

e-Poster



## 2<sup>nd</sup> World Congress on **Otolaryngology and Wound Care**

August 30, 2021

### **The Role of auditory Neuropathy in the hearing impairment in patients with arterial Hypertension**

**Lisotskaya V V**

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**Introduction:** Pure tone audiometry is an insensible method for hearing examination in patients with arterial hypertension. What necessitates the search for the diagnostic of the level of hearing disorders.

**Objective:** 35 patients with low-risk primary hypertension with normal hearing threshold and 35 healthy patients studied at audiology department of the “The Republican Center for Research and Practice in Otolaryngology”, from 2018 to 2020 year.

**The aim:** To determine the topographic and functional level of damage of the hearing organ in patients with arterial hypertension.

**The methodology:** mathematical statistics, student t-test, Fisher test. All patients underwent DPOAE, TEOAE, tympanometry, acoustic reflexometry, auditory brainstem response, high-frequency audiometry, speech intelligibility tests.

**The results:** The study involved 70 individuals an equal men (N=38) and women (N=32) in the middle age at  $35,31 \pm 10$  years (95% CI 18-55 years). All patients (N=70) were divided into 2 groups: 1 group (experience) – patients with hypertension, 2 group (control) –patients without hypertension. The experience group patients showed lower results by passing DPOAE. It was significantly revealed an elongation of the interval I-V with an increase in the amplitude and the latency of the wave I in the first group. Monosyllabic speech intelligibility test, Rapidly alternating speech perception test were  $65 \pm 5\%$  ( $\geq 0,95$ ) with an extremely low percentage of passing digital dichotic tests-  $25 \pm 5\%$  ( $\geq 0,95$ ) in patients of the first group.

**Conclusion:** Arterial hypertension causes damage to the hearing organ at the central and peripheral levels. Auditory synaptopathy leads in the hearing impairment in patients with primary arterial hypertension. Speech intelligibility tests and dichotic digits test should be used for diagnosing hearing impairment in addition to the standard battery tests.

#### **Biography**

Lisotskaya V has expertised in evaluation and rehabilitation patients with hearing impairment, her concept of a personified approach in the diagnosis, treatment and rehabilitation of patients with hidden hearing loss, tinnitus is a new direction in the healthcare. she has built this model after years of experience in research, evaluation, teaching and administration both in hospital and education institutions. this approach is responsive to all stakeholders and has a different way of focusing.

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# Accepted Abstracts



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### **Recurrent paralysis of the facial nerve with sigmoid sinus thrombosis**

**Mohamed Khamis Tolba Mahmoud Abdalla**

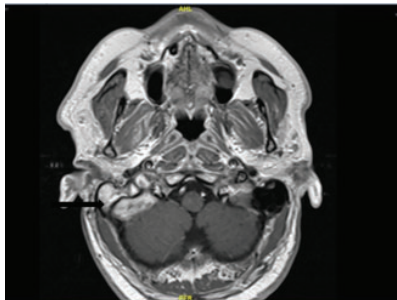
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This article presents a case with a history of 6 attacks of alternating facial palsy over the past 24 years. The patient presented to our clinic with left-sided facial paralysis associated with extensive thrombosis of the right sigmoid sinus and proximal jugular vein.

**Case presentation:** A 46-year male patient presented with a four-day history of sudden onset grade VI left facial nerve paralysis with a history of 5 distinct episodes on both sides. No abnormalities were discovered by general and local examination but left facial paralysis. MRI and CT venogram revealed a thrombus involving the right transverse sinus's distal aspect extending to the right sigmoid sinus and proximal jugular vein.

**Management and Outcome:** The condition improved entirely after four weeks with steroids.

**Discussion:** Recurrent facial palsy accounting for 5.7–11.9% of all acute facial palsy cases; several disease entities may be responsible for that condition.



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## **Endoscope-assisted cochlear implantation: A case report with a focus on history and comparison of different surgical techniques**

**Jeyanthi Kulasegarah, Jasintha Vani Raja Sekaran and Prepageran Narayanan**

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Cochlear implant (CI) is a surgically implanted neuroprosthesis. The electrodes are directly inserted into scala tympani for patients with sensorineural hearing loss to bypass the usual acoustic stimulation to stimulate the auditory nerve directly. In the effort to avoid mastoidectomy and to embrace minimally invasive surgery, multiple alternative surgical techniques for CI have been described over the years, with endoscope-assisted implantation as one of the latest advancements. Dr. Muaaz Tarabichi, an otorhinolaryngologist in Dubai, popularised endoscope-assisted ear surgery. He published his first paper in 1997, which described the use of endoscopes in managing middle ear cholesteatoma. Currently, rigid endoscope-guided middle ear surgery has gained popularity for cholesteatoma removal and other middle ear surgeries such as stapes surgery, myringoplasty, tympanoplasty, and even cochlear implantation. This paper aims to discuss endoscope-assisted cochlear implantation techniques and discuss their advantages and drawbacks. We describe a case of a 7-year-old boy with post-lingual profound sensorineural deafness who underwent endoscope assisted CI in our centre.

