

What's Up? @St John's Hospital

Issue 50th, August 1st, 2021



Lush green campus, the deer park and walkway.

(PC: Dr. Deepti Shanbhag).

Today we celebrate 3 years of continuous publications.

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St John's National Academy of Health Sciences
St John's Medical College Hospital, Bengaluru

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* We now present a fully interactive menu. It works best with Adobe reader application (on computers, mobile phones and tablets)



MESSAGE FROM THE EDITORIAL TEAM

Dear All!

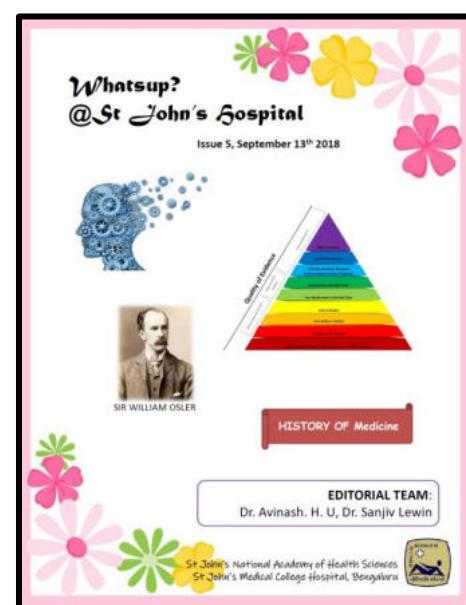
We are pleased to release our 50th issue of “What’s Up? @ St John’s Hospital” magazine today. It was in mid July 2018, when the management called upon Dr. Avinash HU to discuss about the initiative of regularly displaying interesting content on the CMS office notice board. On 13th August 2018, fresh colour prints of four sections namely ‘pearls of wisdom’, ‘Medicine this week’, Quotable Osler’ and ‘The story of medicine’ were up on the decorated CMS office notice board.



1st display on CMS office notice board, 13th Aug 2018 and cover page of 1st issue, 16th Aug 2018

Then came the idea, that, the content can be disseminated, with an academic objective to all faculty and students of institution. So we decided to release the same as a small digital news letter in a pdf version. The first issue which was called ‘Hospital Weekly Newsletter’ and was released on 16th August.

On 17th September 2018, Dr. Rakesh Ramesh, Dr. Saudamini Nesargi, Dr. Manu Verma and Dr. Sanjukta Rao joined the editorial team, to expand the contents of the magazine. The magazine was christened ‘What’s Up? @ St. John’s Hospital!’ and first What’s Up with 6 sections to begin with was released on 13th September 2018.



5th issue of magazine which was 1st named What’s Up? @ St. John’s hospital!

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MESSAGE FROM THE EDITORIAL TEAM

By October 2018, we had a team of twelve enthusiastic members in the editorial board, contributing to more than 10 regular sections. We are now a team of sixteen members representing from medical college, hospital, allied health sciences, nursing college, research institute, laboratory services, information technology and HR department. The diversity in the editorial team has facilitated delivery of a multifaceted magazine for three consecutive years. The magazine has showcased hundreds of academic and extracurricular activities of the academy, highlighted people and their achievements, thrown light upon people working in shadows in these 50 issues.

We have themed the present issue in 'Gold' as it is 50th issue. The editorial board is truly thankful to all those who are contributing to the magazine regularly. We request you to continue the same support and encourage us to move forward.

The present issue brings to you a lot of updates from the institution, and do miss the wonderful articles by Dr. Himagirish Rao and Dr. Srilakshmi Adhyapak. We bust the hype of the drug ivermectin for COVID in the section 'St. John's Watchdog'. We have also brought the Dietary department to limelight in the section 'Know your hospital'.

Please feel free to communicate with us to publish your achievements. Feedback on any section of the magazine is welcome. We are happy to evolve to meet the needs of our beloved readers. Happy Reading!!

Patch Adams and Vitiligo

World Vitiligo Day



25th July 2021

 [Click Here](#)

The wonderful world of Patch Adams has been instrumental in shaping our ideas of medicine as an art. The movie emphasized being humane in our increasingly tech savvy field with the iconic quote....

