

# OTOLARYNGOLOGY

## HEAD & NECK SURGERY

DECEMBER 2015

### Contents

#### Editorial

- NEED FOR CONTINUOUS PROFESSIONAL DEVELOPMENT (CPD)  
IN OTO-RHINO-LARYNGOLOGY** 63

*Iqbal A. Muhammad Khyani*  
Karachi - Pakistan

#### Original Articles

- SHOULD TONSILLECTOMY BE PERFORMED DURING MENSTRUATION?** 65

*Muhammad Shafi, Zahid Suhail, Khalid A. Ashrafi*  
Karachi - Pakistan

- CORROSIVE INTAKE CONTRIBUTORY FACTORS AND THEIR PREVENTION** 68

*Naeem Akhtar, Muhammad Ali Tirmizey, Nisar Akbar*  
Faisalabad - Pakistan

- RACIAL DISPARITY IN PATIENTS WITH ORAL CAVITY  
SQUAMOUS CELL CANCERS IN PAKISTAN** 72

*Beenish Nisar Ahmed, S.M.Tariq Rafi, Muhammad Waqas Nisar Ahmed, Mehwish Nisar*  
Karachi - Pakistan

- THE IMPACT OF TINNITUS ON QUALITY OF LIFE** 76

*Asma A , Yii Hern E, Norsyamimi AR, Khai Yng H, Kirubananthini J,  
Tuti Iryani MD, Wan Fazlina H, Fatimah S, Lim BY, Roslenda AR*  
Cheras - Malaysia

#### Case Reports

- SOLITARY ISOLATED NEUROFIBROMA OF SOFT PALATE;  
A RARE ENTITY** 82

*Iqbal A Muhammad Khyani, Maria Sikandar, Atif Hafeez*  
Karachi - Pakistan

- HEART AT A WRONG PLACE: A CASE REPORT** 85

*Atif Hafeez, Iqbal A Muhammad Khyani, Ashok Kumar Raheja*  
Karachi - Pakistan

- INDEX** 80

## **Need for Continuous Professional Development (CPD) in Oto-Rhino-laryngology.**

**Iqbal A. Muhammad Khyani**

New technologies are advancing rapidly at an exponential rate in the field of medicine and surgery resulted in change in health care delivery system. Newer concepts and technologies are included that has changed the approach, methodology of diagnosis and therapeutic strategies. It is therefore imperative to change teaching and training methodology to change & improve approaches towards ailing humanity. These facts forces the medical educationist to modify the undergraduate and postgraduate curriculum according to the needs of the community. By and large these changes governs to keep pace with the innovation in clinical practice.

Medical education is a lifelong learning process. The need for continence medical education (CME) is universally stressed and the credit hours are considered for upgradation, promotions and registration of the practitioner in liaison with accredited agencies. Unfortunately, this approach is yet to be adapted at full blown in Pakistan. Recently, Pakistan Medical and Dental Council (PMDC) took a very positive approach in the form of mandatory CME credit hours for renewal of registration. PMDC suggested a format of awarding CME credit hours and accredited the agencies to confer the same. This approach was very much appreciated by the majority of proponents but criticized by few opponents.

In the last couple of decades, lots of minor diplomas (D.L.O.) and even major qualification (MS, FCPS) were awarded in the field of otorhinolaryngology, Head & Neck Surgery without structured training program. As a result graduates with inadequate surgical skills were produced that adversely affected the professional health care delivery. They practice as specialist and /or consultants grades performing routine procedures. There is paucity of knowledge and surgical skills for the newer and innovative approaches. It is evident that after clearing the postgraduate examination, the outgoing graduates are good at theoretical knowledge but most of them are weak in decision making and performing major and / or advance surgical procedures.

Considering the gravity of the situation, the College of Physician and Surgeon Pakistan (CPSP) strived in early 21st century to plan strategies to cope with the situation. Workshop for trainees and supervisors were declared mandatory. A structured training program was formatted and dispatched to the supervisor responsible for the training of the postgraduate. All this practice seems to be mere waste of efforts as the program lacking hands-on skill development and monitoring for strict adherence.

Innovation in the field of ENT, Head & Neck Surgery is going through unprecedented development. The approach, methodology of diagnosis and therapeutic strategy has changed due to recent and rapid advancement in the technology. It is therefore imperative to change teaching and training methodology. Blended e learning concept is familiar to most educationist. Advancement in information technology is pivotal that has change the scenario. Masterclass surgical videos, e learning with anatomy software package for otolaryngologist by W.Mc kerraw and Walkman joy stick video game simulated surgical procedures with virtual dissection enable the new generation



of surgeons to learn and practice surgical procedures, are the major innovations for the training of postgraduates. In future, it is envisioned that trainee can upload the individual patient's scans and practice on 3D monitors before taking the patient to real time operating situation.

It is high time now that the awarding agencies invest efforts and money to formulate training program for postgraduates incorporating hands-on training workshops as mandatory to keep pace with the global changes that adequately meets the needs of the community. It is important to develop academic environment and to arrange hands-on workshops at the recognized training centers for practicing surgeon to encourage those who volunteer themselves to keep abreast with the innovation and newer concepts in the field.

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## Should Tonsillectomy be Performed During Menstruation?

\*Muhammad Shafi, \*\*Zahid Suhail, \*\*Khalid A. Ashrafi

**ABSTRACT:** *OBJECTIVE:* To determine the time taken and amount of blood loss if tonsillectomy is performed during menstruation. *STUDY DESIGN:* Prospective Interventional study. *MATERIAL AND METHODS:* This bi center prospective interventional study was conducted at Liaquat University Hospital Hyderabad and Abbasi Shaheed Hospital Karachi for a period of one year from January 2015 to December 2015. 103 female cases during menstrual cycle that otherwise fulfilled the usual criteria for tonsillectomy with all relevant investigations within normal limits were included in this study. The method of tonsillectomy was cold steel wire dissection and snare method. Calorimetric method was adopted for estimation of the blood loss. All the information was collected on predesigned performa and analyzed on SPSS version 16. *RESULTS:* A total of 103 female cases of chronic tonsillitis were included in this study. The age range was 13 - 43 years with mean age being 27 years. Mean blood loss was 201 milliliters and mean time spent from incision till the achievement of complete hemostasis was 68 minutes with reference to the control group which figured 43 milliliters and 24 minutes respectively. *CONCLUSION:* Due to significantly increased intra-operative time and blood loss, excessive use of coagulants during surgery, increased incidence of reactionary hemorrhage and constant stress to the surgeons throughout the procedure, the authors do not recommend the tonsillectomy to be done during menstrual periods.

**Key Words :** Tonsillectomy; Menstrual period; Menstruation.

**INTRODUCTION :** The word menstruation is derived from Latin word "Menses" which means "Month". Menstruation is a natural phenomenon of females extending from puberty till menopause. It is characterized by monthly exfoliation of endometrium due to alteration in the level of estrogen and progesterone following the feedback between gonads, anterior pituitary and hypothalamus<sup>1</sup>. Among the some inevitable accompaniments of this phenomenon is the decreased coagulability of blood. And this is the factor which has remained the nightmare for the surgeons for centuries to keep them avoid elective surgeries during menstruation. But with modern research work, it has been claimed and proved that there is no harm in doing elective surgery during menstruation<sup>1</sup>. Tonsillectomy is a unique surgery in the sense that it does not depends on any drain or pack to detect, assist or prevent any impending or evident bleeding. Moreover, its bleeding does not permit much of the time to continue due to proximity of the aero digestive tract with fear of blood aspiration and ingestion. Also stimulation due to hemorrhage results in nausea and vomiting which again results in more opening of blood vessels and bleeding due to increased local pressure. With the compulsion of the continued promising results from other specialties regarding the permissibility of elective surgery during menstrual periods with no significant untoward effects, this study was conducted to assess the feasibility of the application of this luxury for Tonsillectomy. The purpose of this study is to estimate and document whether tonsillectomy, like other elective surgeries, can be performed during menstruation phase of cycle safely. **MATERIALS AND METHOD :** This prospective study was conducted at Liaquat University Hospital Hyderabad

and Abbasi Shaheed Hospital Karachi for a period of one year from January 2015 to December 2015. 103 female cases with history of menstrual periods that otherwise fulfilled the usual criteria for tonsillectomy with all relevant investigations within normal limits were included in this study. In all cases one pint of blood was arranged pre-operatively. All of these patients were operated upon by experienced surgeons only. Before starting the study, a control group of normal was established by randomly selecting three cases of tonsillectomy of non-menstrual females of like age group which were carried out by the same surgeons. This was done to calculate the amount of blood loss and operative time under normal circumstances by all the three operating surgeons. The average blood loss and intra-operative time by these surgeons was assumed to reflect as a normal against the study cases. The control author's tonsillectomies were found to have blood loss to be 43, 49 & 37 milliliters respectively with control average blood loss established to be 43 milliliters. Similarly, the intra-operative times taken by these surgeons were 24, 27 & 21 minutes respectively with control average operative time established to be 24 minutes. All the figures whether in milliliters or in minutes have been round-figured for ease in calculation and presentation. All the patients were passed through a definite protocol with detailed history, physical examination and relevant investigations. Special note was observed with regards to the time of surgery and the amount of blood loss and measures adopted to control bleeding. Five days of menstrual period were separately concentrated for the interpretation with regards to the time spent for the surgery and the amount of blood lost during surgery. The method of tonsillectomy was Cold steel wire



**Figure 1 :** Age distribution (n=103).

dissection and snare method with the aid of coagulation diathermy and the use of 2/0 silk for ligation to secure hemostasis. Tranxemic acid was the armamentarium for the coagulation used during surgery. Calorimetric method agreed in many studies to be simple and accurate, was adopted for estimation of the blood loss<sup>2,3</sup>. Similarly stop watch was used to record the time of surgery which was mandatorily taken from incision till the achievement of complete hemostasis. All the information was fed into SPSS VER 16 to analyze and exhibit the data.

**RESULTS :** A total of 103 patients were included in this study. The age range was 13 years to 43 years with mean being 27 years (Fig.1). As regards the days of menstrual period, 18 patients were with 1st day of menstrual period, 24 with 2nd, 22 with 3rd, 14 with 4th and 25 with 5th day of their menstrual period. Minimum and maximum blood loss were 49 milliliters and 423 milliliters respectively with mean blood loss being 201 milliliters. Minimum and maximum times spent from incision till the complete hemostasis were 27 and 117 minutes respectively with mean time spent being 68 minutes. The control group minimum and maximum blood losses were 37 milliliters and 49 milliliters respectively, with mean being 43 milliliters. Similarly the control group minimum and maximum time spent were 21 minutes and 27 minutes respectively with mean being 24 minutes. Incidence of increased bleeding was more evident in first three days of menstrual period. During surgery, all the patients were vigilantly observed regarding the state of hypovolemia due to excessive hemorrhage. And when such situation was noted to be impending, Tranxemic acid was given to control the bleeding. Seven patients underwent reactionary hemorrhage, constituting 6.8% incidence, as compared to the nil of the control. Two of these incidences occurred on 1st, three on 2nd day and the rest two on 3rd day of menstruation, again endorsing the increased frequency of bleeding incidence on first three days of menstrual period.

