

# USE OF COTTON BUDS AND ITS COMPLICATIONS

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## ABSTRACT

- Objective* To evaluate the complications and effects produced by use of cotton bud tip in the ear for cleaning.
- Study design* Descriptive study
- Place & Duration of study* This study was conducted from July 2005 to January 2007 at ENT Department, Sir Syed Medical College & Hospital Karachi.
- Patients and Methods* All patients having history of use of cotton buds were included. A thorough examination with aural speculum and auroscope was done. Few were examined with the help of microscope. Aural toilet was done by sucking out pus and with dry moping. Hearing assessment done primarily with tuning fork with 512 HZ frequency. Pure tone audiometry used in selected cases.
- Results* Out of 100 patients 58 were males and 42 females with the mean age of 38.5 years (range from 7 years to 73 years). The most common complication / effect was unspecified itching in the ear in 34 cases, followed by otitis externa in 23, otomycosis in 15, trauma in the external auditory canal in 9, impacted wax medially leading to decreased hearing in 6, cotton tip foreign body in 5, boil in 4 and traumatic tympanic membrane perforation in 4 cases.
- Conclusions* Use of cotton buds tip and match stick can lead to lot of complications including trauma to external auditory canal and tympanic membrane which can lead to perforation resulting in deafness. It should be avoided for the purpose of cleaning ears.
- Key words* Tympanic membrane perforation, Otitis externa, Cotton bud use.

## INTRODUCTION:

Cotton buds are commonly used to clean the ears, remove wax, in case of itching in the ear, aural toilet in discharging ears and some time as a habit. Cotton bud tips are used not only by adults but are also commonly used in pediatric population either by children themselves or by parents. Ear injuries caused by cotton buds are commonly seen in ENT

practice.<sup>1</sup> Cotton tips for cleaning out the auditory canal are readily available from drug stores and super markets. They supposedly represent a safe means of cleaning the ear and nose. Insertion of cotton tips is not only unnecessary but also potentially dangerous.

Excess cerumen (earwax) in the external auditory canal is associated with symptoms of earache, fullness in the ears, and diminished hearing. These symptoms, and tinnitus, are commonly associated with whiplash injury. It is possible that a significant number of acute onset auditory symptoms reported in whiplash patients have a benign cause.<sup>2</sup>

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The most common foreign bodies in children are beads, cotton tips, insects and paper while in adults cotton tips, insects, cotton wool and silicone ear plugs found commonly. Adults were more likely to have associated otitis externa at the time of presentation.<sup>3</sup> In one study the cotton tip swabs were the major cause of ear injury and hearing loss.<sup>4</sup> The purpose of the present paper is to evaluate the complications / effects produced by the use of insertion of foreign body in the ear in the form of cotton tips for cleaning.

#### **PATIENTS AND METHODS:**

This observational study was conducted at the department of ENT at Sir Syed Medical College & Hospital Karachi from July 2005 to January 2007. Patients with history of use of cotton buds were selected and evaluated through detailed history and examination with aural speculum, auroscope and under microscope in selected cases. Hearing assessment was done with tuning fork of 512 HZ frequency and pure tone audiometry done in selected cases. Clinical features like itching, discharge, pain, bleeding and deafness, decreased hearing in ear after use of cotton bud were asked. On examination signs of trauma in external auditory canal and status of tympanic membrane, presence of pus and wax were noted. Suctioning and dry mopping, where required, were done.

#### **RESULTS:**

Out of 100 patients 58 were males and 42 females. Mean age was 38.5 years and range from 07 years to 73 years. The common complications / effects were unspecified itching in the ear in 34, otitis externa in 23, otomycosis in 15, trauma / injury to the external auditory canal in 9, impacted wax medially resulting in decreased hearing in 6 and cotton tip foreign body 5. Four patients developed boil and traumatic tympanic membrane perforation occurred in four cases. Over all 22% patients developed decreased hearing.

#### **DISCUSSION:**

Cotton buds tip are frequently used in our population for ear cleaning in cases of chronic discharging ears. Many people use it as a habit after taking shower, or cleaning the ears for wax or due to itching in the ear. Few studies have been published on this subject. Cotton-tipped swabs are mainly used for clearing wax.<sup>5</sup> Cotton bud use can give rise to cerumen accumulation and some dangerous complications. It is absolutely unnecessary and may be a dangerous practice.<sup>6</sup> Study by Sim D on three hundred and ten patients who used cotton buds for aural toilet, the incidence of visually occlusive wax plugs in the external auditory canals was not significantly different between users and non-users of cotton buds.<sup>7</sup>

In present study there were six cases in whom wax was impacted and pushed medially lead to decreased hearing after the use of cotton bud, but there was no perforation.

Nussinovitch M et al did survey to find out the leading causes of otitis externa. They identified many risk factors but the use of a cotton-tip to clean the ear was assessed to be the leading cause.<sup>8</sup> In our study we found this to be the second most common complication in cotton bud users. In our study there were five cases of foreign body in the form of cotton tip in adults, while in children no case of cotton tip foreign body seen in this study.

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