“Death is not the enemy sir, Indifference is!
You treat a disease, you win, you lose.

You treat a person, I guarantee you, you'll win, no matter what the outcome. Is this interesting?”

In an era of online classes, it is difficult to give our undergraduates the actual feel of seeing their patients as persons and not cases. On the occasion of World Vitiligo Day. July 25, 2021, we wanted our students to understand the feelings of a patient with Vitiligo and learn empathy.

With this in mind, we borrowed another leaf from good old Patch. He said, “Everyone has creative potential. Creativity involves using your imagination and inventiveness. Your unique expression of yourself is your creativity...Creativity can be magic when visiting people who are ill.”

A competition called Rhythmic Hues was set up in collaboration with I.M.P.A.C.T. the health awareness Club and the music Club. The students were encouraged to delve into a patients vitiligo journey and produce cover art and music to describe it. The stunning artwork and moving melodies are testimony to the creative prowess of our students. The event was judged by Dr Mary Augustine (Dept of Dermatology), Dr. Carol Lobo(Dept of Dermatology) and Dr Anil Kumar (Dept of Medicine)

Winning Entries Of Rhythmic Hues

First place: BADGES OF PRIDE by Aleena Paul, Stephen Joseph Hill and Lendha Christ of Xavier (MBBS 2019)

Second place: CHAAND KA DAAG by Christina Gomes, Alapana Bagirath and Siddharth Senthil (MBBS 2019)

Third place: SKIN DEEP by Megha George, Surabhi M Shastry and Megha Ann (MBBS 2019)

Acknowledgement: Dr. Mihika Noronha (Postgraduate) and Dr, Vijay Aithal (Prof & Head), Dept. of Dermatology



India Today Medical College Survey 2021

St. John's Medical College secured **3rd** Rank among private colleges in India

St. John's Medical College has once again retained its 3rd position among the top private medical colleges in India. It was also ranked 19 in overall ranking which includes both private and government medical colleges across the country. It is also one of the top 10 private medical colleges with lowest fees, which is in line with the mission and vision of the institution.

TOP 10 PRIVATE COLLEGES					
RANK 2021	RANK 2020	RANK 2019	RANK 2018	COLLEGE	CITY
1	1	1	1	CHRISTIAN MEDICAL COLLEGE & HOSPITAL (CMC)	Vellore
2	2	2	2	KASTURBA MEDICAL COLLEGE	Manipal
3	3	3	3	ST JOHN'S MEDICAL COLLEGE	Bengaluru
4	5	5	NP	MAHATMA GANDHI INSTITUTE OF MEDICAL SCIENCES	Wardha
5	6	6	8	ARMY COLLEGE OF MEDICAL SCIENCES	New Delhi
6	4	4	4	SRI RAMACHANDRA MEDICAL COLLEGE & RESEARCH INSTITUTE	Chennai
7	7	9	6	DAYANAND MEDICAL COLLEGE & HOSPITAL	Ludhiana
8	8	7	5	M.S. RAMAIAH MEDICAL COLLEGE	Bengaluru
9	9	8	9	CHRISTIAN MEDICAL COLLEGE	Ludhiana
10	10	10	10	KASTURBA MEDICAL COLLEGE,	Mangaluru



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MRI Under Anaesthesia

6th July 2021



Team Anaesthesia unites with team Radiology to start a new endeavour of providing anaesthesia services in the MRI suite. While anaesthesia has always been an available option for other imaging and interventional procedures, doing so in the MRI room has been a challenge.

The need for a MRI compatible anaesthesia workstation, monitors and other equipment has called for special attention in this area. With multiple pieces of equipment being brought to St. John's from different parts of the country, and with timely support from its manufacturers in Europe, this state-of-the-art setup has been put together with the tireless efforts of the Biomedical Engineering team in collaboration with Radiology and Anaesthesiology Departments.

The greatest challenge of getting a patient to lie motionless in a noisy, confined space can now be done with ease by administering anaesthesia with adequate monitoring in a safe, fully controlled environment for the MRI investigation to be done. While most patients manage to go through MRI without anaesthesia care, some adults and children need assistance for the same. This may include anything from minimal sedation to administering complete general anaesthesia for the procedure.