**DISCUSSION :** The physiological phenomenon of menstruation affects all of a woman's tissues in different ways after her entire hormonal and metabolic changes<sup>4</sup>. The most sensitive organs to hormonal changes during

menstruation include breast, vagina, oral mucosa, Eustachian tube mucosa, nasal mucosa and conjunctiva<sup>5-11</sup>. Performing any elective surgery during menstruation was feared by decreased coagulability tendency during this bleeding phase of menstrual cycle. For centuries, this fear had made surgeons not to do elective surgeries during menstruation. But recently, with modern research and available data it has been suggested that postponement of elective surgery because of menstrual period should no longer be accepted as a reason<sup>12</sup>. With this modern concept, surgeons in different specialties like gynecological, abdominal, plastic and nasal, started surgeries during menstruation<sup>4,13-15</sup>. Tonsillectomy is a different type of surgery which neither depends on any drain nor any pack to detect, assist or prevent any impending or evident bleeding. Also it has more chances of aspiration or ingestion of blood due to proximity of aero digestive tract. Therefore it remained a contraindication to be performed during menstruation for centuries. Hence with the light weed of modern research, the literature was reviewed for the evidence to confirm or navigate this thesis according to evidence based medicine. Trying different search engines with different combinations of key words, we could not find any study on tonsillectomy during menstruation. In our study, the main focus was paid on the feasibility of doing tonsillectomy during menstruation in the face of any complications specially the blood loss during tonsillectomy and the time duration of surgery as compared with the normal control group. Our control group had average operative time and average operative blood loss to be 24 minutes and 43 milliliters respectively. Reviewing the literature, the average blood loss during tonsillectomy had been found to vary from 42.5 milliliters to 158.44 milliliters<sup>16,17,18</sup>. Similarly, the average operative time of tonsillectomy had been found to vary from 19.9 minutes to 113 minutes<sup>16-18</sup>. Comparing these controls with those tonsillectomies done during menstruation, there was a significant difference both in terms of operative blood loss as well as operative time. The tonsillectomies performed during menstruation, took significantly quite a long intra operative time especially on first three days

**(CONTROL: MINIMUM= 21 MINUTES;  
MAXIMUM= 27 MINUTES; MEAN=24 MINUTES)**

|                 | 1st Day of Menstruation | 2nd Day of Menstruation | 3rd Day of Menstruation | 4th Day of Menstruation | 5th Day of Menstruation |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| No. of Patients | 18                      | 24                      | 22                      | 14                      | 25                      |
| Minimum         | 56                      | 52                      | 45                      | 37                      | 27                      |
| Maximum         | 112                     | 117                     | 108                     | 77                      | 51                      |
| Mean            | 89.1                    | 89.1                    | 72.7                    | 48.2                    | 40.1                    |

**Table-1 :** Time spent in minutes during tonsillectomy.

**(CONTROL: MINIMUM= 37 MILLILITERS;  
MAXIMUM= 47 MILLILITERS; MEAN= 43 MILLILITERS)**

|                 | 1st Day of Menstruation | 2nd Day of Menstruation | 3rd Day of Menstruation | 4th Day of Menstruation | 5th Day of Menstruation |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| No. of Patients | 18                      | 24                      | 22                      | 14                      | 25                      |
| Minimum         | 153                     | 123                     | 102                     | 54                      | 49                      |
| Maximum         | 417                     | 423                     | 334                     | 215                     | 176                     |
| Mean            | 297                     | 276                     | 204                     | 116                     | 105                     |

**Table-2 :** Blood loss in milliliters during tonsillectomy.

of menstruation (Table-1). Similarly, with regards to the intra-operative blood loss also, there was statistically a significant blood loss compared with the control group, again more so on first three days of menstrual period (Table-2). Almost all the cases needed coagulants in the form of Tranxemic acid which was utilized proactively as well as to control the bleeding. However it is worth mentioning that these effects were more pronounced during first three days of menstruation. Tonsillectomies performed on last two days of menstrual period generally did not pose significant trouble with regards to either operative time or operative blood loss. Seven patients underwent reactionary hemorrhage, constituting 6.8% incidence, as compared to the nil of the control. Two of these incidences occurred on 1st, three on 2nd day and the rest two on 3rd day of menstruation, again endorsing the frequency of bleeding incidence on first three days of menstruation. No reactionary hemorrhage occurred on 4th and 5th days of menstruation.

**CONCLUSION :** The authors conclude that tonsillectomy done during menstruation has significantly increased intra-operative time and blood loss, excessive use of intra and post-operative coagulants and risk of reactionary hemorrhage with stressful period till discharge of the patient. Hence the authors do not recommend tonsillectomy operation to be done during menstruation.

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## Corrosive Intake Contributory Factors and their Prevention

\*Naeem Akhtar, \*Muhammad Ali Tirmizey, \*\*Nisar Akbar

**ABSTRACT:** *OBJECTIVE:* To analyse the contributory factors for corrosive intake among the victims and to devise preventive strategies to reduce its incidence. *INTRODUCTION:* Although corrosive ingestion has declined in the developed countries, yet it still remains a prevalent and preventable condition in developing countries like Pakistan. Corrosive ingestion is relatively common among illiterate people having poor socioeconomic status residing in the rural areas. *STUDY DESIGN:* Descriptive non-interventional study. *PLACE AND DURATION OF STUDY:* This study was conducted in the department of ENT and Head & Neck surgery Allied hospital (PMC) Faisalabad during October 2014 to March 2016. *PATIENTS AND METHODS:* A total of 40 patients having history of corrosive intake were included in the study. *INCLUSION CRITERIA:* The patients of either gender with history of corrosive ingestion, ranging from 03 years to 40 years and giving consent for any surgical intervention were included in the study. *EXCLUSION CRITERIA:* Patients below 03 years and above 40 years, having malignant stricture, peptic stricture and not willing for any surgical intervention were excluded from the study. *DATA ANALYSIS:* SPSS software version 20 was used to analyse the data. *RESULTS:* 6 patients (15%) were males and 34 patients (85%) were females. 30 patients (75%) were more than 15 years of age while 10 patients (25%) were below the age of 15 years. 26 patients (65%) belonged to young age group ranging from 16 years to 30 years of age. Mean age was 19.8 years ranging from 3 years to 40 years. Majority of the patients were illiterate (52.5%), having poor socio-economic status (70%) and belonging to rural areas (60%). 25 patients (62.5%) had ingested corrosive substances with suicidal intention and deliberate self harm while 15 patients (37.5%) took the corrosive accidentally. Patients presenting early were managed conservatively. Short segment strictures were managed with endoscopic dilatation with good results while long and multiple segment strictures were referred to surgery for further management. *CONCLUSION:* The esophageal injuries caused by corrosive intake still remain quite prevalent in the developing countries like Pakistan and are preventable. Therefore the preventive measures are badly needed to control its incidence.

**Key Words :** Corrosive ingestion, Acids, Alkalis, Preventive strategies.

**INTRODUCTION :** ALLAH Almighty gifts us life that is a wonderful mixture of pain and pleasure. It gives us so many charms, but on the other hand we also see it doing some injury. Corrosive ingestion itself and its long term sequelae are the most dangerous weapons through which they torment humanity. Corrosive ingestion and its long term sequelae remain a prevalent and preventable condition in the developing countries<sup>1</sup>. Although corrosive ingestion is declining in developed countries<sup>2</sup> but on the other hand it is increasing in developing countries like Pakistan. Corrosive ingestion is relatively common especially among the illiterate people with poor socio-economic condition<sup>3,4</sup>. Corrosive ingestion on most of the occasions is accidental especially in children under the age of 5 years while the adults ingest it with suicidal intention<sup>5</sup>. The ingested corrosive materials have high corrosive potentials. In households, caustic soda is used in making soap by traditional method in many parts of the poor countries. Moreover caustic soda in bottles can be confused with water or alcoholic beverages that can be ingested accidentally not only by the children but also by the adults<sup>6</sup>. According to the annual report of the American Association of Poison Controls there are about 200,000 corrosive victims annually, most commonly with acid and alkaline substances which are regularly used as cleansing agents

in the households<sup>7</sup>. Corrosive injuries occur after ingestion of acids (such as sulphuric acid, hydrochloric acid, acetic acid and oxalic acid) and alkalis (such as soaps, detergents, sodium hydroxide, potassium hydroxide and household bleaching liquids)<sup>8,9</sup>. The most commonly abused substance among the acids is hydrochloric acid which is often used in the community as a sanitary cleansing agent<sup>10</sup>. Acids cause injuries due to coagulative necrosis whereas alkalis result in liquefactive necrosis of the tissues on contact. The present study has been conducted to analyse the contributory factors responsible for corrosive ingestion among the victims and to devise preventive strategies to reduce its incidence.

**MATERIALS AND METHODS :** A total of 40 patients having history of corrosive ingestion were included in the study. All these patients were admitted in the ENT and head & neck surgery department, Allied hospital (PMC) Faisalabad during October 2014 to March 2016. All the patients were thoroughly investigated with respect to comprehensive history, detailed physical examination and appropriate investigations according to a detailed written proforma. A written consent was also taken from all the patients regarding management of corrosive ingestion. *INCLUSION CRITERIA:* The patients of either gender, with history of corrosive ingestion, having age above 3 years and giving consent

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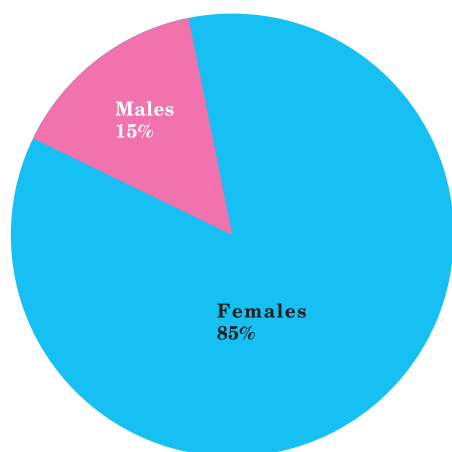


for any surgical intervention were included in the study. **EXCLUSION CRITERIA:** The patients below 3 years of age, having malignant stricture, with peptic stricture and not willing for any surgical intervention were excluded from the study. **DATA ANALYSIS:** SPSS software version 20 was used to analyse the data. Chi square test was applied and P-value less than 0.05 were considered statistically significant.

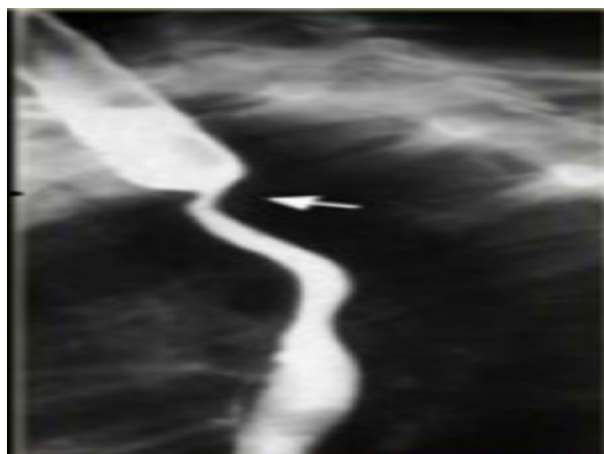
**RESULTS:** Out of 40 patients, 6 patients (15%) were males and 34 patients (85%) were females (Fig.1). 30 patients (75%) were above 15 years of age whereas 10 patients (25%) were below the age of 15 years. Mean age was 19.8 years ranging from 3 years to 40 years (Table.1). 26 patients (65%) were falling within the age range from 16 years to 30 years. Of these 26 young age group patients 22 patients (84.6%) were females and only 4 patients (15.4%) were males. Out of these 26 patients, 6 patients (23%) took the corrosive materials accidentally while 20 patients (77%) ingested corrosive with suicidal intention and deliberate self harm. Out of 40 patients, 15 patients (37.5%) were found to have corrosive ingestion accidentally while 25 patients (62.5%) took the corrosive substance to commit suicide and deliberate self harm due to certain personal reasons. 34 patients (85%) had history of acid ingestion while 6 patients (15%) took alkali. 24 patients (60%) were rural dwellers and 16 patients (40%) were resident of urban areas. Educational status of the patients and their parents is evident from table 2. Socio-economic status of the patients revealed that majority of the patients i.e., 28 patients (70%) belonged to poor socio-economic condition (Table.3.). Six patients (15%) developed psychiatric disorder where as 34 patients (85%) developed esophageal stricture and dysphagia. 9 patients (22.5%) out of 40 of corrosive intake, were managed conservatively. 6 patients (15%) developed long or multiple segment strictures and so they were referred to surgery for further management. 25 patients (62.5%) underwent endoscopy and esophageal dilatation for a number of times. 3 patients (12%) out of 25 had

esophageal perforation during dilatation who were referred to surgical department for further management. Of these 3 patients two survived while one expired because of fatal mediastinitis. 22 patients (88%) out of 25 were managed successfully by endoscopic dilatation with gum elastic bougies.

