## 7. The Clinical Application of Sound-Protection

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(초록은 영문초록 참조)

## 8. 氣管內 插管後에 發生한 喉頭肉芽腫 9例에 對한 臨床的 觀察

慶北醫大

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1932년 Clausen 이 삽관에 의한 전신마취 후에 발생한 喉頭肉芽腫을 外傷性 喉頭肉芽腫이라고 보고한 이래 Harrison 은 삽관환자의 약 4%에서 후두 및 상기도에 손상을 초래하고 그중 약 1%정도가 喉頭肉芽腫을 일으켜서 이로 인하여 발성장애나 심할 때는 호흡곤란까지도 일으킬 수 있다고 하였다.

기관내 삽관은 전신마취를 하기 위하여 사용되거나 또는 인위적으로 환자의 기도를 확보하기 위한 방법의 하나로써 널리 사용되고 있으며 삽관 후 上記와 같은 합병증으로 肉芽腫이 발생된 예는 국내외에서 점차 그 보고된 수가 증가되고 있다.

저자도 1975년 3월부터 1976년 2월까지 1년 동안에 9례의 삽관 후 발생한 喉頭肉芽腫환자를 경험하였기에 문헌적 고찰을 가하여 보고하는 바이다

# 9. 2年後에 拔去가 可能했던 氣管 cannula 拔去困難症

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症例

患者: なつき 4歳 男子

主訴:氣管 cannula 拔去時의 呼吸困難

病歷:來院 2年前 小兒科에서 氣管切開衛은 世았으 中 氣管切開術 1個月後에 氣管 cannula 拔去困難症으 足 再手衛을 받았음.

經過:兩親에 依해 cannula corking F에서 正常氣

道를 通한 꾸준한 呼吸練習을 하여 1976年 3月 16日本教室에서 아무런 후유증 없이 氣管 cannula를 拔去하여 2日後 退院하였음.

2年間 氣管 cannula의 拔去가 困難했던 4歲男兒에서 氣管 cannula 拔去後 아무런 支障이 없었던 1例을 經驗하였기에 報告한다.

正常氣道를 涵한 呼吸困難이 內外科的 수단을 加하지 않고 2年後에 氣管 cannula의 拔去가 可能했다는 事實은 一種의 自然治癒現象으로 보아야 할 것이다. 勿論 high tracheostomy로 因하여 cricoid cartilage 의 손상, perichondritis, granulation 및 聲門下極脹 의 同伴이 있었다.

이러한 呼吸困難이 成長에 수반되는 氣管成長이나 cannula corking 下에서 正常氣道를 通한 꾸준한 呼吸練習이 2年後에 氣管 cannula의 拔去를 可能케 했다고 볼 수도 있으나 癌의 自然治癒現象을 免疫으로 說明하는 것과 같이 이러한 症例도 免疫에 依한 自然治癒나 unknown factor 等을 附加하여 생각할 수도 있겠다.

### 10. 과거 4년 5개월간 본교실에서 취급한 식도 및 기도이물의 통계적 고찰

경희의대 (지도 **전 지 일** 교수)

김성일 · 조현상 · 김정원 · 최태규 김진구 · 최병의 · 임현준 · 김영학

본 의료원 개원이래 1971년 11월부터 1976년 3월말까지 만 4년 5개월간 경희대학교 부속병원 이비인후과에 내원한 식도이물환자 73례, 기도이물환자 8례, 총 81례에 대한 통계적고찰을 하여 다음과 같은 결론을 얻은바 기왕의 보고와 비교관찰하면서 문헌적고찰과 함께 보고하는 바이다. 결론은 다음과 갔다.

- 1) 식도이물의 빈도는 총례 73례중 주화(61례; 83.6%) 골편 (6례; 8.2%) 식괴(3례; 4.1%) 디스크 나른 금속들의 순이었고, 기도이물 총 8혜중 식괴(3례; 7.5%) 금속편(2례; 25%), 플라스틱제 연필뚜껑, 나무조각, 플라스틱제반지의 순서였다.
- 2) 성별비는 남자가 51례(62.9%) 여자가30레 U7.1 %)이며 남녀비는 약1.7:1로 남자에 많았다.
- 3) 연령별로는 5세이하가 총 81례중 69례(85.2%)였으며 특히 주화는 5세이하가 61례중 59례(96.7%)였으며 최고 연령은 8세 최저연령은 11개월 이었다. 기도

are in few.

- 7. The most common findings in ear drums is normal in 177 ears (79.4%) and the next is retracted drums in 28 ears (12.6%).
- 8. The average hearing level is widely distributed from mild to profound hearing loss which was not related to the audigraphic pattern.

# 6. Squamous Cell Carcinoma of the External Ear Canal

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The external ear canal is a rare site for development of squamous cell carcinoma which is usually in the advanced state of invasion by the time the diagnosis is made.

Recently the authors experienced squamous cell carcinoma of the external ear canal which was treated with wide excision of the external ear canal and radical mastoidectomy followed by post-operative radiotherapy.