Our first patient was a 3 month old child with a syndromic facies who required an MRI as part of his evaluation for a seizure episode. The child did well post the imaging.

We feel privileged to offer this vital facility with comprehensive, quality care, to our patients in need, in the spirit of St. Johns!

Acknowledgement: Dr. Bindu George,
Professor and Head, Department of
Anaesthesiology

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Inauguration and Blessing of New Intensive Care (ICU) Facility

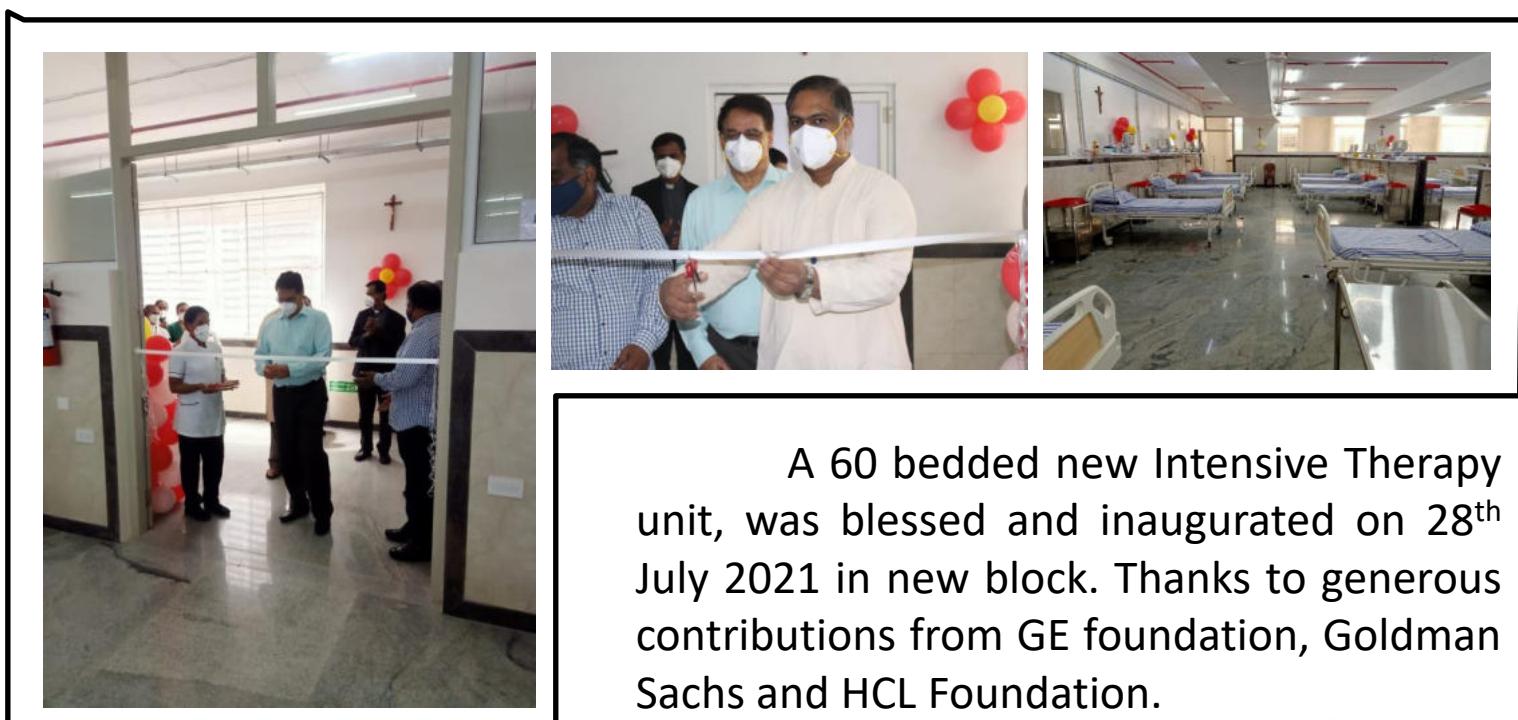
16th July 2021



A 22 bedded intensive care unit (ICU) was inaugurated and blessed on 16th July 2021. All the beds are equipped with modern multimodal monitors and ventilators in ground floor of new block. 15 of the 22 beds were donated by Legato Health India (a subsidiary of Anthem Inc. USA). Another 5 beds were donated through funds raised by the Alumni association of St. John's.