**DISCUSSION :** ALLAH almighty gifts us life that is a wonderful mixture of pain and pleasure. It gives us so many charms but on the other hand we also see it doing some injury work. Corrosive ingestion itself and its long term sequelae are the most dangerous weapons through which they torment humanity. Corrosive ingestion and its long term sequelae remain a prevalent and preventable condition in the developing countries<sup>1</sup>. It is declining in the developed countries but increasing in developing countries like Pakistan. Corrosive abuse is relatively common especially in the illiterate people with poor socioeconomic status<sup>3,4,7,8</sup>. On many occasions corrosive ingestion is accidental especially when the victims are children under the age of five years. The adults ingest them when they have suicidal intention and deliberate self harm<sup>5</sup>. According to the annual report of the American Association of Poisons Control, there are about 200,000 corrosive victims annually, most commonly with acid and alkaline substances which are regularly used as cleansing agents in the households<sup>7</sup>. The most commonly corrosive substance among acids is hydrochloric acid which is often used in the community as a sanitary cleansing agent<sup>8</sup>. Other acids abused as corrosive agents are sulphuric acid, acetic acid, lactic acid and oxalic acid<sup>9,10</sup>. In households caustic soda is used in making soap by old traditional method in many parts of the poor countries. Moreover caustic soda stored in the bottles can be confused with water or alcoholic beverages which can be ingested accidentally not only by the children but also by the adults<sup>6</sup>. other alkalis which may be used as corrosives are sodium hydroxide, potassium hydroxide, detergents and household bleaching liquids<sup>9,10</sup>. Identification of contributory factors



**Figure 1 :** Showing gender distribution among the corrosive victims N: 40.



**Figure 2 :** Showing stricture due to corrosive ingestion (Arrow).

| Serial No. | Age Range in years | No. of Patients | Percentage |
|------------|--------------------|-----------------|------------|
| 1          | 03-10              | 04              | 10%        |
| 2          | 11-15              | 06              | 15%        |
| 3          | 16-20              | 14              | 35%        |
| 4          | 21-25              | 10              | 25%        |
| 5          | 26-30              | 02              | 05%        |
| 6          | 31-35              | 02              | 05%        |
| 7          | 36-40              | 02              | 05%        |

**Table-1 :** Showing age range among the corrosive victims. N=40.

| Serial No. | Literacy Status | No. of Parents | Percentage | Number of Parents | Percentage |
|------------|-----------------|----------------|------------|-------------------|------------|
| 1          | Illiterate      | 23             | 57.5%      | 21                | 52.5%      |
| 2          | Primary pass    | 08             | 20%        | 10                | 25%        |
| 3          | Under matric    | 05             | 12.5%      | 06                | 15%        |
| 4          | Matric          | 04             | 10%        | 03                | 7.5%       |
| 5          | Graduate        | Nil            | Nil%       | Nil               | Nil%       |

**Table-2 :** Literacy status of the parents and the patients N=40.

| Serial No. | Income per month in rupees | Number of Parents | Percentage |
|------------|----------------------------|-------------------|------------|
| 1          | 10,000/-                   | 28                | 70%        |
| 2          | 11,000 - 15,000            | 04                | 10%        |
| 3          | 16000 - 20,000             | 05                | 12.5%      |
| 4          | Above 20,000               | 03                | 07.5%      |

**Table-3 :** Socio-economic condition of the patients N=40.

of corrosive ingestion and their management constitute a medical challenge to the otolaryngologist. Gender distribution of corrosive victims is variable worldwide. Study by Celik B et al<sup>11</sup>. showed that 51.6% patients of corrosive ingestion were males and 48.4% patients were females. According to another study from abroad conducted by Havanond C,<sup>12</sup> 55 patients (75.3%) out of 73 were females and 18 patients (24.7%) were males. This study also showed that suicidal gesture was most common reason (89.2%). This study correlates well with our study which showed that majority of the victims of the corrosive ingestion (85%) were females (Fig.1.) and belonged to relatively younger age group (65% patients had age range from 16 years to 30 years) as revealed by table-1. They were illiterate (52.5%), residing in the rural areas (60%) and had a poor socioeconomic status (70%). All these findings correlate well with international research done in the past<sup>3,4,7,8</sup>. Literacy status of the patients and parents as well especially the mothers who look after their children significantly correlates with other studies conducted in children under the age of 5 years. This fact is evident from the study conducted by Siddiqui et al<sup>13</sup> that showed 73% of poisoning cases in children with illiterate mothers. We also found in our study that majority of the patients who took corrosive substances with intention to commit suicide or deliberate self harm were 62.5% while 37.5% patients ingested the corrosives accidentally. These findings are again in consistent with the reports already published in the previous literature<sup>14,15,16</sup>. Thousands of children less than five years of age accidentally poisoned themselves worldwide mainly due to their inventive exploratory nature and the tendency to take every thing in the

mouth<sup>17</sup>. Johnson et al<sup>2</sup> reported that legislative measures had reduced the incidence of pediatric corrosive ingestion to great extent in USA, but this is not the case in our country where legislative efforts and their implementation are lacking. This makes the environment unsafe and constitutes a substantial risk to both children and adults<sup>7</sup>. This group of people needs to be educated about creating a safe environment by framing regulations about the corrosive substances. Education will help to increase the awareness of dangers associated with corrosive ingestion. Child resistant and child proof packaging of the corrosive substances will also prevent easy access to corrosive agents by children. This public awareness will help in prevention of these common accidents in children as well as in adults. According to the study conducted by Wilson et al,<sup>15</sup> 33% of the patients who ingested corrosives had psychiatric disorders. Other studies showed that 29 to 90% of the corrosive victims had psychiatric disorders<sup>18,19</sup>. The psychiatric illness was quite low (15 % only) in our study. This psychiatric illness is considered the most common cause of suicide and deliberate self harm<sup>20</sup>. These patients may be prevented to develop psychiatric ailment just by good family support, periodic psychiatric evaluation and medication if needed. The psychiatric evaluation of the adult victims of corrosive ingestion should be taken serious and introduced down to the primary health care level. Moreover stigmatization associated with psychiatric illness should also be discouraged. Patients who deliberately or intentionally ingest the corrosives are prone to develop severe esophageal injuries. Esophageal stricture formation and dysphagia was observed in 85% of the patients in our study. Qureshi et al<sup>21</sup> reported that corrosive injuries are frequently more serious in adults who intentionally ingested chemicals and usually in large amounts which leads to life long debilitating conditions. Most patients who developed strictures ingested the corrosives with the intention of deliberate self harm.

**CONCLUSION :** The esophageal injuries caused by corrosive intake still remain quite prevalent in the developing countries like Pakistan and are preventable. The preventive strategies such as regulation and packaging of corrosive substances, legislation and its effective implementation, organization of psychiatric services and education of the population on corrosive ingestion are badly needed to reduce its incidence.

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## Racial Disparity in Patients with Oral Cavity Squamous Cell Cancers in Pakistan

Beenish Nisar Ahmed, S.M.Tariq Rafi,  
Muhammad Waqas Nisar Ahmed, Mehwish Nisar

**ABSTRACT:** *INTRODUCTION: The racial disparity in oral cavity squamous cell cancer is contributed by several factors like age, habits and socio-economics. STUDY DESIGN: Prospective study. PLACE & DURATION OF STUDY : Two years 2009-2010 at ENT Department. JPMC Karachi. MATERIAL & METHODS: Pakistani patients with oral cavity squamous cell cancers matched on clinical characteristics, age, stage, race, socio-economic status and cultural habits. RESULTS: Pakistan have four major races out of them Indo Aryans and Dravidians were found to have high incidence. Punjabi Indo Aryans are least affected by this disease. Turko-Iranian Balochis and Pathans showed opposite results. CONCLUSION: Differences in disease outcome may be attributed to a combination of racial factors, tumor stage, socio-economic status, and access to health care.*

**Key Words :** Squamous cell carcinoma, Oral cavity, Racial disparity.

**INTRODUCTION :** Oral cavity squamous cell cancer is the third most commonly occurring malignancy among head and neck cancer worldwide<sup>1</sup>. A short review of literature on cancer trends in Pakistan showed it to be the Second frequent cancer in both sexes<sup>2</sup>. A recent study also showed it as the second most common tumor in Karachi South<sup>3</sup>. Different factors contribute to the development of this disease including age, gender, cultural habits like pan with betel nuts chewing, manpuri, gutka, smoking, niswar and socio-economic standards. One of the major factors that are indirectly associated to all of these factors is racial disparity<sup>4</sup>. Different races have their own habits and customs that in many ways either leading to this disease or sparing from this. So the disease outcome may be the result of a combination of tumor stage, socio-economic status, and access to health care. Recently the inclusion of biological markers, human papilloma virus (HPV) status is under study to evaluate further. Multiple studies have been done all over the world showing racial factors and determinant of oral cavity squamous cell cancer survival. Chen L M conclude that minority and non-Hispanic white head and neck squamous cell cancer patients receiving similar multidisciplinary-team directed care at a tertiary cancer center have similar survival results overall. These results encourage reducing health disparities in head and neck squamous cell cancer through public-health efforts to improve access to multidisciplinary oncologic care (and to preventive measures) and through individual clinician efforts to make the best multidisciplinary cancer treatment choices available for their minority patients. The subgroup finding suggests a biologically based racial/ethnic disparity among oro-pharyngeal patients and that prevention and treatment strategies should be tailored to different populations of these patients<sup>5</sup>. Gourin CG explained comparison between non-Hispanic white and black citizen of USA that insurance

status, treatment, and extra capsular spread differentially affected the survival of black patients compared with white patients. Only insurance status had a significant effect on survival in black patients after controlling for other variables. These data suggest that racial differences in head and neck cancers outcomes are primarily related to differences in access to health care<sup>6</sup>. Settle K for the first time did the prospective assessment of confirmed HPV status in black versus white head and neck squamous cell cancer patients. These findings have important implications for the etiology, prevention, prognosis, and treatment of head and neck cancers<sup>7</sup>.

Worsham MJ did a cohort study comprised 358 patients with head and neck squamous cell cancer who self-reported race as Caucasian American (CA) and African American (AA) and revealed no correlation with stage or survival, suggesting that head and neck squamous cell cancer outcomes with race may be owing to social/behavior factors rather than biological differences<sup>8</sup>.

This study examined the racial predominance and clinico-pathological features (including age, incidence, cultural habits, site of lesion, stage of disease and socio-economic status) of 208 cases of oral cavity squamous cell cancers in Pakistani population. Pakistan is the place where multiple races lived together. Races can be broadly classified into Turko-Iranians comprising Balochis (Urban and Rural Balochi) and Pathans, Indo- Aryans comprising Urdu speaking as majority and Punjabi, Sindhi and Saraiki, Scytho-Dravidians comprising Gujarati and Sindhi and Aryo-Dravidians comprising of Gujarati and Sindhi of different locality<sup>9</sup>.

This racial disparity is leading to a great difference in disease outcome. This study links the cause of oral cancers with the cultural habits of different races. Age, site and clinical characters are associated with racial habits also. Socio-economic status of different



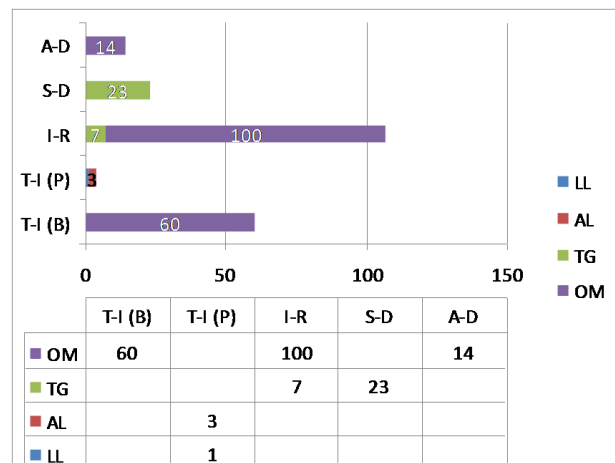
racess also have deep impact over disease prognosis. Tobacco and alcohol are globally accepted etiological factor for head and neck cancers but in our locality other than smoking betel nut chewing, gutka, manpuri and niswar are leading etiological factors. Thus oral cavity squamous cell cancers are the result of nutrition, chemical carcinogens, viruses, racial cultures and socioeconomic status and not just an event. The present study was designed to analyze and integrate the clinical data in order to explore the oral cavity squamous cell cancer at maximum angles with new dimensions in Pakistan. Here we report the data regarding clinicopathological features and racial factors of oral cavity squamous cell cancers in Pakistan.

**MATERIALS AND METHODS:** The study consist of total number of 208 patients of oral cavity squamous cell cancer proven cases collected from the department of Head and Neck surgery and Otorhinolaryngology, Jinnah Post Graduate Medical Center Hospital, Karachi, Pakistan over period of 2 years, 2009 to 2010. It was a prospective study. Information regarding age, race, clinical presentation (including presenting complaints i.e. ulcers in oral cavity, burning sensation, sub-mucosal fibrosis, bleeding etc.), site of involvement (i.e. tongue lateral border, oral mucosa, alveolus and lower lips), cultural habitual addictions (smoking, niswar, betel nut chewing, manpuri, gutka), stage of disease using AJCC, TNM classification via thorough examination and investigations and socio-economic status were recorded on a proforma. Patients under age of 25 to 65 years of any gender, Pakistani nationality, biopsy proven squamous cell cancer of oral cavity are taken as inclusion criteria. Data was analyzed on SPSS 16 and frequencies were measured. Incidence of different races, standard deviations and mean were calculated.

**RESULTS :** This study was designed to analyze and integrate the clinical data in order to explore the oral cavity squamous cell cancer at maximum angles with new dimensions in Pakistan. Pakistani races include Turko-Iranians, Indo-Aryan, Scytho-Dravidians and Aryo-Dravidians. Study group consist of 208 patients. The age range from 25 to 65 years. Mean age was 45 years. Turko-Iranians patients presented in 5th and 6th decades of life. Incidence of Turko-Iranians was

30.78%. They can be divided further in to two races, Balochi and Pathan. Incidence of Pathan was 1.94% and Balochi was 28.84%. Urban Balochi showed incidence of 19.23% and that of rural only 9.60%. The cultural habits of Balochis were found to be smoking, pan with betel nuts chewing, manpuri and gutka and Pathans used niswar frequently. The site of tumor was oral mucosa for Baloch and lower alveolus & lower lip for Pathans. Majority of them presented with late stage (i.e. 3rd and 4th) of disease. Socio-economically they all were poor. Majority of them had presenting complaints of non-healing ulcers. Indo-Aryans presented in 3rd and 4th decades of life. Incidence was high i.e. 51.44%. Their addiction was smoking, betel nut chewing and few also using manpuri and gutka. The site of involvement was oral mucosa and tongue for few patients. Socio-economically they are poor. They presented with advance stage 3 and 4. Their presenting complaints were sub-mucosal fibrosis, non-healing ulcers and burning sensation of oral cavity leading to difficulty in eating.

