Dr. A. Hari Priya- Associate Professor, Department of Prosthodontics

Radical cancer surgery of the maxilla creates extensive loss of hard and soft tissues. The resulting intraoral tissue deficiencies cause speech impediments, restrict mastication, and impair deglutition. Many retentive features generally incorporated in conventional maxillary dentures are sacrificed in the surgical endeavor to eradicate the disease. Seemingly hopeless postsurgical conditions can be resolved by a clinical approach which looks upon such situations not as areas of devastation but, rather, as conditions which can be treated successfully by application of sound prosthodontic principles and clinical skills. Pre surgical prosthetic planning and rehabilitation, therefore, should be an integral part of the patient’s treatment plan. In simpler terms, a palatal obturator covers any fistulas (or “holes”) in the roof of the mouth that lead to the nasal cavity, providing the wearer with a plastic/acrylic, removable roof of the mouth, which replaces the missing teeth and the adjacent alveolar ridge. It is defined as a prosthesis that artificially replaces part or all of the maxilla and the associated teeth lost due to surgery or trauma. Obturators replacing resected hard and soft palates may be classified and defined as follows: (1) a Surgical obturator - an immediate prosthesis fabricated preoperatively and inserted at the time of surgery; the advantage of holding any surgical dressing in place and also aids in pre surgical planning. (2) an Interim obturator - interim appliance that the patient wears during the convalescent or healing period (temporary prosthesis and has to be revised periodically as the defect heals) and (3) a Definitive obturator - prosthesis fabricated after sufficient healing takes place (3-4 months post surgically, depending on the case).

CASE REPORT:
A 20 year old male patient reported to the Department of Dentistry, with a unilateral swelling on the right side of the face. On intra oral examination, a diffuse firm swelling on the right side of the palate extending from the midline to the buccal sulcus and involving the first quadrant was noticed. After further investigations, it was diagnosed as Monostotic Fibrous Dysplasia of the right maxilla. Diagnostic impressions were made and a surgical stent was fabricated to keep the dressing in place immediately following surgery. A surgical resection of the tumor was executed. The impressions of both the maxillary and mandibular arches were recorded with alginate. In the maxilla to record the defect, initially the undercuts were blocked with gauze soaked in saline. Following this, a thick mix of alginate was injected into the defect. Simultaneously alginate was loaded onto the maxillary impression tray and placed in the mouth. After sufficient setting, the impression was withdrawn with a snap. It included the maxillary arch along with the defect portion. Master cast was obtained from the impressions. A trial denture base with only anterior teeth arranged was checked for esthetics and retention. Following which, an INTERIM obturator prosthesis with hollow open bulb design was fabricated and inserted into the patient’s mouth. A hollow bulb design was chosen in order to reduce the bulk of the prosthesis which in turn made it lightweight and improved the patient's acceptance. The bulb of the prosthesis was kept open to accommodate the collection of mucous secretions. Additionally anterior teeth and buccal ramp was designed to improve the esthetics. Post insertion instructions were given and the patient was kept on soft diet. Recall visits were scheduled after 24 hours, 1 week and every one month to check for the tissue healing. A definitive prosthesis was planned after complete healing of the tissues. The present prosthesis apart from obturating the oro-nasal communication to prevent regurgitation of fluids and nasal speech, has also counteracted the facial disfigurement and oral contamination at this immediate post-surgical condition and enhanced the esthetic appeal and patient satisfaction.
A 14 year old female child born to nonconsanguinous parents who is a resident of Nagole, Telangana was brought to the hospital with complaints of inability to speak since 15 days, abnormal twisting of limbs and neck since 10 days and inability to swallow both liquids and solids since 10 days. She was apparently alright 15 days ago when symptoms developed.

History of weakness one year back for which child was treated at government hospital and parents were told that child had a liver illness and treatment was commenced and continued. Medication was stopped 6 months back.

On examination, child was irritable, with generalized dystonia and expressive aphasia. KF rings were present in the corneal limbus. On CNS examination- tone was increased in upper limb and lower limb with deep tendon reflexes 3+ in upper and lower limb. She was evaluated for Wilson’s disease- Serum Free Cu was normal, Serum Ceruloplasmin was low, 24 hour urine Cu was high s/o Wilson’s disease. MRI Brain revealed T2 hyperintensities in putamen, thalami, mid brain, pons and superior cerebellar peduncle. ATP7B gene testing was done. Penicillamine and Zinc acetate were commenced. Parents were counseled about the condition, Natural history and 25% risk of similar to every child. Dystonia significantly improve with Baclofen and Pacitane.

Dr. Sarah (Pediatric dept)

DO IONS INDUCE BACTERIAL DRUG RESISTANCE???

—YES I CAN—

Dr. Guru Prasad Manderwad, Assistant Professor, Microbiology

Multidrug resistant (MDR) bacteria are posing great threat and challenge to the mankind worldwide and also added new dimensions in the treatment and management of the patients. The pathogenic organisms have developed several mechanisms to inactivate the action of the antibiotics including mutational alteration of the target protein, inhibition of the drug access, presence of drug specific efflux pumps, alteration in the drug binding sites.