Inauguration and Blessing of New Intensive Therapy Unit (ITU)

28th July 2021



A 60 bedded new Intensive Therapy unit, was blessed and inaugurated on 28th July 2021 in new block. Thanks to generous contributions from GE foundation, Goldman Sachs and HCL Foundation.

Acknowledgement: Dr. Bobby Joseph, Professor, Community Medicine. PC: Mrs. Mary Noella, Secretary ADC

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Indian Catholic Youth Movement COVID Warrior Award

18th July 2021



Rev. Fr. John Thekkekara, Associate Director - Hospital, received the Indian Catholic Youth Movement COVID Warrior Award from Archbishop Most Rev. Dr. Peter Machado (Bangalore Archdiocese) on 18th July 2021, which was awarded to St. John's Medical College Hospital, Bengaluru.

Meanwhile in Mugalur



23rd July 2021 – The COVID Vaccination outreach session by St. John's was organized at a school in village Mattanahalli near Mugalur. The absence of a mobile signal was preventing the launch of the CoWin registration portal. In the picture, Dr. Ramakrishna Goud (Professor and Head, Department of Community Medicine) is hoisting a Jio wifi dongle in a small basket to the top of the flagpole, where it caught the signal well, and the COVID vaccination session was successfully launched. This was the idea of Dr. Jeganish (Postgraduate, Community Medicine) and Mr. Vinod (the village youth volunteer). The race to vaccinate all must indeed go on, St John's in pole position!

Acknowledgement: Dr. Arvind Kasturi,
Professor, Community Medicine

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'We had become DOCTORS'

- Dr. Himagirish Rao

Last year, we celebrated the silver jubilee of entry into medical college. We sat together reminiscing the MBBS days, when these words came to thought on a mundane weekday afternoon. Please read on...

We had all passed the entrance in flying colours. We were admitted to one of the most-sought-after medical colleges in Karnataka. We were beside ourselves with glee. **EXCITEMENT.**

It was something that was completely new to us. We weren't used to it. We suspected that it was a long and hard road ahead. **APPREHENSION.**

Huge dissection theatre, cold tables and lifeless presences. We all felt so small in the face of all that monumentality. The departed had left, but their remains would teach us youngsters our first lessons about the human body. Lives that had run their distance, yet indispensable to us in death. **RESPECT.**

Clumsy gloves which cut their way through the anatomy. Gross? Sounds like a pun, but anything but. Having to pick our way through a confusing bundle of muscles, vessels and nerves. Surviving one day at a time. **TREPIDATION.**

New acquaintances, together in excitement, adversity and a new endeavour. Friendships made. Bonds welded for life. **WARMTH.**

Midnight oil burnt. Gallons and gallons of it. A brick wall to ram into, every single night. Gangs at work together (combined study), not to destroy, but to build. We would learn a vital lesson: The whole is much, much more than the sum of its parts. **CAMARADERIE.**

Last-minute cramming got a whole new meaning. Miles and miles of ink in a little more than a wink. A million thoughts to put on paper, but time in short supply. Handwritings destroyed, but academic records written. Examinations. **EXULTATIONS.**

Stone-and-mortar walls, a hundred years old. Wonder what they would make of batch upon batch of yuppies, cutting their clinical teeth in the wards. Learning the power of compassion, trying to make sense of the lump somewhere and the dragging pain elsewhere. A million medicos having marched these corridors of time. And part of this procession too, were us. **OBSERVATION.**

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The shining lights and beacons, showing us the way. Through the jumble of signs and symptoms, they would teach us clinical medicine. Some of them (Faculty) doyens already, others (Post-graduates) doyens-to-be. **TEACHERS.**

A few of them, our classmates, dearer to God than the rest of us, it seems. Young lamps alright and burning very bright, put out suddenly at once - wisps risen heavenward. Gone too soon. Sorrow. **LOSS.**