## 7. The Clinical Application of Sound-Protection

Tomohiko Kamio, M.D.

Bekesy measured the sound transformation system of the middle ear 49 years ago. According to his reports, a ratio between the size of ear drum and the size of oval window is 17:1, and the lever function of the ossicles is physiologically I.3:I. Therefore, the hearing might be aggravated to 27.5dB in the case of the vanishment of 3 ossicles.

In 1952, Wullstein reported 5 types of tympanoplasty and the fourth type among them was especially named for the sound-protection. The oval window is only exposed by the sound pressure and the round window is not exposed. According to the application by this idea, the post-operative hearing might be improved until 27.5dB.

Mean while, in 1942, Onchi verified through his

experiment that the results of Bekesy's measurement was not completely conformed to Onchi result. Bekesy measured the sound pressure on the stapes plate of the oval window, on the other hand, Onchi measured the sound pressure on the surface of the perilymph of the oval window after removing the stapes plate(Fig. 1).

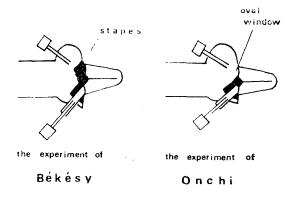


Fig. 1.

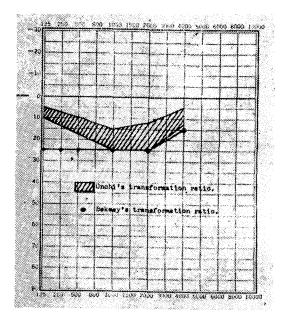


Fig. 2.

The difference of their experiment is recognized that the impedance of the stapes plate exists or not (Fig. 1).

Both Audiogrums are compared as Fig. 2.

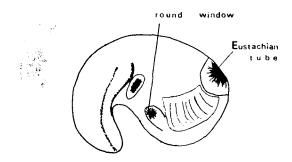
The result of  $\mathbb N$  type of tympanoplasty is success ful in 54% as the Table 1.

Table 1.

number of cases	number of effective cases 500~2,000Hz, under 40dB	percentage of effect
76	41	54%

The reason of unsatisfactory is caused by the thick and unmovable window-membrane and by the closing of air passage to the round window. The closing of the air passage to the round window is occurred by the adhesion between the grafting membrane and the surface of promontorium. In order to preserve this adhesion, I produce to transplantate the mucous membrane of the lip to the bone surface of tympanic cavity after removing the granulation tissue of the tympanic cavity and

to form a membranous canal for the sake of air passage (Fig. 3).



the slash mark' the transformation of mucous membrane

Fig. 3.

The post-operative hearing by this method is shown as Fig. 4, 5. In other words, the post-operative sound pressure entered into the cochlea directly, by way of the oval window only, not by way of the round window, as a theorie of the sound protection.

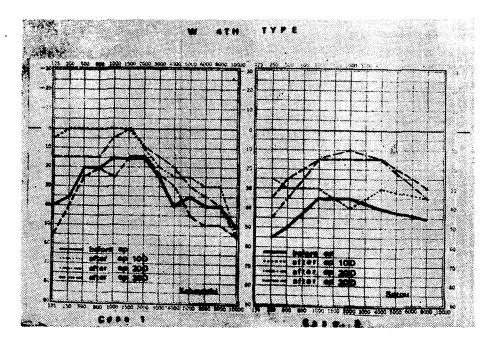


Fig. 4,

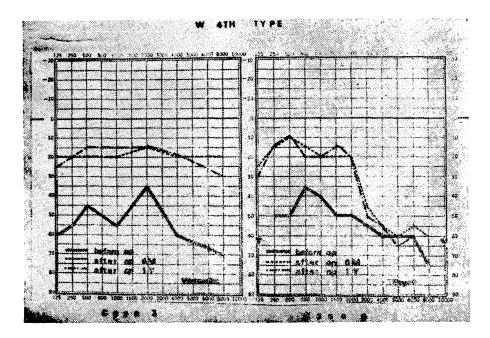


Fig. 5.

### 8. A Clinical Study on the 9 Cases of Laryngeal Granuloma Following Endotracheal Intubation

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Laryngeal granuloma following endotracheal anesthesia was reported as traumatic granuloma of the larynx by Clausen in 1932.

Thereafter Harrison reported that 4% of the intubated cases developed larynx and upper respiratory tract injuries and 1% of the above mentioned injured cases later developed laryngeal granuloma with symptoms including voice change and even dyspnea in severe cases.

The endotracheal intubation has been wedely used for general anesthesia or patency of the air way and the reported cases of the laryngal granuloma as its complication have been increased in number worldwidely.

For a year from March 1975 to Feb. 1976, the authors have experienced the nine cases of laryngeal granuloma in our department and this is the report of clinical findings on these cases along with literature review.

## 9. A Successful Decannulation Case Two Years Later A Tracheostomy

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The authors experienced a case of a difficult decannulation in a 4 years old boy, in which case decannulation was possible 2 years later a tracheostomy. Some immunoglogical phenomena could be considered in this case as though cancer can remiss