

Genesis

the dawn of a NEW ERA...

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PANIMALAR
MEDICAL COLLEGE HOSPITAL
& RESEARCH INSTITUTE
— MAKING A HEALTHY TOMORROW —



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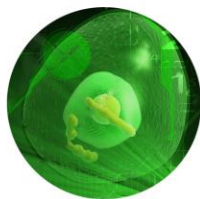
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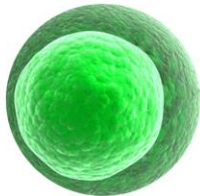


CELL



Dr. P. Chinnadurai
Secretary & Correspondent

NUCLEUS



Dr. C. Sakthikumar
Director

CHROMOSOMES



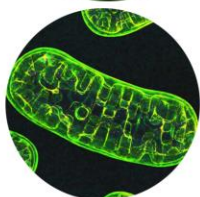
Mrs. C. Vijaya Rajeswari
Director
Mrs. Saranyasree Sakthikumar
Director

DNA



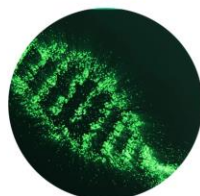
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Assistant Professor
Psychiatry
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Senior Resident
Obstetrics & Gynaecology
Dr. Sumetha Suga
Tutor
Microbiology

Message



Dr.P.Chinnadurai, M.A.,M.Phil., Ph.D **Secretary & Correspondent**

Greetings to all. I am happy to inaugurate “GENESIS” the official newsletter of **Panimalar Medical College Hospital & Research Institute**. The college has been established with sole motive of developing professionals in the field of medicine who follow ethical and evidence based standard of care. This medical college hospital is the fruit of years of toil and hardship. We have not compromised on any aspect of building this institution with state of the art facilities and employing eminent faculty to provide quality care for our patients and training our students. I applaud the team behind the genesis of “GENESIS” who have worked meticulously to cover the academic, curricular, co-curricular & extra curricular activities taking place in the campus and outside related to PMCH&RI. My best wishes to all the members of the Panimalar Medical College Hospital & Research Institute Family and I hope this newsletter turns out to be stellar in every aspect.

Message



Dr. C. SakthiKumar M.E., Ph.D
Director

“You don’t have to be great to start, but you have to start to be great”

As the Director of PMCH&RI, I feel elated to write this letter congratulating the members of PMCH&RI who have worked so hard towards making the college one among the best in patient care even in these unprecedented times. Never in the history has any new college faced so many difficulties in “Pandemic” proportions and still able to solve it like a veteran. **“GENESIS”** – the official newsletter is another feather in the hat. This newsletter was proposed to showcase the laurels of PMCH&RI family. I wish the editotial team all the best in their future ventures.

Message

Dear Members of PMCH&RI, I hope in these tough times all of you are in good health and peace of mind. I am happy to be a part of this “GENESIS” newsletter inauguration. I am extremely proud and happy that with such short period of time Panimalar Medical College hospital & Research Institute has worked so tirelessly to succeed in things which their peers have taken years together to achieve. I hope this newsletter provides a platform for all the faculty members & students to showcase their talents both academic and extracurricular. I wish the team behind this newsletter all the very best and success for the future.



Tmt. C. Vijaya Rajeswari
Director



Mrs. Saranyasree SakthiKumar, B.E., M.B.A.,
Director

My heartfelt congratulations to the team “GENESIS”. I am excited and eagerly awaiting for this first official newsletter of PMCH&RI. PMCH&RI has proved without doubt that it is a force to reckon in the field of medical education. I hope this newsletter captures the essence to what this institution believes and is set to achieve. I wish many more such laudable works from the members of PMCH&RI and we assure our full support for the same.

Message

We feel extremely proud in launching the first edition of the official newsletter of Panimalar Medical College Hospital & Research Institute. The name “**GENESIS**” denotes the origin and advent of a new era in the field of medical education. we feel happy to lead this team of elite faculty members who have worked day in and out for the benefit of the institution. we congratulate all the members who have contributed towards the newsletter and motivate others to actively participate in the future. We wish all the very best to the “**TEAM GENESIS**”.