Scytho-Dravidian were less frequently affected by this disease. Incidence was 11.05 %. Site of tumor was tongue (lateral border). Socio-economically they were poor patients. Presented with early stage disease. Few of them using betel nuts. Peoples presented in late ages 5th and 6th decades. Presenting complaints were non-healing ulcers. In Aryo-Dravidians incidence is



**TABLE: 2**

DIFFERENT SITE OF INVOLVEMENT IN DIFFERENT RACES OF PAKISTAN

\* X- AXIS OF GRAPH SHOWS NUMBER OF PATIENTS AFFECTED BY EACH RACE

\* Y-AXIS OF GRAPH, RACES REPRESENTED AS

T-I =TURKO-IRANIANS

I-A=INDO-ARYANS

S-D=SCYTHO-DRAVIDIANS

A-D=ARYO-DRAVIDIANS

AND COLORS SHOWS SITE OF LESION REPRESENTED AS

LL=LOWER LIP (BLUE)

AL=LOWER ALVEOLUS (RED)

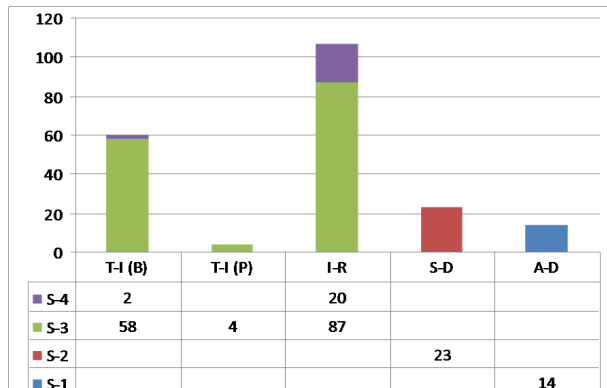
TG=TONGUE (GREEN)

OM=ORAL MUCOSA (PURPLE)

| RACES IN PAKISTAN     | INCIDENCE OF RACES |
|-----------------------|--------------------|
| T-I =TURKO-IRANIANS   |                    |
| BALOCHI               | 28.84%             |
| URBAN                 | 19.23%             |
| RURAL                 | 9.60%              |
| PATHANS               | 1.94%              |
| I-A=INDO-ARYANS       | 51.44%             |
| S-D=SCYTHO-DRAVIDIANS | 11.05%             |
| A-D=ARYO-DRAVIDIANS   | 6.73%              |

**TABLE: 1**

INCIDENCE OF DIFFERENT RACES IN PAKISTAN  
(N=208). TOTAL NUMBER OF PATIENTS AND RACES

**TABLE: 3**

STAGE OF DISEASE IN DIFFERENT RACES OF PAKISTAN

\*X-AXIS OF GRAPH, RACES REPRESENTED AS

T-I =TURKO-IRANIANS

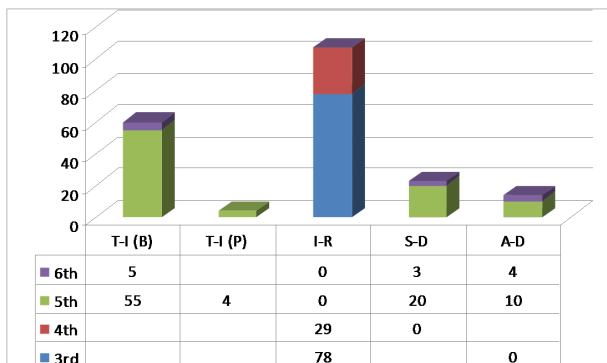
I-A=INDO-ARYANS

S-D=SCYTHO-DRAVIDIANS

A-D=ARYO-DRAVIDIANS

\*Y-AXIS OF GRAPH SHOWS NUMBER OF PATIENTS AFFECTED BY EACH RACE

\*STAGES OF CANCER FROM STAGE 1 TO 4 ARE REPRESENTED AS S1, S2, S3 AND S4 WITH DIFFERENT COLORS, BLUE, RED, GREEN, PURPLE RESPECTIVELY

**TABLE: 4**

AGE OF PATIENTS OF DIFFERENT RACES OF PAKISTAN

\*X-AXIS OF GRAPH, RACES REPRESENTED AS

T-I =TURKO-IRANIANS

I-A=INDO-ARYANS

S-D=SCYTHO-DRAVIDIANS

A-D=ARYO-DRAVIDIANS

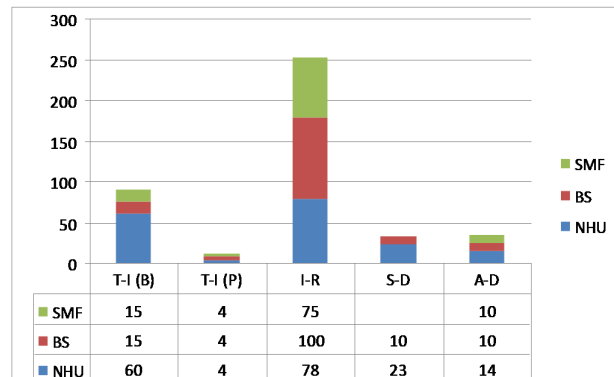
\*Y-AXIS OF GRAPH SHOWS NUMBER OF PATIENTS AFFECTED

\*DIFFERENT COLORS SHOWS AGES IN DECADES OF LIFE (i.e., 3rd, 4th, 5th, 6th, BLUE, RED, GREEN, PURPLE RESPECTIVELY)

much lower i.e., only 6.73%. People presented in 5th and 6th decades of life. They were found to have no addiction. Site was oral mucosa and socio-economic standard were poor. Presented in early stage of disease i.e. stage 1 and presenting complaints were non healing ulcers.

We reported the data regarding clinico-pathological features and racial factors of oral cavity squamous cell cancers in Pakistan (Table 1 to 6).

**DISCUSSION:** Oral cavity squamous cell cancer is one of the most commonly occurring cancers in

**TABLE: 5**

PRESENTING COMPLAINTS OF DIFFERENT RACES OF PAKISTAN

\*X-AXIS OF GRAPH REPRESENTED RACES AS

T-I =TURKO-IRANIANS

I-A=INDO-ARYANS

S-D=SCYTHO-DRAVIDIANS

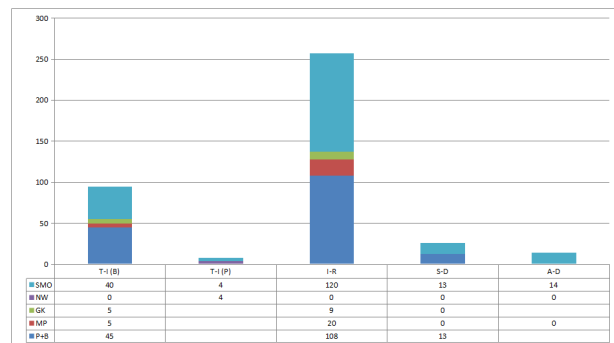
A-D=ARYO-DRAVIDIANS

\*Y-AXIS OF GRAPH REPRESENTS THE NUMBER OF PATIENTS WITH PRESENTING COMPLAINTS AS

SMF= SUB MUCOSAL FIBROSIS (GREEN)

BS= BURNING SENSATION OF MOUTH (RED)

NHU=NON HEALING ULCERS (BLUE)

**TABLE: 6**

ADIFFERENT ADDICTIONS OF RACES IN PAKISTAN

\*X-AXIS OF GRAPH, RACES REPRESENTED AS

T-I =TURKO-IRANIANS

I-A=INDO-ARYANS

S-D=SCYTHO-DRAVIDIANS

A-D=ARYO-DRAVIDIANS

\*Y-AXIS SHOWED NUMBER OF CASES OF DIFFERENT ADDICTION WITH DIFFERENT COLORS SHOWS ADDICTIONS AS

SMO=SMOKING (SKY BLUE)

NW=NISWAR (PURPLE)

GK=GUTKA (GREEN)

MP=MANPURI (RED)

P+B=BETEL NUT CHEWING WITH PAN (BLUE)

Pakistan. It is occupied by different races. These races showed different results in patients of oral cavity squamous cell cancers because of different cultural habits of addictions, socio-economic status, access to health care centers. All of these factors leading the disease towards worse prognosis. Urdu speaking Indo-Aryans are mostly affected race by the oral cavity

squamous cell cancer followed by Urban Baloch from Turko-Iranian group. This increase incidence was found to be the result of their cultural habits of chewing betel nuts with pan, manpuri, smoking and gutka. Socio-economically poor status was also a factor contributing towards advance stage presentation. In comparison with other races where the peoples are not using betel nuts, gutka etc. were found to be least involved by tumor. The tumor site depends upon the place for using the carcinogenic addictive agents and presenting complaints were also depends upon the site of involvement of tumor. Multiple studies have done around the world and showed racial disparity affecting oral cancers in various manners<sup>10-12</sup>. We have done a prospective study to calculate the results of racial disparity among different races which are affecting the disease outcome and prognosis. These results encourage reducing health disparities in head and neck squamous cell cancer through public-health efforts to improve access to multidisciplinary oncologic care (and to preventive measures) and through individual clinician efforts to make the best multidisciplinary cancer treatment choices available for their minority patients. These finding suggest a biologically based racial/ethnic disparity among oral cavity cancer patients and that prevention and treatment strategies should be tailored to different populations of these patients<sup>5</sup>. In this study we concluded that the difference in results as shown in Tables 1-6 is strongly associated with their cultural habits and their socioeconomic status.

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### **3rd EUROPEAN OTOLARYNGOLOGY ENT SURGERY CONFERENCE**

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## The Impact of Tinnitus on Quality of Life

Asma A , Yii Hern E, Norsyamimi AR, Khai Yng H, Kirubananthini J,  
Tuti Iryani MD, Wan Fazlina H, Fatimah S, Lim BY, Roslenda AR

**ABSTRACT: OBJECTIVE:** Tinnitus is believed to cause significant psychological distress leading to impairment in one's quality of life (QOL). The aim of the study was to assess the negative impact of tinnitus on patient's QOL. A cross-sectional study was conducted from June 2013 to May 2014 on 88 patients who experienced tinnitus. Patients who attended Otorhinolaryngology clinic, Universiti Kebangsaan Malaysia Medical Centre (UKMMC) were evaluated based on socio-demographic data, clinical data and QOL. QOL was assessed using Tinnitus Handicap Inventory (THI), a self-report questionnaire measuring 3 domains of QOL: functional, emotional and catastrophic scales. Respondents consisted of 35 males (39.8%) and 53 females (60.2%) with mean age of 57.9'13.9 years old. The racial distribution was 43 Malay (48.9%), 36 Chinese (40.9%), 5 Indian (5.7%) and 4 others (4.5%). Patients with persistent tinnitus had significantly higher mean THI total scores ( $p=0.042$ ) and emotional subscale score ( $p=0.037$ ) compared to patients with intermittent tinnitus. However, there were no significant associations between gender, duration of tinnitus and laterality of tinnitus with patient's THI score. Fifteen (17%) out of the 88 patients were either severe handicap grade 4 or catastrophic handicap grade 5 while seventy-three (83%) fall under slight handicap grade 1, mild handicap grade 2 or moderate handicap grade 3 in the Tinnitus Handicap Inventory (THI). Patients suffering from persistent tinnitus have higher total THI and emotional subscale scores. Therefore we suggest those patients to be assessed by THI questionnaire and those with higher grades will be referred to the psychiatrist for further assessment.

**Key Words :** tinnitus, quality of life, tinnitus handicap inventory.

**INTRODUCTION :** Tinnitus is one of the common medical symptoms that can be debilitating. The term tinnitus describes the conscious perception of an auditory sensation in the absence of a corresponding external stimulus. It is a medical condition where patient is complaining of ringing sound in the ear. The characteristic feature is that the origin of this sound is within the patient. Tinnitus can be either constant or intermittent. The onset of tinnitus can be abrupt, but it is insidious in most cases. Usually, it is unilateral but may also affect both ears. It may vary in pitch and loudness and has been variously described by the patient as roaring, hissing, swishing, rustling or clicking type of noise. Risk factors possibly contributing to tinnitus include hearing loss, ototoxic medication, head injury and so on. Tinnitus is more annoying in quiet surroundings. It may cause a significant distress to patient as it will lead to sleep disturbance. Prevalence studies of tinnitus have mostly been done in Western Europe or the USA, and have methodological drawbacks. Consequently, the scatter of prevalence estimates is wide, although most study results have shown rates of between 10% and 15% of the adult population. The largest and most scientifically reliable study was undertaken as part of the National Study of Hearing in England ( $n=48313$ ). The results of the study showed a prevalence of 10.1% among

adults<sup>1</sup>. In a retrospective study conducted for the prevalence of tinnitus in otology patients of the ENT clinic, UKMMC, the prevalence of tinnitus was found to be 33% in the otology patients, the prevalence of tinnitus was higher in middle aged group (40-49 years) (7.6%), in females (17.3%), in unemployed group (12%), in unilateral ear (44%), in left-sided or mostly left-sided localization (8.9%) and in cases with hearing loss (36.8%).