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### **Islanded pedicled nasolabial flap in head and neck reconstruction**

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**Statement of the problem:** Reconstruction of head neck cancer ablative defects is challenging. The primary aims of reconstruction are to maintain or recreate functionality with acceptable cosmetic outcomes. Free flaps are the preferred reconstructive armamentarium in most centers although they have certain limitations. Local flaps provide a good reconstructive alternative in select situations. Random nasolabial flap (NLF) has been in common use for oral cancer ablative defect reconstruction. A modification of the nasolabial flap (islanded pedicled nasolabial flap-ipNLF) is an easy and reliable option for reconstruction of small to medium sized defects of the head and neck.

**Methodology:** We present the retrospective analysis of 27 consecutive patients reconstructed with ipNLF at two high volume Indian cancer centers. The functional outcomes measured were duration of weaning of feeding and tracheotomy tubes and speech assessment [speech intelligible rating score (SIR)] post surgery. Complications assessed were flap loss, oro-cutaneous fistula, donor site wound dehiscence, oral incompetence and angle of mouth deviation.

**Findings:** Most common ablative defect was of the oral cavity (22 patients) followed by oropharynx (4 patients) and hypopharynx (1 patient). The mean operating time for flap harvesting and inseting was 57.7 minutes. The mean durations for post operative feeding tube and tracheotomy removal were 10 and 5 days respectively. Twenty four subjects had SIR scores of I or II. None of the subjects had flap loss, oro cutaneous fistula or donor site wound dehiscence. Twenty five subjects had no oral incompetence and 26 had no or minimal angle of mouth deviation.

**Conclusion:** This is the largest series of ipNLF till date and emphasizes on the versatility, reliability, reproducibility and excellent functional and acceptable cosmetic outcomes of this flap for reconstruction of judiciously chosen head and neck ablative defects.

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### **Association of metabolism and DNA repair genes with head & neck cancer (HNC) patients from southern Punjab, Pakistan**

**Zureesha Sajid**

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**Statement of Problem:** Head and neck cancers (HNCs) are cataloged among the top ten malignancies worldwide. HNC is further divided into cancers of oral cavity, tongue, cheeks, lips, larynx, upper aero-digestive tract, eyes etc. In addition to epidemiological factors, genetics play a very important role in rendering a person immune or prone to carcinomas. Two important families of genes in this regard are CYP family (coding enzymes that metabolize potential carcinogens) and DNA repair genes (which prohibit and proofread errors in DNA replication).

**Methodology:** A case control study was conducted comprising of 100 controls and 135 HNC patients of different age groups to check the association and prevalence of polymorphisms in GSTT1, GSTM1, XRCC1, XRCC2 & XRCC4. A detailed questionnaire was filled by all study subjects followed by the collection of blood samples for DNA extraction. GSTT1 and GSTM1 deletion polymorphism was detected using multiplex PCR to illustrate presence or absence of the gene and the TETRA-primer ARMS PCR assay was developed for rapid determination of SNVs in XRCC1 codon 194, XRCC2 codon 188 and XRCC4 codon 247.

**Findings:** GSTT1 and GSTM1 individual null genotypes have no significant association with HNC while significant positive association has been seen in incidences of GSTT1/GSTM1 simultaneous double deletion. XRCC1 Arg194Trp analysis showed that mutant allele has a protective role while wild type allele is associated with HNC. In case of XRCC2 Arg188His; wild type allele is found to be more frequent in controls while mutant allele was prominent in patients. No allele of XRCC4 Ser247Ala showed any significant association with HNC. We suppose that our data will serve as a fundamental record for the forthcoming clinical and genetic studies related to variability in the response or toxicity to xenobiotics/drugs known to be substrates of glutathione-S-transferases as well as DNA damages.

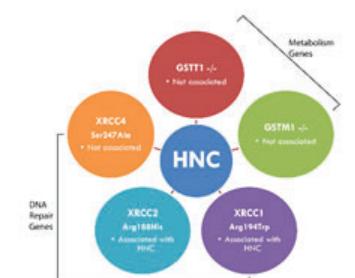


Figure 2: Summary of study on association of Head & Neck Cancer with deletion and single nucleotide variations in 5 different genes

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### **Wound Care Nutrition**

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Pandemic, COVID-19, has been teaching us many lessons, one of which is a wound care Nutrition. Wound is responsible for Pain which is one of the important reasons for existence of medicine, nutritionist, and doctors. It is recognised that the aggravation of pain varies from person to person, due to difference in severity of wound. In some persons pain sensation may be irritative but in others may be un-bearable. The nerve sensors play a major role in pain. First action therapist has to take relates to right nutrition so as to bring the body to alkalinity. RICE is often the first step in relieving any pain, due to wound.