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Message from “Splicers”

“If you have the courage to begin , you have the courage to succeed “

When the editorial board for the official newsletter was constituted at PMCH&RI, all of us were called and briefed regarding the goals and objectives for the newsletter. Many of us are relatively new to be a part of editorial board. But with constant motivation and guidance from our Chief Patron Dr. P. Chinnadurai, Patrons Mrs. C. Vijaya Rajeshwari, Mr. C. Sakthikumar, Mrs.Saranyasree Sakthikumar , our Dean Dr. C. Ilamparuthi, Vice Principal Dr. Surapaneni Krishna Mohan and Medical Superintendent Dr. R. Sabaratanavel we were finally able to make the herculean task of releasing the first edition of **“GENESIS”** – the official newsletter of Panimalar Medical college Hospital & Research Institute. We would like to acknowledge all the faculty members of PMCH&RI for their support and active participation by providing various article for the newsletter. In this Pandemic situation, it is important that we stay connected socially and distanced physically and this newsletter will provided an outlet for all the talents of our faculty members. We were overwhelmed by the response and we hope we have lived up to expectations.





"A Vision without action is merely a dream; Action without vision just passes the time. Vision with action can change the world."

Panimalar Group of Institutions has set a benchmark in the field of Global Education. Panimalar Engineering College started by the "Jaisakthi Education Trust" in 2000 is one among the most sought after Institutions in India. It has shown excellent results and helped in shaping the careers of many Professionals. The Institute's reputation precedes its name in inculcating high moral and ethical values into the students. Good health and good sense are considered to be life's greatest blessings. With commitment to provide high end health care to the community, **Panimalar Medical College Hospital & Research Institute** was established. The college is located at Varardharajapuram, Poonamallee, Chennai and is well connected by road covering Chennai, Kancheepuram and Thiruvallur districts. The College is well-equipped with the state of the art infrastructure, technology-enabled smart classrooms, advanced laboratories and continually focuses on teaching, clinical practice, and research. The Medical College Hospital provides top quality care to the community.



This humongous green campus extends upto 46 acres of land where sustainable and eco friendly practices are adapted. The campus provides a holistic education in an ambiance that makes no compromise on discipline, dedication, and commitment. It strives to instill the spirit of learning in the campus offering state of the art facilities and learning environment to the students. The College ensures that the students who pass out of the college, turn out to be academically brilliant, morally upright, and empowered individuals.

VISION

To impart holistic approach to healthcare through exemplary medical education, innovative training, quality patient care and transformative research through community collaboration to become a global centre of excellence.

MISSION

Medical Education : To provide distinctive learner-centered medical education.

Clinical Care : To deliver dedicated service to mankind with humanity.

Research : To pursue transformative medical research of international standards.

Community Service : To improve the health status of the medically underserved, needy and poor population.

5th FEBRUARY 2020



Letter of Permission (LOP) by the
MEDICAL COUNCIL OF INDIA (MCI)

Beginning of a New Era in Medical Education...

Panimalar Medical College Hospital & Research Institute has obtained the Letter of Permission (LOP) from the Medical Council of India (MCI), to start MBBS course with an annual intake of 150 students for the academic year of 2020 – 2021. (Letter of Permission issued by Medical Council of India (MCI) - Ref. No:MCI-34(41) (E-37)/2019-MED/186916 dated: 05-02-2020).. Panimalar Medical College Hospital & Research Institute is affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai.

Departments

The various departments and the salient facilities available are highlighted below

Department of Anatomy – Well equipped audio-visual aids and teaching materials, museum, histology laboratory, research laboratory and model.

Department of Physiology – Has laboratories like Hematology lab, Amphibian lab, Mammalian lab, Clinical Physiology lab and Research lab with audio-visual aids and sophisticated ultra modern instruments for experiments.

Department of Biochemistry – Well equipped with state of the art facilities, latest equipment, skilled laboratory personnel and offers round the clock services to provide quality health care service to patients.

Department of Pharmacology – Offers sound knowledge of treatment for all diseases, complications, adverse effects and drug interactions of all the drugs. Separate Pharmacovigilance Centre to deal with adverse drug reactions and clinical audits

Department of Pathology – has various sub-specialties such as histopathology, cytology, hematology & immunopathology facilities. It renders round the clock Patient care laboratory services.

Department of Microbiology – has state of the art lab facilities & caters quality diagnostic services to the public. Molecular Virology lab is under processing for opening shortly

Department of Forensic Medicine – Well stocked museum with medico legal specimens & charts, laboratory, research lab and mortuary block.

Department of Community Medicine – Work towards better health for all by providing promotive, preventive and curative health care services to the community. Coordinates with the other departments in implementing national health programmes for the benefit of the community.

Department of Transfusion Medicine – render quality services to all peoples including donor's & patient's through continuous acquisition, sharing and application of knowledge .