There is no effective drug treatment available, even though much research is underway into mechanisms and possible treatments. Surgical intervention for any otological pathology associated with tinnitus might be effective for that condition, but the tinnitus can persist. Available treatments include hearing aids when hearing loss is identified (even mild or unilateral), wide-band sound therapy, and counselling. The severity of tinnitus has been found to correlate with a number of health problems. Among them are distress symptoms such as headache, dizziness and insomnia<sup>2</sup>. Many patients with tinnitus report that their quality of life is impaired by symptoms such as frustration, annoyance, irritation, anxiety and depression. In comparison with normal samples, tinnitus complainants have shown higher mean levels of anxiety<sup>3, 4</sup> and more negative mood states and depressive tendencies<sup>3, 5</sup>. The aspects of quality of life



affected may differ between individuals but the commonest are psychological or emotional effects, impact on lifestyle, sleep disturbance, auditory and health effects<sup>6</sup>. In another retrospective study done in Saudi Arabia by Alsanosi<sup>7</sup> in order to assess the impact of tinnitus on the quality of life in their patients, they used the Tinnitus Handicap Inventory (THI) questionnaire). Their results showed 64% of respondents were found to be in severe handicap grade 4 or catastrophic handicap grade 5 in which male respondents have higher prevalence than females. A long duration of complaints is also associated with significantly higher mean levels of the emotional and catastrophic subscales total scores in comparison with shorter duration of complaints with p value of 0.069. The catastrophic scores were also found to be positively associated with the hearing loss with the p value of 0.021.

Therefore, there is strong evidence showing that quality of life is reduced in patients suffering from severe distress due to their tinnitus symptoms. **METHODOLOGY :** A total of 88 patients (35 male, 53 female) ranging in age from 18 to 65 years (mean age=57.93) participated in this study. The subject sample was drawn from outpatients with a primary complaint of tinnitus who visited the Otolaryngology, Head and Neck Surgery, UKM Medical Centre, from June 2013 to May 2014. All the participants agreed on research participation. Patients were excluded if they had neurologic diseases or a history of vertigo/dizziness or if they could not fill in the subjective questionnaires completely.

Subjects were evaluated based on socio-demographic data, clinical data and QOL. QOL was assessed using Tinnitus Handicap Inventory (THI), a self-report

questionnaire measuring 3 domains of QOL: functional, emotional and catastrophic scales.

**RESULTS :** The study included 88 tinnitus patients; 35 males (39.8%) and 53 females (60.2%). Of the 88 patients, 1 (1.1%) were aged 18-20 years, 10 (11.4%) were aged 21-40 years, 38 (43.2%) were aged 41-60 years and the remaining 39 (44.3%) patients were more than 60 years of age. The racial distribution was 43 Malay (48.9%), 36 Chinese (40.9%), 5 Indians (5.7%) and 4 others (4.5%). The mean age of the patients was 57.9 13.9 years. There are 62 (70.5%) patients with tinnitus onset more than 12 months while 26 patients (29.5%) less than 12 months.

On the other hand, 62 patients (70.5%) had unilateral tinnitus, while the rest 26 (29.5%) had bilateral tinnitus. Associated hearing impairment occurred in 50 patients (56.8%) whereas 38 patients (43.2%) did not have hearing impairment. Moreover, 47 patients (53.4%) experienced persistent tinnitus while the rest (46.6%) experienced tinnitus intermittently. Table 1 shows the comparison of the THI, and subscale total scores by gender, duration of tinnitus, associated hearing impairment, laterality and persistency of tinnitus.

With regard to persistency of tinnitus, patients with persistent tinnitus had a significantly higher scoring for the emotional total subscale scores ( $p=0.037$ ) and THI total score ( $p=0.042$ ) compared with those with intermittent tinnitus. However, there were no significant associations between gender, associated hearing impairment duration and laterality of tinnitus with patient's THI total score, functional, emotional and catastrophic total subscale score.

THI scoring is categorized into 5 grades. Our result shows 33 patients (37.5%) fall under slight handicap

(CONTROL: MINIMUM= 21 MINUTES; MAXIMUM= 27 MINUTES; MEAN=24 MINUTES)

| Variables               | THI total score (Mean $\pm$ SD) | Emotional total subscale score (Mean $\pm$ SD) | Functional total subscale score (Mean $\pm$ SD) | Catastrophic total subscale score (Mean $\pm$ SD) |
|-------------------------|---------------------------------|------------------------------------------------|-------------------------------------------------|---------------------------------------------------|
| Gender                  |                                 |                                                |                                                 |                                                   |
| Male (n=35)             | 30.11 $\pm$ 25.303              | 9.31 $\pm$ 10.243                              | 16.29 $\pm$ 11.52                               | 4.46 $\pm$ 5.802                                  |
| Female (n=53)           | 31.81 $\pm$ 23.482              | 10.72 $\pm$ 10.008                             | 16.30 $\pm$ 11.131                              | 4.79 $\pm$ 5.369                                  |
| P-value                 | 0.996                           | 0.278                                          | 0.995                                           | 0.337                                             |
| Duration of tinnitus    |                                 |                                                |                                                 |                                                   |
| < 12 months (n=26)      | 32.38 $\pm$ 19.968              | 9.46 $\pm$ 8.247                               | 18.54 $\pm$ 10.667                              | 4.38 $\pm$ 4.001                                  |
| >12 months (n=62)       | 30.61 $\pm$ 25.760              | 10.45 $\pm$ 10.788                             | 15.35 $\pm$ 11.887                              | 4.77 $\pm$ 6.064                                  |
| P-value                 | 0.173                           | 0.655                                          | 0.227                                           | 0.174                                             |
| Hearing impairment/loss |                                 |                                                |                                                 |                                                   |
| Yes (n=50)              | 31.16 $\pm$ 25.456              | 9.84 $\pm$ 10.651                              | 16.56 $\pm$ 10.805                              | 4.72 $\pm$ 5.976                                  |
| No (n=38)               | 31.11 $\pm$ 22.511              | 10.58 $\pm$ 9.368                              | 15.95 $\pm$ 11.887                              | 4.58 $\pm$ 4.919                                  |
| P-value                 | 0.697                           | 0.166                                          | 0.801                                           | 0.717                                             |
| Laterality              |                                 |                                                |                                                 |                                                   |
| Unilateral (n=62)       | 29.94 $\pm$ 22.467              | 9.45 $\pm$ 9.291                               | 15.97 $\pm$ 10.486                              | 4.52 $\pm$ 5.121                                  |
| Bilateral (n=26)        | 34.00 $\pm$ 27.863              | 11.85 $\pm$ 11.743                             | 17.08 $\pm$ 13.001                              | 5.00 $\pm$ 6.456                                  |
| P-value                 | 0.578                           | 0.298                                          | 0.675                                           | 0.324                                             |
| Persistency             |                                 |                                                |                                                 |                                                   |
| Persistent (n=47)       | 36.64 $\pm$ 25.896              | 12.43 $\pm$ 10.954                             | 17.74 $\pm$ 11.719                              | 6.43 $\pm$ 6.071                                  |
| Intermittent (n=41)     | 24.83 $\pm$ 20.371              | 7.56 $\pm$ 8.337                               | 14.63 $\pm$ 10.521                              | 2.63 $\pm$ 3.986                                  |
| P-value                 | 0.042                           | 0.037                                          | 0.196                                           | 0.362                                             |

Table 1: Comparisons of the total scores of the THI, emotional, functional, and catastrophic subscales by gender, presence of hearing loss, laterality, duration of tinnitus and persistency of tinnitus among the patients.

| Variables               | THI severe (58-76)<br>or catastrophic<br>(78-100) score | Odds Ratio | 95%<br>confidence<br>interval |
|-------------------------|---------------------------------------------------------|------------|-------------------------------|
| Gender                  |                                                         | 0.989      | 0.318-3.074                   |
| Male                    | 6 (17.14%)                                              |            |                               |
| Female                  | 9 (16.98%)                                              |            |                               |
| P-value                 | 0.984                                                   |            |                               |
| Duration of tinnitus    |                                                         | 1.840      | 0.473-7.155                   |
| <12 months              | 3(11.54%)                                               |            |                               |
| >12 months              | 12(19.35%)                                              |            |                               |
| P-value                 | 0.374                                                   |            |                               |
| Hearing impairment/loss |                                                         | 0.854      | 0.275-2.649                   |
| Yes                     | 9(18%)                                                  |            |                               |
| No                      | 6(15.79%)                                               |            |                               |
| P-value                 | 0.785                                                   |            |                               |
| Laterality              |                                                         | 1.238      | 0.378-4.058                   |
| Unilateral              | 10(16.13%)                                              |            |                               |
| Bilateral               | 5(9.23%)                                                |            |                               |
| P-value                 | 0.724                                                   |            |                               |
| Persistency             |                                                         | 0.354      | 0.103-1.214                   |
| Persistent              | 11(23.40%)                                              |            |                               |
| Intermittent            | 4(9.76%)                                                |            |                               |
| P-value                 | 0.089                                                   |            |                               |

Table 2: Prevalence of severe or catastrophic THI total scores in relation to gender, laterality, hearing loss, and duration of symptoms among tinnitus patients

grade 1, 24 patients (27.3%) under mild handicap grade 2, 16 patients (18.2%) under moderate handicap grade 3, 11 patients (12.5%) under severe handicap grade 4 and 4 patients (4.5%) under catastrophic handicap grade 5.

Table 2 shows the relative risks associated with experiencing a catastrophic score of 58-76 (grade 4) or 78-100 (grade 5) with respect to gender, duration of tinnitus, associated hearing impairment, laterality and nature of tinnitus. Result shows that the relative risk is not significant for all 5 variables.

**DISCUSSION :** Patients experiencing tinnitus may present with variable impact on the quality of life according to previous studies done in Brazil<sup>8</sup> and Saudi Arabia<sup>7</sup>. Studies have been done on the important variables (age, gender, associated hearing loss, laterality and duration of symptoms) in association with quality of life among tinnitus patients. However, little research has been done in Malaysia on these variables. Since there is lack of literature review regarding the relationship between nature of tinnitus and quality of life, we have included the nature of tinnitus as one of the variables in our current research. From our study, the mean age of 88 patients was 57.9-13.9 years in which the respondents were predominantly from the age of 40 years old and above, which makes up a percentage of 87.5%. This was an expected result as tinnitus sufferers are mostly in elderly age group. This is evidenced by a study done in Brazil by Patricia Ciminelli Linhares Pinto et al.<sup>8</sup>, in which the result showed that the mean age among females was 61 years and the mean age among males was 57 years. Another study done in Singapore<sup>9</sup> showed the mean age was 48.9 13.4 years and 76.5% patients were more than 40 years old. Effect of gender on the

prevalence of tinnitus has been studied and it is controversial. A study done in Saudi Arabia<sup>7</sup> showed a slight predominance in males. However, females predominated in studies done by Patricia Ciminelli Linhares Pinto et al.<sup>8</sup> and study done by Lim J J B H et al.<sup>9</sup>. Similarly, our study showed a predominance of tinnitus in females. Another study<sup>10</sup> found the prevalence of tinnitus to be similar in both genders. The racial distribution in our study was 43 Malays (48.9%), 36 Chinese (40.9%), 5 Indians (5.7%) and 4 others (4.5%). Another study done in Singapore [9] showed that 80.7% patients were Chinese, 10.4% were Malay, 4.0% were Indian and 4.9% belonged to other ethnic groups. The difference is due to different distribution of races in both countries. Our study showed female patients had a slightly higher mean total THI score and all three subscale scores. However, these differences are not statistically significant which is concurs with previous studies<sup>8,9</sup>. However, the study done by Alsanosi<sup>7</sup> the male patients had worse THI total scores, emotional, and functional total subscale scores.

Based on the subscale scores and total THI score, we found no significant difference between the presence of hearing loss in tinnitus patient and QOL. Similarly, other studies<sup>8,9</sup> who applied THI questionnaire showed no significant differences in the handicap scores in their study between those with normal hearing and those with hearing loss with regard to the degree of handicap severity. Among the respondents, 70.5% were suffering from prolonged tinnitus which was more than 12 months. The result revealed that there was no significant association between the duration of tinnitus and Tinnitus Handicap Inventory (THI) score. Alsanosi<sup>7</sup> concluded that a long duration of tinnitus significantly affected the quality of life, which is different from our findings.

