

# Manipulation of fractured nose using mallet and champagne cork

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## Abstract

We describe an alternative method of manipulating fractured nasal bones using a surgical mallet and a champagne cork. This method enables accurate fracture reduction with minimal skin trauma, by affording the surgeon a high level of control. This method may be applied successfully to late-presenting fractures.

**Key words:** Nasal Fracture; Facial Trauma; Manipulation Under Anaesthesia

## Introduction

Fractured nose is a common acute diagnosis in ENT practice. Whilst numbers of presentations are not recorded nationally, 9362 manipulations under anaesthesia of such fractures were undertaken in England from 2005 to 2006 – approximately one per 5300 people.<sup>1</sup>

Accepted practice is to undertake a full assessment seven days post-injury, once swelling has reduced, allowing a further eight to 12 days for surgical intervention before any fractured facial bones become fixed in an abnormal position. Common current practice for treatment of deviations of the nasal pyramid is to undertake manual manipulation of nasal bones under anaesthesia.

We describe a previously unreported technique which is accurate, gives excellent control, minimises the risk of skin trauma, and can be used successfully in late interventions.

## Technique

After induction of general anaesthesia or placement of appropriate local anaesthesia and sedation, the patient is placed supine and the head is stabilised. A thorough assessment of the deformity is made and a surgical plan agreed. The champagne cork is placed within the thumb of a sterile glove, and then placed against the skin overlying the deviated nasal pyramid (Figure 1). Disimpaction and realignment of nasal bone and cartilage is achieved with one or more sharp taps of a surgical mallet to the proximal end of the cork, on the appropriate side of the pyramid, using the rounded end of the cork for disimpaction and the flatter end for realignment. Any surgical complications are dealt with in the normal way.

## Discussion

The aim of nasal fracture manipulation is to return the nasal bones accurately to their pre-morbid position, with the minimum of trauma to the surrounding tissues. The springy, slightly compressible nature of a champagne cork

means that applied force can be transmitted to underlying rigid structures with minimal trauma to overlying skin. In addition, the form of the two ends of the cork is very suitable for this function: the rounded end is ideal for disimpaction through exacerbation of the original injury, while the flat end can initially apply force preferentially to the most deviated areas of the pyramid, then subsequently spread force over a larger area, thereby partially attenuating any excess force applied.

This technique enables the surgeon to apply taps of the mallet to the cork with varying degrees of force, somewhat analogous to the technique of using an osteotome and mallet in septorhinoplasty. This technique thus permits fractures to be reduced with a great deal of accuracy. In addition, the technique may potentially be useful in late-presenting fractures in which the nasal bones are relatively fixed in an abnormal position.

Whilst this technique has potential application for the treatment of simple deviations of the nasal pyramid, it is less useful in other defects, such as depressed segments of bone. However, for such cases, excellent instruments already exist to perform the required manoeuvres.

- **Manipulation of fractured nasal bones can be undertaken with a surgical mallet and champagne cork**
- **This technique allows quick, accurate fracture reduction with minimal skin trauma**
- **The technique is useful for simple deviations of the nasal pyramid, but less so for depressed segments**
- **The technique may have particular application for late-presenting fractures**
- **The cork is placed within a sterile cover, such as a surgical glove, and can be re-used**



FIG. 1

Nasal fracture manipulation procedure.

Although this technique involves the use of a cork as a reusable, non-sterile instrument, infection control concerns can be assuaged by the use of a disposable sterile glove, as described above, thereby avoiding the need to open a new bottle of champagne for each procedure.

#### Reference

- 1 Hospital Episode Statistics for England. In: <http://www.hesonline.nhs.uk> [21 February 2010]

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