Department of General Medicine - The department handles all medical emergencies with evidence based approach and provides quality care for the patients.

Department of Pediatrics – The department runs several specialty clinics along with well equipped NICU and PICU.

Department of Tuberculosis and Respiratory Diseases - Services like Pleural aspiration, Pleural biopsy, Intercostal tube drainage and Bronchoscopy procedure are provided. The department is actively involved in the Revised National Tuberculosis Control Programme (RNTCP).

Department of Dermatology, venereology and leprosy: State-of-the-art treatment is being provided to handle all types of Dermatological, venereal & Leprosy cases. The department also provides cosmetic & dermatosurgery services, it has LASER facility to treat a variety of ailments.

Department of Psychiatry – The department treats all the patients with multi disciplinary approach involving pharmacological and behavioural interventions for Bio-psycho-socio betterment of the patient. Its also provides psychotherapeutic counselling and rehabilitation services.

Department of General Surgery: Handles all emergency and elective surgeries. Well equipped with state of the art operation theatre.

Department of Orthopaedics: Provides 24x7 effective operative & non-operative treatment for various orthopaedic conditions.

Department of Oto-Rhino Laryngology : The Department of Oto-Rhino Laryngology boasts of modern equipment that can be used to perform a plethora of surgeries including micro ear surgeries, hearing restoration surgeries, skull based surgeries, and head & neck surgeries.

Department of Ophthalmology : The department handles with all emergency cases and elective surgical procedures. Following facilities are available:

- Phacoemulsification
- Perimeter
- Laser
- A-Scan and B-scan
- Synoptophore
- Autorefractometer and lensometer
- Keratometer
- Operating microscope with TV unit with camera
- Slitlamp with camera
- Fundoscope

Department of Obstetrics and Gynecology: This department is equipped with state of the art labour rooms which are manned 24x7 by qualified team of doctors, nurses and paramedics supported by anesthetists and neonatologist. It also provides best services for gynec and fertility problems. Family welfare services are also provided.

Department of Anaesthesiology : It provides complete anaesthesia care to the entire surgical service. Apart from that the department also runs a pre-operative assessment clinic and 24 hours pain management services.

Department of Radiodiagnosis : It offers patients with real time imaging services. It is equipped with the following cutting edge equipments to achieve best possible diagnosis.

- 32 slice Siemens CT scanner
- Ultrasound and Colour Doppler scanners (2 machines)
- Computerized radiography (3 machines)
- Bedside ultrasound (2 machines)
- Bedside X- Ray (2 machines)
- Ultrasound guided procedures
- CT guided procedures

Department of Dentistry - It is equipped with state of art dental X ray unit and modern dental instruments & offers excellent dental care.

Department of Emergency Medicine - Zero Delay “Casualty” . This Department delivers superior quality integrated emergency health care using technological advances in all areas of medical expertise.

Department of Medical Education - The scope of activities of the Department of Medical Education (DOME) can include undergraduate and postgraduate education and continuing professional education. In general, the functions of the Department of Medical Education span the areas of research, teaching, service, workshops, evaluation, consultancies, and the career development of staff.

Department of Research - Panimalar Medical College Hospital & Research Institute houses a state of art research department with Clinical Trial Unit, Institutional Human Ethics Committee (IHEC), Institutional Animal Ethics Committee (IAEC), Central Research laboratory & Laboratory Animal Facility.

Department of Clinical Skills & Simulation - One of the most fascinating & the unique feature of Panimalar Medical College Hospital & Research Institute is the “Department of Clinical Skill & Simulation” which is established at the inception itself aiming at imparting the clinical Skills & to Promote the Competance Based Medical Education. The Department of Clinical Skills & Simulation, a Center of excellence, focuses on teaching Health Care Professionals in a safe learning environment with realistic experiences to support effective, efficient and safe patient care.

The Medical Council of India (MCI) has specified now, that simulation based medical Education be imparted to Medical Students: “The Medical Council of India (MCI), the apex body overseeing medical education, released a reform document in January, the introduction of new teaching techniques such as simulation, skill labs and smart classrooms”.

SIMULATION-BASED MEDICAL EDUCATION

Simulation means to imitate a situation or process that occurs in real life or a generic term that refers to the artificial representation of a real world process to achieve educational goals via experimental learning. Well-designed Simulation department for practicing clinical skills that increases the student’s confidence, reduce errors and improves patient safety.

This 20000 sq. ft. multipurpose area is ideal for workshops. Alternatively, it can be used for lectures and tutorials.

