**Key words:** Haematoma; Drainage; Ear, External; Ear Cartilages; Ear Deformities, Acquired

### Introduction

Subperichondrial pinna haematomas commonly result from blunt trauma. If not treated appropriately, they can progress to abscess formation, chronic scarring and subsequent disfigurement. Early evacuation of the haematoma is best achieved with formal incision and drainage. Aspiration with a large bore needle should only be considered for small, very early haematomas. Following this, external compression is necessary to prevent re-accumulation of the haematoma. Various materials and methods have been described.

We describe here the use of Leonard buttons (Downs Surgical, Sheffield, UK; approximate cost, £43 for 10) as an effective and easily used compressive device (Figure 1). Leonard buttons are commonly used by maxillo-facial surgeons to help secure fractured mandibles, and hence are readily available in most operating theatres.

### Method

Following the incision and evacuation of a pinna haematoma, Leonard buttons can be secured in pairs on both sides of the pinna with through and through 3/0 Ethilon to provide external compression. Multiple pairs can be used, depending on the size of the haematoma, placed 0.5–1 cm apart. If used close to the pinna angle, the button can be paired posteriorly with a small piece of Silastic® sheet instead. For large haematomas, a small drain can be placed between the buttons to aid drainage. A light head bandage, although unnecessary, can be applied for cosmetic reasons and to protect the ear from further trauma. The buttons normally stay in place for seven to 12 days. The authors prefer to review the patient every few days during this time to enable early identification of complications.

### Case study

An 18-year-old man suffered a haematoma to the superior aspect of his right pinna during a judo competition. He was

counselled on the options available. He chose to have needle aspiration with head bandage compression, as he was due to participate in another competition soon.

However, the haematoma recurred. At the patient's request, further aspiration and head compression were performed. Following a further recurrence, we proceeded to formal incision and drainage with Silastic sheet compression, under general anaesthetic.

Unfortunately, the patient suffered a third recurrence. By this time, the haematoma involved the superior two-thirds of the pinna. At this stage, a month following the initial injury, we performed a repeat incision and drainage and used Leonard buttons with through and through sutures for compression (Figure 2).

We followed up the patient for 32 days and there were no further complications (Figure 3). The patient was pleased with the final appearance of his ear (Figure 4).

### Discussion

Pinna compression following haematoma evacuation can be achieved by non-invasive or invasive methods.

Non-invasive methods include antiseptic-impregnated cotton wool and silicone impression material,<sup>1,2</sup> with or without a compressive head bandage to hold things in place. One problem with this method is that repeat aspiration is needed in 14–33 per cent of patients for haematoma recurrence.<sup>1,2</sup>

Invasive methods involve suturing compressive materials in place using through and through sutures. Dental rolls and Silastic sheets are commonly used in many ENT departments. However, we have found a high haematoma recurrence rate within our practice, using these materials. In cases of recurring haematomas, there is the possibility of fibroneocartilage formation, seven to 10 days following the injury, and it has been recommended that this be removed prior to application of compression.<sup>3</sup>

The advantages of our method, using Leonard buttons, include: greater rigidity (and hence better compression

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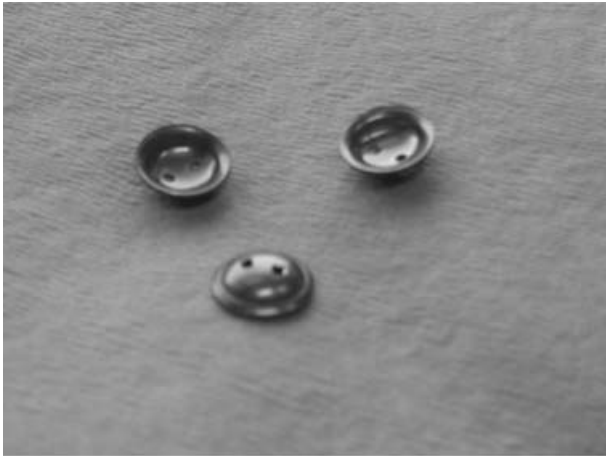


FIG. 1  
Leonard buttons.



FIG. 3  
Post-operative day 2; drain removed.



FIG. 2  
Incision and drainage through an anti-helical fold incision; five pairs of Leonard buttons, used with corrugated drain.



FIG. 4  
Post-operative day 32.

over a broad area); the facility to place a drain between the buttons if necessary (for a large haematoma) to aid drainage; minimal risk of recurrence due to dislodgement of compression (as the buttons are secured in place); and unhindered post-operative wound inspection (as a head bandage is unnecessary).

This technique has been successfully used on 21 patients, with satisfactory cosmetic appearances. These cases included some recurrent haematomas previously treated with the Silastic sheet splints method. Using our Leonard button method, we have not had a single case of recurrence or post-operative infection.

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