The field in the middle, a patch of green amidst all the drear. The games, fun and frolic. Once in a while, we would let our hair down. A game after all, but players intent and fierce. And a last-ball six to seal the winning runs. **ECSTASY.**

And, side-by-side, sweet like milk and honey, many a talent to come out in mellifluous harmony. Songs and their singers. Many a leg shaken. Chhod aaye hum wo galiyan. **HAPPY & BREATHLESS.**

In the centre of it all, the stone pavilion. Under the canopy, anna-rasa of the canteen and the precious minutes of banter. Lunchtime was the best hour. Friends, philosophers and guides were made as idli-vade were crunched. Oh, and to one side, what we looked upon as a mystery at that time. The Ladies' Lounge of the Medical College. LLM. Mnemonic for the branches of the lateral chord of the brachial **PLEXUS.**

Tucked away in a far corner, under the library upstairs. This cave was what we called our Reading Room. A dozen tables abound, each with chairs around. Our own books burrowed into, book-eared and digested. The beating heart of our college. The place where 'Brains' were made. Itself dank and dark, but a place of **ENLIGHTENMENT.**

The vivas and clinicals, the days that we would dread. Having to sit in front of four pairs of eyes boring into one. Many would be friendly, some even benevolent. Many indifferent but some downright scary. **BAPTISM BY FIRE.**

And somehow, before we knew it, we had spent half a decade. And in the process,

. WeDunIt. **WE HAD BECOME DOCTORS**

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MEDICAL FICTION...

TO SEE A WORLD IN A GRAIN OF SAND

- *Dr. Srilakshmi Adhyapak*
(Associate Professor, Cardiology)

The golden aura of the rising Sun lit up the eastern sky. Another day in his life, he awoke in eager anticipation of events which might unfold. In all his six years, he had learnt not to talk loudly and not to ask many questions. The questions were there, burning within him. He somehow knew he would have to find the answers himself. The school was a friendly place if he respected his boundaries. No transgressions beyond severe drawn lines were allowed. His skin was dark, and he was in the colored section. Within his limits, he was tolerated. His teachers were affable, even encouraging some of his questions. Home was a warm, secure cocoon with his mother cooking tirelessly to feed her hungry family. His father tinkered with wood and used to carve beautiful, sturdy pieces of furniture. His ambition was to apprentice his son in whom he saw the spark of creativity. As the boy grew up, he began slowly and cautiously learning his father's trade. His keen ability to foresee problems and the uncanny ability to solve them impressed his father and several others.

He was a keen and astute observer who imbibed the subtle nuances of technicalities, making his pieces a cut above the rest. From school he gleaned lessons, especially science and mathematics which intrigued him. Graduating from school, he built his repertoire of facts upon which he based his creations. He could not study further due to financial difficulties of his family. He continued to apprentice his father in his work yard. As incomes dwindled, he had to look out for a job and found one as a research assistant in a scientific laboratory associated with the prestigious university. Here, he helped in animal experiments, using anesthesia on pigs and dogs.

Several experiments were on, especially on canine and porcine hearts. These interested him and he would spend hours helping and learning by these. It was here that way back in 1944, another colored person Vivian Thomas had helped evolve the surgical technique of the Blalock-Taussig shunt. He had read all about it and felt proud about Thomas' achievements.

MEDICAL FICTION...

Pathological and clinical studies in humans had demonstrated early alterations in left ventricular topography in approximately one-third of patients who died as a result of acute myocardial infarction. These topographic alterations, referred to as infarct expansion, were characterized by dilation and thinning of the infarcted zone. Such changes had been observed to appear clinically as early as 3 days after myocardial infarction and were seen to progress over days to weeks with no evidence to suggest more recent myocardial necrosis or infarct extension. This process appeared to be associated with deterioration in cardiac function and increased mortality which might be important in the developments of cardiac rupture and late aneurysm formation. Studies in humans had suggested that certain morphological features, including transmural necrosis and infarct size, might be determinants of the development of expansion. To determine the factors responsible for infarct expansion, experiments were ongoing on canine hearts. They proceeded by ligating the left anterior descending artery or the left circumflex artery. After creating a myocardial infarct, the animals were killed, and their hearts studied both macroscopically and microscopically. An expansion index was determined for both arterial ligations.