Features include:

- 1 - Store room
- 10 - Skill station
- 8 - Examination rooms with necessary audio-video camera recording facilities.
- 2 - Demonstration room with necessary audio video visual aids.
- 2 - De briefing room with necessary audio- video visual aids.
- 1 - Human patient simulator room (HPS) with audio- video visual aids

Department of Clinical skills and simulation provide a safe learning environment for the undergraduate medical curriculum to teach and assess students in a patient-centered care.

Our Mannequins

1. Advanced Life Support (ALS) Patient Simulator:



The ALS mannequin supports ACLS Courses and many other courses. It has realism while practicing VF or Asystole scenario. This computerized mannequin allows the following to be performed:

- Its software which can be controlled by a Simpad can change the rhythms on an ECG monitor hooked on to it, allowing the students to decipher this and give appropriate defibrillation or cardio version;
- Oro pharyngeal and nasopharyngeal airway insertion.
- Bag-Valve-Mask (BVM)
- Supra glottis Airway Devices
- Head tilt, Chin Lift and jaw thrust sensors
- IV arm provides proficiency in venipuncture and IV administration
- Live defibrillation allows users to incorporate live AED or manual defibrillators during the learning experience
- 4 connector 3-lead features allows students to monitor ECG readings during training.
- Automatically generated carotid pulses are synchronized with ECG and allow realistic pulse check during training.
- CPR.

2. BLS Mannequin

A. Little Anne QCPR (Adult) & little junior QCPR (Child)

- These are robust half torso mannequins and deployed in BLS courses for CPR and BMV or Mouth to Mouth ventilation.
- QCPR Technology is utilized to enable both instructors and trainees to more effectively monitor and review CPR performance.
- Little Anne QCPR allows an instructor to monitor up to six learners at the same time from the palm of their hand.
- The Instructor App provides an easy to view performance summary that highlights which students may require further guidance.



B. Baby Anne (Infant)



This mannequin allows the following to be performed,

- Oral and nasal passages allow realistic nose pinch required for mouth-to-nose ventilation.
- Natural obstruction of the airway allows

students to learn the important technique of opening the airway.

- Airway closes during flexion and extension of the neck.
- Head tilt/chin lift and jaw thrust allow students to practice correctly all manoeuvres necessary when resuscitating a real patient.
- Foreign-body airway obstruction feature allows the release of a foreign-body obstruction to be practiced through back blows and chest-thrust techniques.
- Economical disposable airways for quick and easy clean up.

3. Mama Birthie (Birth Simulators)

These simulators allow for practice of steps taught to students in conducting normal and difficult labor, deployed. The teachers of OBG are reinforcing classroom and ward teaching.



4. Inter changeable catheterization and enema trainer

The Interchangeable enema and catheterization Trainer is a life-like, vinyl female pelvis, designed to teach enema and urinary catheterization procedures. Students practice on mannequins who allows for interchange of male and female pelvis, after witnessing a demo by the faculty and assisted during the procedure.

5. Suture tutor kit

Surgeons teach undergraduate students different suturing and knotting skills which would be of immense benefit in the surgery OP, Theater, labor ward and ER. Advanced 3 layer skin pad gives realistic tissue response and is suitable for practicing a wide range of suturing techniques.



6. Adult multi venous IV arm and Arterial arm stick trainer



This adult like arm reproduction with multi-vein system is designed for peripheral intravenous therapy. Deltoid region for teaching intramuscular injections is an add on. The skin and blood vessels can be easily replaced, and can be used repeatedly.

This mannequin allows the following to be performed,

- Venipuncture possible in the ante cubital area or dorsum of the hand.
 - Accessible veins include the median, basilic and cephalic
- Arterial arm stick trainer designed for training the proper arterial puncture procedure for arterial blood gas analysis.

7. Airway Management Trainer Adult

The Airway Management Trainer's lifelike upper torso and head simulates real-world complications when practicing a variety of intubation, ventilation, and suction techniques. This mannequin allows for practice of oral and nasal intubation, Bag Mask Valve (BMV) Ventilation, Advanced airway (LMA, Combitube and ET tube insertion). Stomach inflation and vomiting situation can be simulated and this trainer provides visual inspection of lung expansion.



8. Intra muscular buttock injection trainer

The intra muscular buttock injection trainer designed with the Structure of left gluteal muscles, sciatic nerve and veins. left gluteal region can be taken off. So it is easy to observe internal structure and make sure position of sciatic nerve and veins.