Wound caused during sports has to be taken care immediately so as to resume the play. Here, Liquid Nutrition like juices or syrups are very useful. Obtaining a history of a wound with pain characterization as acute, sub-acute or chronic etc. It can be done with physical examination like temperature, pulse, blood pressure, respiration, weight loss or mental status examination which may demonstrate confusion. Vitamin E has good role to play in many types of wounds, to soak up excess free radicals.

Vitamin-E may in the form of sprouts, soyabean milk, vegetable juice or wheat germ oil. Curcumin can be very good wound healer and pain reliever. Fruits like, cherries, strawberries and blueberries are also in that category of pain reliever. Thus, wound care nutrition is useful in any pain which should not be killed with the help of drugs/chemicals but can be relieved with help of various fruits, vegetables and nutritious foods if taken in appropriate proportions.

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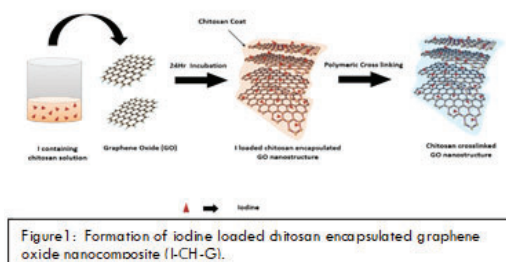
### **Accelerated antibacterial and wound healing activity in full thickness chronic wounds by iodine loaded chitosan encapsulated graphene oxide nanocomposite**

**Priyanka Chhabra<sup>1</sup> and Amit Tyagi<sup>2</sup>**

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Nanotechnology has emerged as a novel innovation of the century in different areas of science. The development of different types of nanocarriers offers novel approaches to delivering active drug at the site of injury in a sustained and effective manner which could significantly enhance the wound healing potential of chronic wounds. Given that, the goal of the present study is to develop nanocomposite based on chitosan, graphene oxide, and iodine as an antimicrobial agent for rapid wound healing. The prepared iodine loaded chitosan encapsulated graphene nanocomposites (I-CH-G) were characterized using different techniques, such as SEM, FTIR, AFM, particle size analysis and zeta potential measurement. The average diameter of I-CH-G nanocomposite was found to be  $370 \pm 1.2$  nm and showed sustained release behavior. The optimized I-CH-G nanocomposite was incorporated into carbopol gel and evaluated for drug content, pH, *in vitro* release, texture analysis, and viscosity. In addition to that, they were also evaluated for their antimicrobial activity against *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Escherichia coli*. Further, these nanoparticles were evaluated *in-vivo* for wound healing efficacy in Sprague Dawley rats. Histopathological evaluations demonstrated that I-CH-G-NPOs showed significantly enhanced wound contraction, enhanced cell adhesion, epithelial migration, and high hydroxyproline content leading to faster and more efficient collagen synthesis as compared to plain carbopol, plain iodine and controls. Hence the topical administration of fabricated I-CH-G-nanocomposites appears to be an interesting and suitable strategy for the treatment of chronic wounds.



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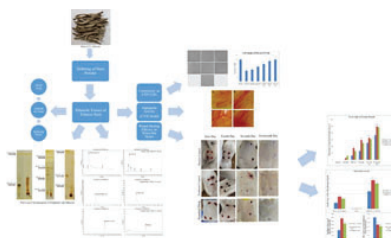
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### Preclinical assessment of stem of *Nicotiana tabacum* on excision wound model

**Kumud Bala**

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Agro-waste material derived from *N. tabacum* has shown enormous potential antioxidant and antimicrobial activity. Hence in the present study, we investigated the wound healing efficacy of ethanolic extract of stem of *Nicotiana tabacum* on Wistar rat model. Ethanolic extract prepared from defatted stem was to check various phytochemicals using spectrophotometric and chromatographic technique. The antioxidant potential was determined by FRAP and Reducing Power assay in extract. Cytotoxicity of extracts was determined using mouse fibroblast L929 cell lines by MTT assay. *In vivo* angiogenic activity was observed on chick chorioallantoic membrane (CAM) model by observing blood vessels formation and its branching. *In vivo* wound healing activity was observed on excision wounds in rat model by quantifying percentage of wound contraction, antioxidant activity and histopathology studies. From the present study, polyphenols, tannins and alkaloids were found to be determined in the ethanolic extract by means of spectrophotometric and chromatographic analysis against standards. Antioxidant assay revealed maximum antioxidant potential in ethanolic extract. Cytotoxic effect of extract has not been shown on L929 cell line. From CAM model, extract has shown growth of blood vessels formation at concentration of 480 µg/ml. Topical application of extracts on excision wounds, revealed wound healing activity i.e., 98.7% ± 0.002 on 14th day as well as enzymatic activity (SOD, CAT, GST) and non-enzyme content (GSH and Lipid peroxidation) has been found to be high in granulated tissue. Histopathological studies confirmed the re-epithelization in skin wounds. It can be concluded that stem of *N. tabacum* can be used as herbal remedy in wound healing process as a topical application.



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