The previous studies stated above did not study the association between persistency of tinnitus and QOL. Our result showed that patients with persistent tinnitus had poor quality of life, as shown by the higher mean THI total scores (p=0.042) and emotional scale total score (p=0.037) compared to patients with intermittent tinnitus. These differences are statistically significant, and are therefore clinically significant. The majority (83%) of patients in our study were THI grade 1, 2 or 3, which indicates a slight to moderate handicap. The previous study done by Lim J J B H et al.<sup>9</sup> showed the similar finding in which 81% patients were fall under THI grade 1,2 or 3. However, the study done by Alsanosi<sup>7</sup> has shown that the majority of tinnitus patients had severe or catastrophic handicap.

At the same time, the study done by Alsanosi<sup>7</sup> concluded that males had a 3.15 times higher risk of experiencing different catastrophic (grade 4 or 5) tinnitus than females which is from our findings. Both of our study and the study stated above<sup>7</sup> concluded

that the relative risks associated with experiencing a grade 4 or 5 tinnitus with respect to hearing loss, laterality, and duration of symptoms are not statistically significant.

**CONCLUSION :** Our finding showed no difference was found the overall THI and subscale scores between the patients with unilateral or bilateral tinnitus.

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## Solitary Isolated Neurofibroma of Soft Palate; A Rare Entity

Iqbal A Muhammad Khyani, Maria Sikandar, Atif Hafeez

**ABSTRACT:** Palatal involvement in case of solitary neurofibroma is quite rare and when it is not associated with Von Recklinghausen's disease, the scenario becomes even more infrequent. Here we present a rare case of 22 years old female with a solitary isolated neurofibroma of the soft palate. The mass was excised with intraoral approach without prior tracheostomy and sent for histopathology. Histopathology report shows features of Spindle cell lesion with nerve sheath differentiation.  
**Key Words :** Neurofibroma, Nerve sheath, soft palate.

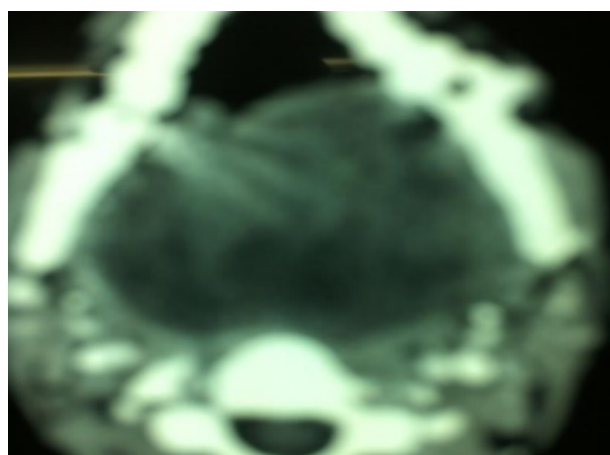
**INTRODUCTION :** Neurofibroma is an uncommon benign tumour of the oral cavity derived from the cells that constitute the nerve sheath. Neurofibroma is seen either as a solitary lesion or frequently associated with the generalized syndrome of neurofibromatosis usually neurofibromatosis type 1 (NF-1), also called Von Recklinghausen's disease of the skin<sup>1</sup>. The solitary form does not differ from the disseminated form or the multiple form of the disease, except that systemic and hereditary factors present in the disseminated form are absent in the solitary type. As a solitary lesion, a neurofibroma is common in young adults and sex predilection is contradictory<sup>2</sup>. The incidence of neurofibromas reported in the head and neck is 37%<sup>3</sup>. Intra oral neurofibroma may presents as sessile nodule or pedunculated progressive but slow growing lesion. Often painless but may be painful due to pressure effects. Commonly seen on the tongue, may occur at any site like the palate, cheek mucosa, floor of the mouth and in the mandible<sup>4</sup>. We present a successfully treated 22 years old female with symptomatic solitary isolated soft palatal neurofibroma.

**Case Summary:** A 22 years old female presented in our outpatient clinic with 12 years long history of swelling in the oral cavity. Associated symptoms were sleep apnea,

muffled voice, snoring and swallowing difficulties. According to the patient, the swelling increased gradually in size so as her symptoms. There were no complains of weight loss and loss of appetite. Oral cavity examination revealed a huge globular mass of 6x5 cm on soft palate occluding whole oropharynx (Fig-1). The base of tongue, uvula, lateral and posterior pharyngeal wall was not visible. The mass was soft, non-tender and did not bleed on touch. It was attached to the soft palate superiorly, left tonsillar area laterally and to whole faucial pillars. Inferiorly it was not attached to the base of tongue and oropharynx thus finger passed easily below the mass. There is no palpable significant cervical lymph nodes. Complete blood count, urea, creatinine, electrolytes, urine analysis and chest radiographs all were normal. Computerized tomography revealed a mass in the oropharynx, non-contrast enhancing, no calcification and no bony involvement (Fig-2). Under general anaesthesia, with tracheostomy standby, a blind nasotracheal intubation was done. A tonsillar Boyle Davis mouth gag was applied and tumour exposed well. A inverted 'U' shaped incision was made over soft palate along the margins of the mass. The mass was dissected and excised in toto, along with whole of the soft palate and anterior faucial pillars. Nasogastric tube passed

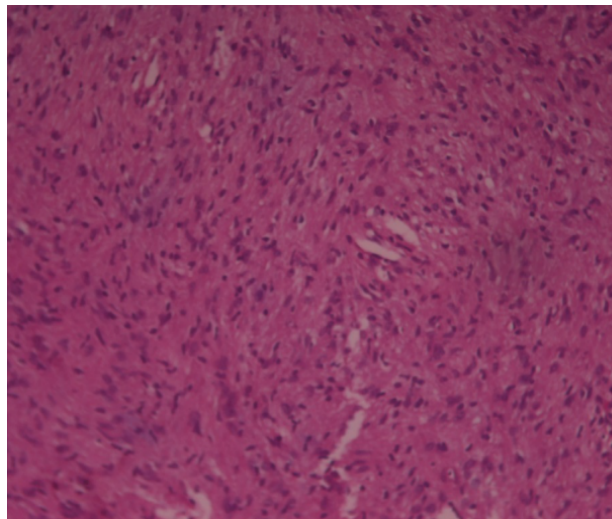


**Figure 1 :** Pre-operative picture of the lesion showing globular swelling on soft palate occluding whole Oropharynx.



**Figure 2 :** CT-Scan of the lesion.





**Figure 3 :** Photomicrograph showing cells with round to oval nuclei with moderate to abundant cytoplasm with collagen bundles and areas of hyalinization in between.

and haemostasis was secured. Postoperative period was uneventful. Patient was kept in propped up position for 24 hours, Postoperative antibiotics, analgesics and anti-inflammatory steroids were given for one week. There was no respiratory difficulty or feeding difficulty observed. Histopathology showed a spindle cell lesion arranged in fascicles and sheets. The neoplastic cells have round to oval nuclei along with moderate to abundant cytoplasm. In between these neoplastic cells, collagen bundles and areas of hyalinization is seen (Fig-3). A diagnosis of Spindle cell lesion with nerve sheath differentiation i.e. Neurofibroma was made. Due to surgical defect, the patient developed Rhinolalia Aperta, therefore, impression for obturator was taken and it was applied successfully. It is interesting to note that keeping follow up appointments by patients is usually difficult in this part of the world, especially in post-operative cases of benign and slow growing lesions. This is partly due to poverty and ignorance; therefore we could follow up our patient for only two weeks after surgery.

**DISCUSSION:** Neurofibroma is an uncommon benign neoplasm which originates from nerves that is composed of Schwann cells, perineural cells and fibroblasts. Soft palatal neurofibromas are rare and present with slowly growing painless mass<sup>5</sup>. Generally, neurofibromas present as either solitary mass or as part of neurofibromatosis syndrome or von Recklinghausen's disease<sup>6</sup>. The solitary form does not differ from the disseminated form or the multiple form of the disease, except that systemic and hereditary factors present in the disseminated form are absent in the solitary type. Solitary neurofibromas of oropharynx are extremely rare<sup>7</sup>. Most commonly neurofibroma involves tongue in oral cavity and then other sites in order of frequency are the buccal mucosa, the floor of the mouth, palate, lips and gingiva<sup>8</sup>. Previously four cases of solitary neurofibroma of soft palate were reported in English literature. Sinha et al reported the first case of isolated

neurofibroma of the soft palate in 2009, not associated with Von Recklinghausen's disease<sup>9</sup>. Mazzoleni reported the second case in 2009<sup>10</sup>. Choi et al in 2011 reported the third case<sup>11</sup> and the fourth case was reported by Anil Hanakere Thimmaiah et al 2013<sup>12</sup>. To the best of our knowledge and extensive literature search, this is the first case of its type from our region and overall can be ranked fifth over the globe. The cause of solitary neurofibroma is unknown. However, neurofibromatosis is inherited as an autosomal dominant trait with a high degree of penetrance but variable expressivity<sup>12</sup>. Patients usually present with an un-inflamed, slowly enlarging, asymptomatic lesion that varies greatly in size from tiny nodules to large pendulous masses. A definitive diagnosis of oral neurofibroma can only be rendered after an incisional biopsy or an excisional biopsy followed by histopathological examination. Solitary neurofibromas are treated by surgical excision and exhibit low recurrence rate. The patient should be instructed to report any new growth seen in the area or any abnormal sensations, such as tingling. These signs may signify a recurrence, and lesions may require repeat excision. Our case presented to us with the history of this mass for more than 12 years. On evaluation there is background history of split family which is considered to be a socio-cultural issue. This case is considered to be a perfect example of poverty and negligence, a common ethical dilemma of our region.

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## Heart at a Wrong Place: A Case Report

Atif Hafeez, Iqbal A Muhammad Khyani, Ashok Kumar Raheja

**ABSTRACT:** Heart has physiological function in the animal and humans. It is also implicated in psychosomatic function like love, affection and intimate relationship. Its shape is the symbol of expressing these psychosomatic relationships. The shape is usually presented or worn in the form of ornament which may be made up of metal, stone, paper, cards, pillow and plastic. Small shapes may be ingested by children while playing as foreign body and may pose emergency situation. Generally foreign body ingestion is a commonly encountered problem in emergency room.

We presented a rare case of heart shaped cobblestone locket used in necklace, accidentally ingested by a one year old female child presented in emergency of our department. It was removed with a special technique in emergency operation theatre under general anesthesia. The causes, types, methods and difficulties are discussed.

**Key Words :** Heart, Foreign body, Aero-digestive tract.

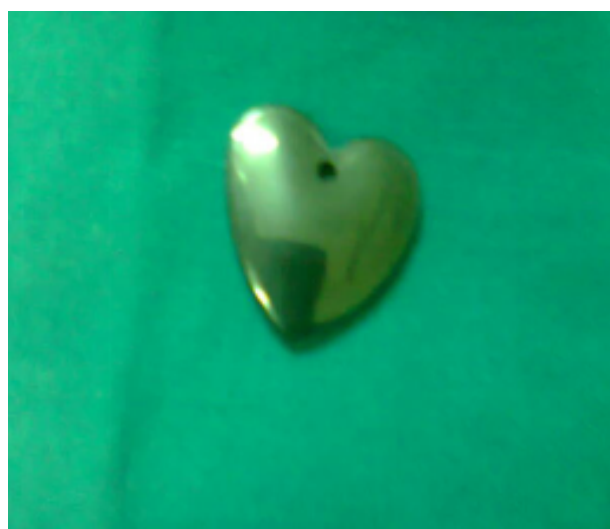
**INTRODUCTION :** Foreign body in aero digestive tract is a common presentation in otorhinolaryngological practice. Majority of foreign body ingestions occur in the pediatric population, with a peak incidence between the ages of 6 months to 6 years<sup>1,2</sup>. Variety of foreign bodies ingestion are described, commonest being coins. Other variety may include bone, plastic pieces, metallic pieces, stone, button batteries, pieces of material used in toys and ornaments<sup>3</sup>. As regard to site of impaction, three physiological constrictions in upper digestive tract has been described. Most common site being the junction of pharynx and esophagus (cricopharynx)<sup>4</sup>. The patients are usually presented in emergency room with dysphagia, ptylism, nausea,

vomiting and pain. Ingested foreign body with smooth surface, if passed through cricopharynx may not require a removal as this site is the narrowest part of gastrointestinal tract after vermiform appendix and once foreign body passes through this, it will be naturally expelled in stool. Foreign body at cricopharynx and those impacted at esophageal constriction may require endoscopic removal<sup>5</sup>. We present an unusual case of foreign body in 1 year old female child impacted at cricopharynx which was successfully removed with a special technique under general anaesthesia.