9. Clinical female pelvic trainer

This mannequin allows the following to be performed:

- Recognition of perineal and pelvic anatomy including bony landmarks.
- Vaginal examination
- Bi-manual examination
- Cervical smear procedure (including use of speculum)
- Rectal examination.

10. Neonatal



Neonatal mannequin is realistic in size and appearance with natural weight and feel warm when filled with lukewarm water. It includes features such as spontaneous breathing, palpable umbilical pulse & crying. Neonatal mannequin can be used for role-play scenarios such as normal post-birth care, standard resuscitation, and resuscitation measures including

positive pressure ventilation and closed chest compressions.

This mannequin allows the following to be performed

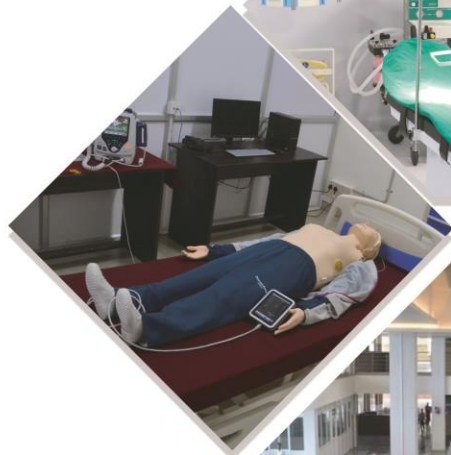
- **Oxygen delivery procedures.**
- **Suctioning techniques.**
- **Positive pressure ventilation.**
- **Spontaneous chest and lungs rise and fall.**

11. Breast examination trainer

The Basic Breast Examination Trainer provides a highly realistic learning platform for acquiring the skills required to perform Clinical Breast Examination (CBE). Featuring 6 readily interchangeable and multi-positional pathologies, providing healthcare professionals with the tools to identify various complications and pathologies, including carcinomas, cysts, fibrocystic disease and fibro adenoma.

- **Clinical breast examination (CBE)**
- **Self-breast examination (SBE)**
- **Identification of anatomical landmarks.**
- **Identification of lymph nodes.**
- **Location and diagnosis of pathologies.**

Central Library: It was a long-standing dream of the institution that the Library should have an independent building; thus the new building named as “**Knowledge Centre**” with the state of art infrastructure like Reading Halls, e-Library and a spacious ultra modern conference hall. It is equipped with 9863 volumes, 30 National and International Journals with seating capacity for about 800 students. Electronic resources such as E-journals, E -databases, E -books made available by the Central Library. We have subscribed 4100 E-Journals and 13909 E-books.



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'NEW'Tation





PCR (Polyscientific Contributions)

Publications :



Dr. Surapaneni Krishna Mohan *PhD(Medical)., MHPE., FAIMER Fellow., FRSC*
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Head, Department of Clinical Skills & Simulation,
Head, Department of Research,
Panimalar Medical College Hospital & Research Institute,
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Has published the following original Research paper in the High Impact Journals

1. Application of proteomic approach for identification of functional mutant sites to improve the binding affinity of anticancer biologic trastuzumab with its antigen human epidermal growth factor receptor 2. *Journal of Molecular Recognition*. 2020 Feb;33(2):e2818. **Impact factor – 1.919**
2. Apoptotic induction and anti-metastatic activity of eugenol encapsulated chitosan nanopolymer on rat glioma C6 cells via alleviating the MMP signaling pathway. *Journal of Photochemistry and Photobiology B: Biology*. 2020 Jan; 203:111773. **Impact factor - 4.067**
3. Punicalagin promotes the apoptosis in human cervical cancer (ME-180) cells through mitochondrial pathway and by inhibiting the NF-κB signaling pathway. *Saudi Journal of Biological Sciences*. 2020; 27: 1100 - 1106. **Impact factor - 2.82**

RNA (Recognitions N Awards)

Recognitions :

IRB - United States Department Of Health And Human Services (HHS)



The Institutional Review Board (IRB) of Panimalar Medical College Hospital & Research Institute is Registered with the Office for Human Research Protection (OHRP), U.S. Department of Health and Human Services (HHS) on February 28, 2020 and is approved for use through February 28, 2022.

Name of the IRB : Panimalar Medical College Hospital & Research Institute IRB #1.

Awards :

Congratulations to Dr. Divya R, Senior Resident who had won the National level Quiz competition conducted by the Indian menopause society at IMSCON, Bangalore 2020. She is selected to represent India in International Menopause quiz Olympics to be held at Melbourne, Australia in May 2020.