The expansion index was endocardial length of the infarct-containing segment/endocardial length of the non-infarcted segment). Thus, the transverse slices of the left ventricle having been divided into anterior and posterior segments. A transverse section from a heart containing an infarct in the circumflex distribution had an expansion index defined as: length of the posterior segment/length of the anterior segment. For infarcts in the vascular distribution supplied by the left anterior descending coronary artery, the expansion was defined as: length of the anterior segment/length of the posterior segment.

He was very keen and his measurements in the canine hearts were precise making the results greatly accurate. The dependence of this phenomenon of infarct expansion on transmural necrosis and a critical infarct size, which suggested a detrimental effect of expansion on survival. Further, transmurality of an infarct was suggested as necessary for infarct expansion. Histopathology suggested that non-transmural infarcts did not expand, while majority of transmural infarcts demonstrated significant expansion. While smaller infarcts did not expand, larger transmural infarcts were seen to expand. If early thinning and dilatation did not occur, the process of cardiac remodelling resulted in a scar formation but with preserved left ventricular contour.

MEDICAL FICTION...

Preservation of this contour for any infarct size was hemodynamically advantageous. Dyssynergic areas increased the ventricular volume and diameter and wasted a large part of the total left ventricular stroke volume and work, placing an increased hemodynamic and metabolic burden on the remaining myocardium. Infarct expansion further increased functional infarct size. The hemodynamic impairment probably depended more on this functional infarct size than on the actual amount of infarcted myocardium. This process of infarct expansion, cardiac remodelling which eventually led to detrimental cardiac failure and even death was an unending dilemma. The infarcts led to areas of systolic expansion with thinning and scar formation which were labelled aneurysms.

His interest was ignited in studying the properties of this aneurysm.

When the myocardium in an aneurysmal area functioned improperly or had been replaced by fibrosis, local tension development and fiber shortening were restricted or absent. Stroke volume would then fall. So, he deduced that in order to maintain constant stroke volume, myocardial fibers extrinsic to the aneurysm must increase their extent of shortening. This led to ventricular dilatation as increasing length of the myofiber within physiological limits increased contractility. These concepts were new to him and puzzling. The science classes and math that he had learnt in school were re-kindled in his thoughts.

With the surface area of an aneurysm being 20% to 25% of the ventricular volume, the contractile or normal portions of the ventricle had to dilate to maintain an effective cardiac output. This was a concept proposed by one of the cardiologists. He began thinking about whether the shape of the aneurysm had any effect on cardiac hemodynamics. For this he approached a mathematician with his idea. On computing aneurysm shapes of circles and rectangles it could be mathematically deduced that with a rectangular aneurysm shape, the ratio of percent contractile muscle to percent inactive muscle was greater than a circular aneurysm shape. But, from his observations on canines, he had noted that aneurysms were generally did not correspond to any geometric shape, least of all being rectangular! He did not think more of this as it struck him as being unrealistic. The cardiologists too thought of it as a 'mathematical observation' and nothing else.



MEDICAL FICTION...

It was an era of breakthrough cardiac surgeries. There were several cardiac surgeons who tried several surgical means to alleviate congestive cardiac failure. Left ventricular restoration surgeries were being performed at several centres. There was an evolution of the surgical technique from linear repair which entailed resection of the aneurysm followed by bringing the excised borders of contractile myocardium together and suturing the borders. This gave way to the geometric repair by using a prosthetic patch to exclude the aneurysmal area. It was indeed a very onerous task to preserve a normal ellipsoid left ventricular contour following surgery and prevention of further ventricular dilatation long after surgery.

A young and dynamic cardiac surgeon who dared operate the most complicated surgeries, visited his research lab. He was impressed by the various studies and experiments being conducted. On discussing the problem of ventricular restoration procedures for aneurysm, his keen eye caught the mathematical deductions done by a mathematician in consultation with a coloured research assistant. He then decided to use a rectangular prosthetic patch instead of the circular one he had been thus far using. To his pleasant surprise, he found the heart being restored to a more elliptical shape with its twisting motion returning when the heart resumed contraction after weaning bypass. These patients also had a better long-term outcome several years after surgery.