**CASE SUMMARY:** One year old female child resident of Badin, Sindh presented in emergency with



**Figure 1 :** Skiagram of neck and chest showing foreign body at cricopharynx.



**Figure 2 :** Heart shaped foreign body retrieved.

complaints of difficulty in swallowing and vomiting since last evening. According to patient's father, she ingested something accidentally while playing. Since then she developed difficulty in swallowing, excessive salivation and vomiting. She developed pain in throat and could not eat or drink since then. On examination oral cavity and chest was unremarkable. Throat was full of secretions could not be examined at length due to obvious reasons. Plain skiagram of chest and neck was ordered, which showed heart shaped foreign body in throat at the level of cricopharynx (Fig-1) Emergency operation theatre was arranged and endoscopic removal of foreign body under general anesthesia was planned. Small pediatric laryngoscope was passed under general anesthesia to locate the foreign body. It was tried to be remove with endoscopic forceps but failed to grip it due to smooth surface. A small size foley's catheter was introduced in esophagus underneath the foreign body and the balloon of catheter was inflated by putting 5cc distilled water and pulled out to bring the difficult to grip foreign body in oropharynx and was picked up with Magill's forceps. It was a heart shaped foreign body made up of stone with a hole indicating a locket for necklace (Fig-2) Child was kept under observation overnight, postoperative recovery was unremarkable with resolution of the presenting symptoms, the child was sent home next morning.

**DISCUSSION :** Foreign bodies in aero-digestive tract is a common problem in ENT practice,<sup>1,2,6</sup> Cricopharynx is the commonest site of foreign body impaction followed by laryngotracheobroncheal tree. It occurs at this site as it is the narrowest part of the aero digestive tract after the vermiform appendix<sup>7,8</sup>. Once it crosses the cricopharynx it usually passes through rest of the gastrointestinal tract uneventfully<sup>5</sup>. The peak incidence of ingestion of foreign body in early childhood is related to the fact that children have a habit of putting objects into their mouth to determine their texture and taste and to rub on gum when teething to relieve irritation. They also have the habit of crying, shouting, laughing and playing during meal which predisposes an accidental ingestion and/or inhalation. Common foreign bodies are coins, bone, plastic pieces, metallic pieces, stone, button batteries, pieces of material used in toys and ornaments<sup>3</sup>. An accurate clinical history is important supplemented by radiological evaluation for diagnosis and management of ingested foreign bodies. Most children are asymptomatic at the time of presentation. Common symptoms include drooling, gagging, dysphagia, odynophagia, decreased appetite, food refusal, fever, nausea, vomiting, hematemesis, neck pain, chest pain, abdominal pain, halitosis, cough, stridor, wheezing, and respiratory distress, caused by the highly compliant wall between the trachea and the esophagus. Management of an esophageal foreign body depends

on the duration of impaction, nature, size and site of impaction. Small and blunt foreign body may pass spontaneously through the esophagus. Trauma due to foreign body leads to mucosal edema and thus once it is impacted and remains there for some time, it is unlikely to pass spontaneously. A period of 24 hours observation may be justified in cases of blunt foreign body with no potential to cause perforation. Disc batteries should be removed as early as possible otherwise leakage of the contents and possibly low voltage current will cause tissue necrosis and perforation. Rigid endoscopy and use of endoscopic forceps for removal of foreign body under general anaesthesia is traditionally employed<sup>9,10</sup>. In certain situations modified methods may be employed like Magill forcep, Laproscopic cautery hook, Magnet tube and balloon extraction<sup>11-4</sup>. Removal of blunt smooth surface foreign body may safely be carried out with small sized Foley's catheter under general anaesthesia with rigid and / or fiberoptic endoscope. Small, smooth and inert foreign body may be pushed in stomach with the help of appropriate bougie.

**Conclusion and Recommendation :** Foreign body in aero-digestive tract is a preventable public health hazard that might endanger life. Early diagnosis and prompt management is stressed to reduce morbidity and mortality. Incidence can be reduced by public awareness. The masses should be educated about the potential life threatening situation through print and electronic media. Parents must be educated about the pediatric home care. Government should ensure availability of complete range of rigid endoscopes together with full range of foreign body forceps at all district level hospitals along with proper training of doctors.

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## SUBJECT INDEX - 2015

### A

An unusal case of suprasternal epidermoid cyst.  
Noor T, Siddiqui AH, Khyani IAM, Ahmed Z, Farooq U, 2015; 31: 21-23.

### C

Coins as foreign body in the oesophagus, can this emergency be prevented ?  
Akhter N, Shareef MJ, Hussain F, 2015; 31: 6-9.  
Comparison of level of recall of risk information following maxillofacial trauma and elective head and neck surgery after informed consent.  
Hameed F, Kadri W, Naseem MP, Nasir MY, Haider SM, Salman, SMA, 2015;31: 10-14.  
Cochlear implant; an innovative advent in the history of medical science.  
Thahim K, 2015;31: 33-34.  
Computed tomography of paranasal sinuses- an important guideline for endoscopic sinus surgery.  
Rao K, 2015; 31: 47-50.  
Corrosive intake, contributory factors and their prevention.  
Akhtar N, Tirmizey MA, Akbar N, 2015; 31: 68-71

### E

Etiology of chronic headache and facial pain in patients referred to ENT clinic.  
Ahmed S, Waleem S, Malik NW, 2015;31: 3-5.  
Effects of post-maneuver restrictions on efficacy of Epley's maneuver in benign paroxysmal positional vertigo.  
Ahmed S, Manzoor F, Bashir U, 2015; 31: 39-42.  
Estimation of serum iron in oral sub mucous fibrosis patients and its comparison with healthy controls.  
Hameed F, Ali I, Khan ZR, Aslam MA, Hafeez N, Haider SM, Rizwan A, 2015;31: 43-46.

### H

Heart at a wrong place: A case report.  
Hafeez A, Khyani IAM, Raheja AK, 2015; 31: 80-81.

### I

Incidence of tracheostomy in gun shot trauma victims.  
Ahmed M, Ashfaq K, Udaipurwala IH, Khan M, Ashfaq M, 2015; 31: 15-17.  
Infra-orbital nerve schwannoma with sino-orbital involvement: A case report.  
Zakaria AF, Doi M, Yonus MRM, Azman M, 2015; 31: 59-60.  
Infratemporal fossa growth: excision with surgical expertise and less morbidity: A case report.  
Ahmed BN, Hussain SI, Ahmed MWN, 2015; 31: 61-62.

### K

Kabuki syndrome: A rare entity.  
Rahman N, Khyani IAM, Siddiqui AH, 2015; 31; 56-58.

### M

Malignant solitary fibrous tumor of the nasal cavity and paranasal sinuses.  
Anurag, Shah S, Pradhan B, Thapa NM, 2015; 31; 27-29.

### N

Need for continuous professional development (CPD) in Otorhinolaryngology.  
Khyani I A M, 2015; 31; 63-64.  
New trends in the field of medical education: Challenge and direction for need of basic reforms of medical training in Pakistan.  
Thahim K, 2015; 31; 1-2.

### R

Role of the pre-operative high resolution computed tomography of temporal bone in squamous chronic otitis media.  
Sarin V, Kaur T, Sood AS, 2015; 31: 55.  
Risk factors for oral cancer in young patients aged 40 years and below in Karachi.

Malik S, Musani MA, Jawaaid I, Shaukat R, 2015;31: 35-38.

Racial disparity in patients with oral cavity squamous cell cancers in Pakistan.

Ahmed BN, Rafi SMT, Ahmed MNA, Nisar M, 2015, 31 : 72-75.

## S

Supraglottic laryngeal paraganglioma: A rare clinical entity managed by lateral pharyngotomy approach.

Naik SM, Shenoy A, Chavan P, Akshay S, Gupta S, 2015; 31: 24-26.

Should tonsillectomy be performed during menstruation?

Shafi M, Suhail Z, Ashrafi K A, 2015; 31; 65-67.

Solitary isolated neurofibroma of soft palate; A rare entity.

Khyani IAM, Sikandar M, Hafeez A, 2015; 31: 78-79

## T

The role of ultrasound guided fine needle aspiration cytology in the management of parotid tumors.

Ansari NA, Khyani IAM, Baloch MA, 2015; 31; 18-20  
To evaluate the efficacy of oral steroid therapy in early ethmoidal nasal polyposis,

The impact of tinnitus on quality of life.

Asma A, Yii Hern E, Norsyamimi AR, Khai Yng H, Kirubananthini J, Tuti Iryani MD, at al 2015; 31 : 76-7.

## W

Workshop on cochlear implant.

Ahmed Z, 2015; 31: 29-30

# AUTHOR INDEX 2014

## A

Adil R, see Faisal H, 2015; 31: 43-46.

Akshay s, see Sudhir M. Naik et al, 2015; 31; 24-26.

Asma A etal, The impact of tinnitus on quality of life, 2015; 31: 76-7.

Anurag et al, Malignant solitary fibrous tumor of the nasal cavity and para nasal sinuses, 2015; 31: 27- 29.

Arvinder S S, see Vanita S et al, 2015; 31: 51-55.

Ashol R, see Atif H, 2015; 31: 80-81.

Ashok S, see Sudhir M Naik et al, 2015; 31 : 24-26.

Atif H S, see Nabeel R et al, 2015; 31 : 56-58.

Atif H, see Iqbal A M K et al, 2015;31: 78-79.

Atif H , Heart at a wrong place: A case report, 2015; 31: 80-81.

Atiqah F Z et al, Infra-orbital nerve schwannoma with sino-orbital involvement: A case report. 2015; 31: 59-60.

## B

Beenish N A, Infratemporal fossa growth: excision with surgical expertise and less morbidity: A case report., 2015; 31: 61-62.

Beenish N A, Racial disparity in patients with oral cavity squamous cell cancers in Pakistan. 2015, 31 : 72-75.

Beenish N A, To evaluate the efficacy of oral steroid therapy in early ethmoidal nasal polyposis, 2015; 31: 76-77.

## F

Faisal H, Comparison of level of recall of risk. information following maxillofacial trauma and elective head and neck surgery after informed consent., 2015;31: 10-14.

Faisal H, Estimation of serum iron in oral sub mucous fibrosis patients and its comparison with healthy controls, 2015;31: 43-46.

Faisal M, see Shoaib A, 2015;31: 39-42.

Fiaz H, see Naeem A, 2015; 31: 6-9.

## G

Ghazanfar Z, see Noor A A, 2015;31: 18-20

## I

Irfan A, see Faisal H, 2015; 31: 43-46.



Itrat J, see Shaukat M, 2015;31: 35- 38.

Iqbal A M K, Need for continuous professional development (CPD) in Otorhinolaryngology., 2015; 31: 63-64.

Iqbal A M K, Solitary isolated neurofibroma of soft palate; A rare entity., 2015; 31: 78-79.

Iqbal A M K, see Nabil R, 2015; 31: 56-57.

Iqbal A M K, see Noor A A, 2015;31: 18-20.

Iqbal A M K, see Tooba N, 2015; 31: 21-23.

## K

Kalimullah T, Cochlear implant; an innovative advent in the history of medical science., 2015;31: 33-34.

Kalimullah T, New trends in the field of medical education: Challenge and direction for need of basic reforms of medical training in Pakistan. 2015; 31: 1-2.

Kiran r, Computed tomography of paranasal sinuses- an important guideline for endoscopic sinus surgery, 2015; 31: 47-50.

Khalid A A, see Muhammad S, 2015; 31: 65-67.

## M

Manzoor A, Incidence of tracheostomy in gun shot trauma victims., 2015; 31: 15-17.

Maria S, see Iqbal A M K, 2015; 31: 78-79.

Mawaddah A, see Atiqah F, 2015; 31: 59-60.

Mehwish N, see Beenish N, 2015; 31: 72-75.

Mohammad A A, see Faisal H, 2015; 31: 43-46.

Mohammad B D, see Atiqah F, 2015; 31: 59-60.

Mohd R M Y, see Atiqah F, 2015;31 : 59-60.

Muhammad A M, see Shaukat M, 2015;31: 35-38.

Muhammad A T, see Naeem A, 2015; 31: 68-71.

Muhammad J S, see Naeem A, 2015; 31: 6-9.

Muhammad P N, see Faisal H, 2015; 31: 10-14.

Muhammad S, Should tonsillectomy be performed during menstruation ?, 2015; 31: 65-67.

Muhammad S F, see Noor A A, 2015;31: 18-20.

Muhammad w N A, see Beenish N A, 2015; 31: 61-62.

Munir A B, see Noor A A, 2015;31: 18-20.

Muhammad U F, see Tooba N, 2015; 31: 21-23.

Muhammad W N A, see Beenish N, 2015; 31: 72-75.

Muhammad Y N, see Faisal H, 2015; 31: 10-14.

## N

Nabeel H, see Faisal H, 2015; 31: 43-46.

Nabil R, Kabuki syndrome; A rare entity, 2015;31: 56-57.

Nisar A, see Naeem A, 2015; 31: 68-71.

Nadeem w M, see Shoaib A, 2105;31 : 3-5.

Naeem A, Corrosive intake, contributory factors and their prevention., 2015; 31: 68-71.

Noor A A, The role of ultrasound guided fine needle aspiration cytology in the management of parotid tumors, 2015; 31: 18-20.

## P

Pardhan B, see Aurag, 2015; 31: 27-29.

Purshotam C, see Sudhir M N, 2015;31: 24-26.

## R

Rida S, see Shaukat M, 2015;31: 35-38.

## S

Saadatullah W, see Shoaib A, 2105;31 : 3-5.