Nucleo”Tides”

International Women’s Day Celebration:

Panimalar Medical College Hospital & Research Institute has more than 60% women employees. The Institute believes in empowerment of women and provides a work environment that ensures that they are equally involved in decision making. International Women’s day celebration was held on 7th March 2020. This year’s event was hosted by the Department of Obstetrics and Gynaecology with the theme “ **Women’s Health is Nation’s Wealth**”. A weeklong camp for screening for cervical cancer and other non communicable diseases in women was held from 1st March to 7th March 2020 free of cost. More than 500 women benefitted from this program. Various competitions like Singing, Dancing, Rangoli and Poetry recitation were held and prize winners were given attractive gifts. On the 7th of March at 10:30 am, Eve Feista was held at the Lecture Hall I in the Medical College campus.





Welcome address was given by Dr.Padmavathy, Professor & HOD, Department of Obstetrics & Gynaecology. Inaugural address was given the Chief Guest of the day Mrs.Saranyasree Sakthikumar, Director - Panimalar Group of Institutions. She expressed how related and honored she felt to be a part of the gathering that celebrated women. Felicitations were given by Dr.C.SakthiKumar, Director - Panimalar Group of Institutions, Dr. C. Ilamparuthi – Dean, Panimalar Medical College Hospital & Research Institute, Dr. Surapaneni Krishna Mohan, Vice Principal, Panimalar Medical College Hospital & Research Institute, Dr. R.Sabaratnavel- Medical Superintendent, Panimalar Medical College Hospital & Research Institute. The Guest of Honour for the event was the renowned and eminent gynaecologist Dr.Ramani Rajendran. She has done pioneer work in cervical cancer screening and trained many Gynaecologists all over India regarding colposcopy and cancer screening. She is currently the advisory committee member of NHM for cervical screening program. She also graced the occasion by giving a guest lecture on cervical cancer screening which was highly informative and well received.Cultural events were held at the end of the program. Vote of Thanks was given by Dr.D.Tamilselvi, Professor Department of Obstetrics & Gynaecology. The cultural events were held at the end of the program. Overall, Eve fiesta 2020 was indeed celebration of women.



“Fun”tosis

Ice-cream Headache

Brain freeze is pretty much inevitable if you eat cold treat too quickly. Many people experience sudden, excruciating and brief headaches after ingesting something cold. The scientific term for brain freeze is sphenopalatine ganglioneuralgia which is a cluster of nervous cells in the parasympathetic nerves system. That system is responsible for rest and digestive activity.



While you are enjoying that slushie or ice cream a bit too excitedly, the temperature at the back of your throat changes very quickly. Two important arteries the internal carotid artery which feeds blood to the brain and the anterior cerebral artery which is where the brain tissue starts.



Now your brain likes everything to stay status quo.

That includes its internal thermostat, so when these arteries get cooled, they dilate and contract and the brain interrupts that sensation of pain and voila! you get a nasty headache. The pain associated with brain freeze is sensed by receptors in the meninges.

Is there a cure for brain freeze? Yes – Stop drinking the icy cold beverage. You can also jam your tongue up to the roof of your mouth, because it will transfer heat and energy to your sinuses behind your nose. It will provide warmth to the nerve bundle that causes brain freeze. Or you can also drink something tepid to normalize the temperature in your mouth.

Since migraines are believed to be triggered by changes in blood flow to the brain, disrupting the process by creating brain freeze may be your remedy.

Contributed by -
Dr. Bhuvaneshwari,
Associate Professor, Department of Anatomy,
Panimalar Medical College Hospital & Research Institute
Poonamallee, Chennai.

பனிமலர் எங்கள் பனிமலர் !!

பூமித்தாய் தன்
பூம்பாதங்கள் இட்டு
பூங்காவனமாய் பூத்திருந்தது
பூவிருந்தவல்லியாம் !!

பூவிருந்தவல்லியெனும்
பூங்காவனத்தில்
பனி விழும் மலர் வனத்தில்
பூத்த பூவே
பனிமலரே !!

பொறியியலில் தனிப் பெரும்
பொன்மலராய் மலர்ந்து
மணம் வீசிய நீ

உயிர் காக்கும்
மருத்துவத்தில்
கால் பதித்தாய்
மணிமலரே !!

இது உன் புது
பரிமாணம்
அழகிய
பரிணாமம் !!

பிணி போக்கும் பணியில்
அர்ப்பணித்த பனி மலரே
நீயே எங்கள்
பனிமலரே !!