The 70S bacterial ribosomes are held together through Mg2+ ions. The ribosomal subunits require low concentration of magnesium ions to maintain the ribosome as a unit. Recent Innovative studies have found an overall new mechanism of defending the action of antibiotics on ribosomes through the influx of the magnesium ions and using them as a armour shield around ribosomes.

The research conducted by Suel’s and Co-workers found a relationship between the membrane potential and the ribosomal activity which are functionally linked in bacteria. They evaluated and found the existence of two types of cells: growth defective cells show transient increase in the hyperpolarization, followed by the cell death whereas growing cells lack the hyperpolarization leading to survival of the cell. The bacteria are showing the stress resilience through influx of magnesium ions around ribosomes leading to the prevention of hyperpolarization of the bacterial cell. This study found a new mechanism of bacterial drug resistance through increase in the influx of the magnesium ions leading to the survival of bacteria.

The finding of this new mechanism will help to increase the action potency of antibiotics, through interfering the uptake
MEDICAL EDUCATION UNIT
ACITIVITIES IN 2018

1. Orientation program for Interns 2018 was held from 29-03-2018 to 31-03-2018 for the batch of 2013
Orientation programme involved speakers, enlightened the house surgeons regarding the requisition of various laboratory investigations, infection control, evidence based medicine, case sheet writing and medical ethics.

2. Orientation Program for I-MBBS students held on 20-8-2018
This program held to familiarize the fresh MBBS batch students with medical curriculum and to the college campus.

3. Cadaveric Oath Ceremony has been held on 30-9-2018,
Professor Dr. Saritha, HOD, Dept of anatomy spoke about the importance of Cadaveric oath taking.

4. Foundation course for 1st year MBBS was carried out 6-9-18
This course enlightened the students regarding the history of medicine, study skill and test preparation, time management and career prospects after MBBS course, E- learning and scope of research in MBBS.

5. Foundation course for IInd year MBBS was carried out 8-10-2018 to 9-10-2018
This course enlightened the II MBBS students speakers enlightened about the pediatric view, history taking examination in OBG, importance of log book and rational use of laboratory tests, along with that white coat ceremony for the 1 MBBS students.

6. Work shop Mentoring the need of the hour held on 6-12-18
It stressed on the need of structured mentoring programme, speakers explained the definition of mentoring, aim of mentoring role of personal support Continuing education and Professional development.

7. AETCOM- Curtain raiser and Sensitizer-
Speakers enlightened regarding the medical ethics, new core aspects of curriculum, interactive sessions held as well as stressed the need of communication skills.

Reference
Lee et al., Magnesium Flux Modulates Ribosomes to Increase Bacterial Survival, Cell (2019)
LIST OF CME HELD IN 2019- UPDATE

1. Medical Education Unit - CME- Basics principles of teaching and learning- January 2019
2. Pathology CME- Pathology Update- March 2019
3. Anatomy CME- Limbic System and Clinical Correlation- June 2019

Dr. Archana A Dharwarkar, Professor and HOD, Department of Biochemistry and Mr. N Ashok Vardhan MSc (PhD), Tutor Department of Biochemistry, has been awarded best poster- “Lead Toxicity Vs Nootropic Plants: Fate of Cognitive Function loss and toxic effects in Animal Models: HORIZON 2019 INTERNATIONAL CONFERENCE held at Saveetha Dental College, Saveetha University, Chennai on 1st March of 2019.

Mr. N Ashok Vardhan MSc (PhD), Tutor Department of Biochemistry, was awarded Emerging Researcher Award for his excellence in research in the field of neuro biochemistry and behavioural sciences with in the research panel discussions of HORIZON 2019 INTERNATIONAL CONFERENCE held at Saveetha Dental College, Saveetha University, Chennai on 1st March of 2019.

1. HORIZON 2019: The Epitome of Biomedical Research, 20 CP, SAVEETHA DENTAL COLLEGE, 28th of February & 1st March 2019, Chennai, Co presenter, Epitome of Biomedical Research – Dr. Archana A Dharwadkar.
2. HORIZON 2019: The Epitome of Biomedical Research, 20 CP, SAVEETHA DENTAL COLLEGE, 28th of February & 1st March 2019, Chennai, Co presenter, Epitome of Biomedical Research – Mr. N. Ashok Vardhan.

Invited lectures & award
Dr. Lakshmi Vemu
1. Rajyalakshmi Oration award - in XXI Indian Association of Medical Microbiologists, AP Chapter, Nellore. My experience in Research.
2. CLSI guidelines updates on Antibiotic susceptibility testing . XXI Indian Association of Medical Microbiologists, Nellore, TAP Chapter
3. Utility of Malditof in the early diagnosis of Mycobacterial infections. XXI Indian Association of Medical Microbiologists, Nellore, TAP Chapter
4. LAMP assay to detect Carbapenemase genes, Workshop on Diagnostic methods in Microbiology, JIPMER,October 20th , 2018
6. LAMP assay to detect Carbapenemase genes, ISID conference, Spain, November 2018.

Obstetrics & Gynaecology:
Awards & Rewards: Dr. Vasundhara Professor & HOD received the Indy wood medial excellence awards in December 2018.
Nandhini Joshi assistant Professor in OBG, Achieved MRCOG in Feb 2019.