Shaukat M, Risk factors for oral cancer in young patients aged 40 years and below in Karachi, 2015;31: 35-38.

Shoaib A, Etiology of chronic headache and facial pain in patients referred to ENT clinic., 2015;31: 3-5.

Shoaib A, Effects of post-maneuver restrictions on efficacy of Epley's maneuver in benign paroxysmal positional vertigo, 2015; 31: 39-42.

Shankar S, see Aurag, 2015; 31: 27-29.

S M Tariq R, see Beenish N, 2015; 31: 72-75.

Sudhir M N, Supraglottic laryngeal paraganglioma: A rare clinical entity managed by lateral pharyngotomy approach, 2015; 31: 24-26.

sunil G, see Sudhir M N, 2015, 31: 24-26.

Syed I H, see Beenish N A, 2015; 31: 61-62.

Syed M H, see Faisal H, 2015; 31: 43-46.

Syed M A S, see Faisal H, 2015; 31: 10-14.

## T

Tanya k, see Vanita S, 2015. 31: 51-55.

Thapa N M, see Aurag, 2015; 31: 27-29.

Tooba N, An unusual case of suprasternal epidermoid cyst, 2015; 31: 21-23.

**U**

Uzma B, see Shoaib A, 2015; 31: 39-42.

**V**

Vanita S, Role of the pre-operative high resolution computed tomography of temporal bone in squamous chronic otitis media, 2015; 31:51- 55.

**W**

Wahab K, see Faisal H, 2015; 31: 10-14.

**Z**

Zeba A, workshop on cochlear implant, 2015; 31: 29-30.

Zeba A, see Tooba N, 2015; 31: 21-23.

Zahid S, see Muhammad S, 2015; 31: 65-67.

Zia R K, see Faisal H, 2015; 31: 43-46.

Prepared by:

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## SUBJECT INDEX - 2015

### A

An unusual case of suprasternal epidermoid cyst.  
Noor T, Siddiqui AH, Khyani IAM, Ahmed Z, Farooq U, 2015; 31: 21-23.

### C

Coins as foreign body in the oesophagus, can this emergency be prevented ?  
Akhter N, Shareef MJ, Hussain F, 2015; 31: 6-9.  
Comparison of level of recall of risk information following maxillofacial trauma and elective head and neck surgery after informed consent.  
Hameed F, Kadri W, Naseem MP, Nasir MY, Haider SM, Salman, SMA, 2015;31: 10-14.  
Cochlear implant; an innovative advent in the history of medical science.  
Thahim K, 2015;31: 33-34.  
Computed tomography of paranasal sinuses- an important guideline for endoscopic sinus surgery.  
Rao K, 2015; 31: 47-50.  
Corrosive intake, contributory factors and their prevention.  
Akhtar N, Tirmizey MA, Akbar N, 2015; 31: 68-71

### E

Etiology of chronic headache and facial pain in patients referred to ENT clinic.  
Ahmed S, Waleem S, Malik NW, 2015;31: 3-5.  
Effects of post-maneuver restrictions on efficacy of Epley's maneuver in benign paroxysmal positional vertigo.  
Ahmed S, Manzoor F, Bashir U, 2015; 31: 39-42.  
Estimation of serum iron in oral sub mucous fibrosis patients and its comparison with healthy controls.  
Hameed F, Ali I, Khan ZR, Aslam MA, Hafeez N, Haider SM, Rizwan A, 2015;31: 43-46.

### H

Heart at a wrong place: A case report.  
Hafeez A, Khyani IAM, Raheja AK, 2015; 31: 80-81.

### I

Incidence of tracheostomy in gun shot trauma victims.  
Ahmed M, Ashfaq K, Udaipurwala IH, Khan M, Ashfaq M, 2015; 31: 15-17.  
Infra-orbital nerve schwannoma with sino-orbital involvement: A case report.  
Zakaria AF, Doi M, Yonus MRM, Azman M, 2015; 31: 59-60.  
Infratemporal fossa growth: excision with surgical expertise and less morbidity: A case report.  
Ahmed BN, Hussain SI, Ahmed MWN, 2015; 31: 61-62.

### K

Kabuki syndrome: A rare entity.  
Rahman N, Khyani IAM, Siddiqui AH, 2015; 31; 56-58.

### M

Malignant solitary fibrous tumor of the nasal cavity and paranasal sinuses.  
Anurag, Shah S, Pradhan B, Thapa NM, 2015; 31; 27-29.

### N

Need for continuous professional development (CPD) in Otorhinolaryngology.  
Khyani I A M, 2015; 31; 63-64.  
New trends in the field of medical education: Challenge and direction for need of basic reforms of medical training in Pakistan.  
Thahim K, 2015; 31; 1-2.

### R

Role of the pre-operative high resolution computed tomography of temporal bone in squamous chronic otitis media.  
Sarin V, Kaur T, Sood AS, 2015; 31: 55.  
Risk factors for oral cancer in young patients aged 40 years and below in Karachi.

Malik S, Musani MA, Jawaid I, Shaukat R, 2015;31: 35-38.

Racial disparity in patients with oral cavity squamous cell cancers in Pakistan.

Ahmed BN, Rafi SMT, Ahmed MNA, Nisar M, 2015, 31 : 72-75.

## S

Supraglottic laryngeal paraganglioma: A rare clinical entity managed by lateral pharyngotomy approach.

Naik SM, Shenoy A, Chavan P, Akshay S, Gupta S, 2015; 31: 24-26.

Should tonsillectomy be performed during menstruation?

Shafi M, Suhail Z, Ashrafi K A, 2015; 31; 65-67.

Solitary isolated neurofibroma of soft palate; A rare entity.

Khyani IAM, Sikandar M, Hafeez A, 2015; 31: 78-79

## T

The role of ultrasound guided fine needle aspiration cytology in the management of parotid tumors.

Ansari NA, Khyani IAM, Baloch MA, 2015; 31; 18-20

To evaluate the efficacy of oral steroid therapy in early ethmoidal nasal polyposis,

The impact of tinnitus on quality of life.

Asma A, Yii Hern E, Norsyamimi AR, Khai Yng H, Kirubananthini J, Tuti Iryani MD, et al 2015; 31 : 76-7.

## W

Workshop on cochlear implant.

Ahmed Z, 2015; 31: 29-30

# AUTHOR INDEX 2014

## A

Adil R, see Faisal H, 2015; 31: 43-46.

Akshay s, see Sudhir M. Naik et al, 2015; 31; 24-26.

Asma A et al, The impact of tinnitus on quality of life, 2015; 31: 76-7.

Anurag et al, Malignant solitary fibrous tumor of the nasal cavity and para nasal sinuses, 2015; 31: 27- 29.

Arvinder S S, see Vanita S et al, 2015; 31: 51-55.

Ashol R, see Atif H, 2015; 31: 80-81.

Ashok S, see Sudhir M Naik et al, 2015; 31 : 24-26.

Atif H S, see Nabeel R et al, 2015; 31 : 56-58.

Atif H, see Iqbal A M K et al, 2015;31: 78-79.

Atif H , Heart at a wrong place: A case report, 2015; 31: 80-81.

Atiqah F Z et al, Infra-orbital nerve schwannoma with sino-orbital involvement: A case report. 2015; 31: 59-60.

## B

Beenish N A, Infratemporal fossa growth: excision with surgical expertise and less morbidity: A case report., 2015; 31: 61-62.

Beenish N A, Racial disparity in patients with oral cavity squamous cell cancers in Pakistan. 2015, 31 : 72-75.

Beenish N A, To evaluate the efficacy of oral steroid therapy in early ethmoidal nasal polyposis, 2015; 31: 76-77.

## F

Faisal H, Comparison of level of recall of risk. information following maxillofacial trauma and elective head and neck surgery after informed consent., 2015;31: 10-14.

Faisal H, Estimation of serum iron in oral sub mucous fibrosis patients and its comparison with healthy controls, 2015;31: 43-46.

Faisal M, see Shoaib A, 2015;31: 39-42.

Fiaz H, see Naeem A, 2015; 31: 6-9.

## G

Ghazanfar Z, see Noor A A, 2015;31: 18-20

## I

Irfan A, see Faisal H, 2015; 31: 43-46.



Itrat J, see Shaukat M, 2015;31: 35- 38.

Iqbal A M K, Need for continuous professional development (CPD) in Otorhinolaryngology., 2015; 31; 63-64.

Iqbal A M K, Solitary isolated neurofibroma of soft palate; A rare entity., 2015; 31: 78-79.

Iqbal A M K, see Nabil R, 2015; 31: 56-57.

Iqbal A M K, see Noor A A, 2015;31: 18-20.

Iqbal A M K, see Tooba N, 2015; 31: 21-23.

## K

Kalimullah T, Cochlear implant; an innovative advent in the history of medical science., 2015;31: 33-34.

Kalimullah T, New trends in the field of medical education: Challenge and direction for need of basic reforms of medical training in Pakistan. 2015; 31; 1-2.

Kiran r, Computed tomography of paranasal sinuses- an important guideline for endoscopic sinus surgery, 2015; 31: 47-50.

Khalid A A, see Muhammad S, 2015; 31: 65-67.

## M

Manzoor A, Incidence of tracheostomy in gun shot trauma victims., 2015; 31: 15-17.

Maria S, see Iqbal A M K, 2015; 31: 78-79.

Mawaddah A, see Atiqah F, 2015; 31: 59-60.

Mehwish N, see Beenish N, 2015; 31: 72-75.

Mohammad A A, see Faisal H, 2015; 31: 43-46.

Mohammad B D, see Atiqah F, 2015; 31: 59-60.

Mohd R M Y, see Atiqah F, 2015;31 : 59-60.

Muhammad A M, see Shaukat M, 2015;31: 35-38.

Muhammad A T, see Naeem A, 2015; 31: 68-71.

Muhammad J S, see Naeem A, 2015; 31: 6-9.

Muhammad P N, see Faisal H, 2015; 31: 10-14.

Muhammad S, Should tonsillectomy be performed during menstruation ?, 2015; 31; 65-67.

Muhammad S F, see Noor A A, 2015;31: 18-20.

Muhammad w N A, see Beenish N A, 2015; 31: 61-62.

Munir A B, see Noor A A, 2015;31: 18-20.

Muhammad U F, see Tooba N, 2015; 31: 21-23.

Muhammad W N A, see Beenish N, 2015; 31: 72-75.

Muhammad Y N, see Faisal H, 2015; 31: 10-14.

## N

Nabeel H, see Faisal H, 2015; 31: 43-46.

Nabil R, Kabuki syndrome; A rare entity, 2015;31: 56-57.

Nisar A, see Naeem A, 2015; 31: 68-71.

Nadeem w M, see Shoaib A, 2105;31 : 3-5.

Naeem A, Corrosive intake, contributory factors and their prevention., 2015; 31: 68-71.

Noor A A, The role of ultrasound guided fine needle aspiration cytology in the management of parotid tumors, 2015; 31; 18-20.

## P

Pardhan B, see Aurag, 2015; 31: 27-29.

Purshotam C, see Sudhir M N, 2015;31: 24-26.

## R

Rida S, see Shaukat M, 2015;31: 35-38.

## S

Saadatullah W, see Shoaib A, 2105;31 : 3-5.

Shaukat M, Risk factors for oral cancer in young patients aged 40 years and below in Karachi, 2015;31: 35-38.

Shoaib A, Etiology of chronic headache and facial pain in patients referred to ENT clinic., 2015;31: 3-5.

Shoaib A, Effects of post-maneuver restrictions on efficacy of Epley's maneuver in benign paroxysmal positional vertigo, 2015; 31: 39-42.

Shankar S, see Aurag, 2015; 31: 27-29.

S M Tariq R, see Beenish N, 2015; 31: 72-75.

Sudhir M N, Supraglottic laryngeal paraganglioma: A rare clinical entity managed by lateral pharyngotomy approach, 2015; 31: 24-26.

sunil G, see Sudhir M N, 2015, 31: 24-26.

Syed I H, see Beenish N A, 2015; 31: 61-62.

Syed M H, see Faisal H, 2015; 31: 43-46.

Syed M A S, see Faisal H, 2015; 31: 10-14.

## T

Tanya k, see Vanita S, 2015. 31: 51-55.

Thapa N M, see Aurag, 2015; 31: 27-29.

Tooba N, An unusal case of suprasternal epidermoid cyst, 2015; 31: 21-23.

**U**

Uzma B, see Shoaib A, 2015; 31: 39-42.

**V**

Vanita S, Role of the pre-operative high resolution computed tomography of temporal bone in squamous chronic otitis media, 2015; 31:51- 55.

**W**

Wahab K, see Faisal H, 2015; 31: 10-14.

**Z**

Zeba A, workshop on cochlear implant, 2015; 31: 29-30.

Zeba A, see Tooba N, 2015; 31: 21-23.

Zahid S, see Muhammad S, 2015; 31: 65-67.

Zia R K, see Faisal H, 2015; 31: 43-46.

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