எத்துறையிலும்
தனித்து மணம்வீசும்
நீ ஒரு
தனிமலரே !!

இனி வரும் காலங்களில்
இனிய வெற்றிகள் குவிப்பாய்

இனிமலரே
இனியமலரே !!

வெற்றிகள் அணி வகுக்கும் அணிமலராய்
வெற்றிக் கனிகள் தந்திடும் கனிமலராய்
நெடுநாள் வாழ்ந்திருப்பாய்
நம்பினோரை வாழவைப்பாய்
நனிமலரே!! எங்கள் பனிமலரே!!

Contributed by-

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“Photo” Chrome P450

Imaging Tidbits

CORADS in COVID CT Chest - For the clinician’s easy understanding

The COVID pandemic is raging relentlessly through our country. Our Institute is in the forefront in offering committed and successful treatment to COVID patients.

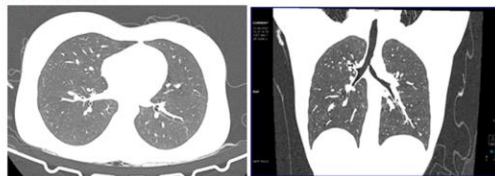
The Radiology department plays a huge role in COVID in 2 ways:

- Once a patient is tested COVID positive in RT PCR, most of the symptomatic patients are sent for a CT chest to assess the extent of involvement. **The percentage of lung involvement stratifies the disease into mild, moderate and severe, and we also assign a CT severity score.**
- If the patient tests COVID negative in RT PCR, then **all the surgical patients are referred for a CT Chest preoperatively** to make sure there’s no lung involvement (to rule out a false negative RT PCR).

With the advent of COVID, a lot of new terms are coming up in our CT Chest reports (such as CORADS, COVID CT severity index etc). Only the clinicians who are actively involved in COVID work relate to these terms, while others find difficulty in interpretation. With this article, we hope to pictorially explain the CORADS grading of CT Chest for COVID.

CORADS 1

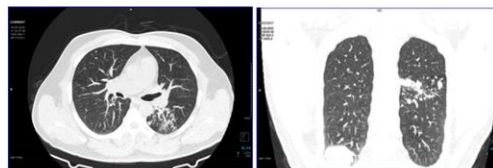
This simply means the patient CT Chest reveals no infective abnormality. The lung fields are absolutely normal or have findings which are definitely non infectious (such as fibrosis, malignancy or interstitial lung disease). **CT is categorically negative for infective lung involvement.**



CORADS 1 – normal CT Chest

CORADS 2

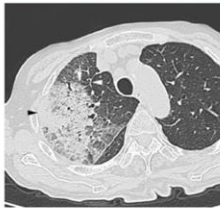
By definition, CORADS 2 means there is **minimal or low risk for COVID**. There are some findings in the CT chest which suggest an infective etiology, but the findings are pathognomonic for another infection. In our country, Tuberculosis is the most rampant. Typical patchy airspace opacities with tree in bud pattern of nodular involvement is a TB finding, and when present, it can be classified as CORADS 2. **But we would suggest a RT PCR correlation to rule out COVID, since this COVID 19 virus is a great mimic of any kind of infection.**



CORADS 2 -Tree in bud pattern of infection in the left lung,

CORADS 3

This is the grey area which leaves us perplexed. There are CT findings suggesting an infection. These findings are neither typical for COVID nor typical for any other established infection. Extensive bronchopneumonia, pneumonia limited to certain lobes, ground glass opacities secondary to septic emboli etc are some examples of confounding findings. This we classify as CORADS 3 or indeterminate. We recommend a RT PCR correlation.



CORADS 3 – Indeterminate. Lobar bronchopneumonia in the right lung

CORADS 4

The CT indicates a high level of suspicion for COVID 19. The findings however may not be particularly typical. These include focal ground glass opacity, multifocal consolidations without any other classic finding, and COVID findings in the background of pre-existing lung disease such as interstitial lung disease or emphysema.

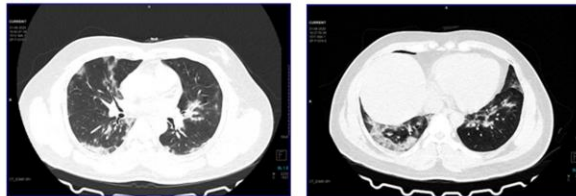
With our experience in COVID CTs, we feel the findings to say CORADS 4 usually fit into either a CORADS 3 or CORADS 5, and hence we hardly ever report CORADS 4, it's always a 3 or 5.