The fire ignited in a research laboratory while performing canine experiments helped resolve a complicated dilemma in the operating room. Several contributions emerge from humble beginnings and remain unknown and unsung.

Author Disclaimer: No Funding. No conflict of Interest.

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***Mrs. Banu, Mrs. Roopa and
Mrs. Shanthamma***
(Housekeeping staff, COVID Ward)

On what seemed like a regular Friday morning, we found ourselves waiting in front of the 'Unit of Hope', in "hopes" of interviewing three hardworking members of the housekeeping staff. Although initially, getting hold of them proved to be quite the task, we later understood, contrary to popular belief, housekeeping can be quite demanding, testament to their busy working hours. To get all three members of staff together at the same time for a joint interview, was close to impossible, so we gave in to their schedules and interviewed them separately as per their convenience.

The first staff member, Mrs. Banu has been working in St. John's as a housekeeper for four years now. She had moved to Bangalore from Andhra Pradesh in search of a stable job, to provide help for her children. Later, we also understood that her children served as the main source of motivation and prime reason to work. This job entails her to do three types of duties - morning, evening and night. As she took time out of her morning duty for us, she explained to us the intricacies of her job, which includes sweeping and mopping the wards, and maintaining the hygiene of the washrooms.



Mrs. Banu



Un-Sung COVID WARRIORS of St. John's

Although her job did not change drastically during the COVID pandemic, Mrs. Banu did tell us that wearing the entire PPE when they cleaned the COVID wards, was nothing short of irksome. Apart from this, she said not much has changed. Although against the will of her husband and her family, she continues to walk one hour every day to get to work and fulfill her duties, with the aim of supporting her three children.

Mrs. Roopa has worked in St. John's for three years with her work being like that of Mrs. Banu. She talked to us about how the PPE was the only major change that she had to adapt to, during the pandemic as well. Since Mrs. Roopa works according to the contract, she is allowed to have paid leave which she states as one of the benefits of this job as compared to her previous occupation as a cook. She is pleased with her job and claims that any source of livelihood for someone with her educational qualification, seems to be enough to sustain a family.



Mrs. Roopa

Our third interviewee, Mrs. Shanthamma, rekindled our faith in humanity when she told us about why she decided to become a member of the housekeeping staff. She believes that ***this job helps her do her little bit of service to society***. Be it the small things like mopping and sweeping the floors of the hospital wards, or even pushing trollies with sanitation equipment – Mrs. Shanthamma explained to us that everyone must play their role to help our society to progress.



Un-Sung COVID WARRIORS of *St. John's*



Mrs. Shanthamma

These members tirelessly came to work every single day, all through lockdown, to help with the upkeep of the hospital. It was this key role they played that helped tie everything together in hospitals and it was their undying spirit, even during lockdown, that helped keep us going. The stories of these three interviewees helps remind us that we should always commend and respect people that do the little things, because, at the end of the day, we'd be lost without them.

She also narrated the budding friendships between the staff, with them covering each other's shifts during any unforeseen occurrences. This whole part of the interview made our hearts swell with admiration for someone with such pure intentions of lending a helping hand.

When we think of the frontline workers in the pandemic, we often fail to notice the contribution made by the housekeeping staff members.

Interview by: Lavanya V Reddy (MBBS 2020),
Alapana Bagirath (MBBS 2019).
Coordinated by: Tanvi Deshpande (MBBS 2018)





St John's WATCHDOG

Ivermectin and COVID19

Background – Ivermectin is an orally administered being used since the mid-1980s for the treatment of two parasitic infestations namely, onchocerciasis (river blindness) and lymphatic filariasis. It has also been used extensively in the livestock industry to prevent or treat parasitic infestations in cattle. During the second wave of the COVID19 pandemic in India, an effort was made by a US based group calling itself the 'Frontline COVID19 Critical Care Alliance' (FLCCC) to popularize Ivermectin as a means to prevent COVID19 in lieu of vaccination and also as a mode of treatment. In this issue of Watchdog, we look at the methods used by FLCCC to promote Ivermectin as a mythical 'wonder drug' for COVID and the reality of current evidence surrounding Ivermectin use in COVID19.