CORADS 5

We have typical COVID findings. To enumerate typical COVID findings in a CT Chest:

- Multifocal ground glass opacities (GGOs) in bilateral peripheral and basal distribution.
- Vascular thickening.
- Crazy paving pattern.
- GGOs with surrounding consolidation – Reversed halo sign.
- Blurred margins of the GGOs.

Once we have these findings, it's a definite COVID, and we need to grade the patient with the CT severity index



CORADS 5: Typical multifocal ground glassing in peripheral basal distribution with vascular thickening. We see a reversed halo sign in the image on the left (yellow arrow)

CORADS 6

So if CORADS 5 is already typical, what is CORADS 6? It is CORADS 5 with a positive RT PCR. That is the only difference. If the patient has already tested for RT PCR, is tested positive and then has the findings of CORADS 5 in his or her CT Chest, then the grade assigned is CORADS 6.

Summing up:

In the current clinical scenario, we study a CT chest with a high level of suspicion so as to absolutely avoid false negatives.

- **Grade 1** is where we can safely assume that at the time of that particular study there is no COVID involvement of the lungs.
- **Grade 2** though appearing pathognomonic for another type of lung infection, it is always better to correlate with RT PCR, clinical profile and other biochemical markers to rule out a COVID lung.
- **Grade 3** can go either way, and RT PCR is recommended as the gold standard.
- **Grade 4**, we hardly ever use. The CT findings usually fit into a Grade 3 or 5.
- **Grade 5 and 6** is an explicit COVID lung without any uncertainties, and we should assign a CT severity score.

Contributed by

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“New”tation

Central Auditory

Processing Disorder

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Hi all... In the field of Audiology and Speech Language Pathology we have been diagnosing and treating various hearing and communication disorders in all age groups. We are presenting this write-up to discuss about a rare disorder known as central auditory processing disorders (CAPD).

Let's see the interesting process of auditory signals at the level of brain. When we hear a sound, a beautiful process unfolds along our auditory pathway. The ear sends complex information all the way to the brain, which decodes the information to make sense of its meaning. We hear all the sounds of our world (including speech, language, and music) not only with our ears, but also with our brains. The processing of auditory signal at the level of brain is called as auditory processing.



Auditory processing skills are important to process the incoming auditory signals. These skills are auditory discrimination, temporal integration, temporal resolution, temporal ordering, temporal masking, sound localization and lateralization. Impairment of these skills leads to auditory processing disorders.

Individuals with CAPD usually have a normal structure and function of the outer, middle and inner ear but they have a problem in the processing of auditory signals. They experience difficulty in understanding speech. They may also have other symptoms such as difficulty in localizing sound, comprehending and following rapid speech, musical and singing skills and frequent requests for repetitions, saying “what” and “huh”. CAPD negatively impacts on listening, language skills, and learning.

This incidence of CAPD is 2-3% in general population.

Diagnosis of CAPD involves using advanced audiological testing and comprehensive assessment of the auditory system to make an accurate diagnosis of CAPD. The Audiologist selects and performs various behavioral and electrophysiological tests based on the patient’s symptoms and needs. Behavioral tests assess the functional capabilities of the auditory system. These tests include Auditory Discrimination Tests, Auditory Temporal Processing and Patterning Tests, Dichotic Speech Tests, Monaural Low-Redundancy Speech Tests and Binaural Interaction Tests. These tests are designed to assess the specialized auditory skills of decoding, integration, and prosody.

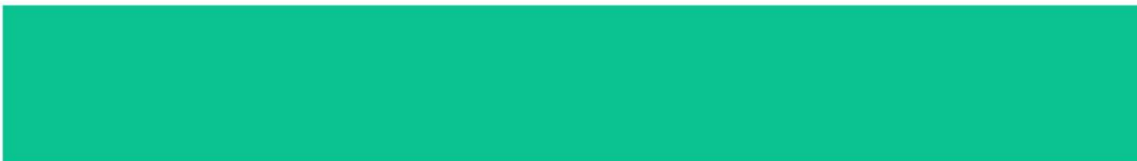
Electrophysiological tests provide information about the integrity of the auditory nervous system. These tests include Auditory Brainstem Response (ABR), Middle Latency Response (MLR), Late Cortical Response, P300, and Mismatch Negativity.

Electrophysiological measures may be useful in cases where behavioral procedures are not feasible and behavioral findings are inconclusive.

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