Attempts to popularize Ivermectin as preventive/ therapeutic modality for COVID19 – The FLCCC founded by 2 US physicians – Drs Pierre Kory and Paul E. Marik (Pulmonologists and Intensivists) along with other authors worked on a meta-analysis of studies evaluating Ivermectin as a preventive/ therapeutic modality for COVID19, which was published by a peer reviewed, MEDLINE indexed journal, the American Journal of Therapeutics. Based on the results of this meta-analysis, the authors made sweeping conclusions on the effectiveness of Ivermectin and started propagating Ivermectin as a preventive/ therapeutic modality for COVID19 through means such as –

- Testifying in front of a US government committee on homeland security that Ivermectin was a 'miraculous wonder drug'.
- The video of this testimony went viral on social media gathering 1 million views in a few days.
- Many websites including FLCCC's website purporting to show meta-analysed data in favour of Ivermectin's use in COVID-19. The websites had anonymous owners, multiple domains which redirected to the same content and colourful misleading graphics to make a point (Source: Wikipedia)
- Highlighting poorly designed studies of Ivermectin with positive results as 'clinching evidence' of efficacy.



WhatsApp





St John's WATCHDOG

Ivermectin and COVID19

Effects of this propaganda in India –

It is well known that the Government of Goa planned to dose the entire population with a 'preventive' dose of Ivermectin. Ivermectin was advocated for a length of time in the treatment protocol for COVID19 by AIIMS Delhi and followed nationwide before finally being dropped in June 2021. Messages purporting Ivermectin efficacy went viral on Indian WhatsApp groups creating confusion among the Indian physician community.

Ivermectin for COVID19 Facts –

1. The WHO and US-Centers for Disease Control (CDC) have consistently maintained the position that there is insufficient evidence to either support the use of Ivermectin or exclude it from COVID prevention and treatment protocols. This is based on the fact that the studies reporting Ivermectin's use for COVID19 have significant methodological flaws such as small sample sizes, no control groups or poor quality control groups, non-randomized allocations or downright fraudulent trials (a large RCT was recently withdrawn from Research Square, a pre-print server on strong suspicions of being fraudulent).
2. The meta-analysis included such studies resulting in a 'positive result', which was then popularized by FLCCC. Therefore, the CDC and WHO are correct in concluding that sufficient high quality evidence to support the use of Ivermectin in COVID19 does not yet exist and further better quality studies are needed to make any firm recommendation.



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Dietary Services

Dietetics is the science of managing food and nutrition to promote health. Dietitians are food and nutrition experts who provide nutritional services in hospitals, schools, nursing care facilities and other institutions. Dietitians are responsible for developing food and nutrition programs to prevent and treat illness and to promote good health. The importance of hospital dietary department is not only to give clean, safe, therapeutic, and timely supply of food but so demonstrate to the patient's value of balanced diet and train others to follow it. The hospital food service is combination of two aspects that is nutrition and dietetics.

Our Vision:

To serve international, national, and local communities by discovering ways in which food and its bioactive components contribute to health and the prevention of disease. We strive towards this through effective application of nutrition knowledge in order to improve health and well-being.

Our Mission:

To create and share knowledge to ensure a safe and healthy supply of food that supports the well-being of people and the environment.

Activities of the department:

The Dietary Department perform two major activities that is

- Nutritional care of patients/staff
- Food service management

Nutritional care of patients/staff: On an average, we serve food for around 300 patients and their attenders. We meet the normal and therapeutic needs of the inpatients and attenders. The patient's nutritional requirement is assessed through dietary recall, bio-chemical parameters, anthropometry and medical history. Individualized diets are prescribed according to the requirement. Dietitian plan, prescribe, and implement medical nutrition therapy along with nutritional counselling, and make necessary amendments in the diet plan according to patient needs.

Dietary Services

The dietary department serves food for 1650 + people which includes religious Fathers, nuns, staff nurses, undergraduate and postgraduate students, hospital faculty and allied health personnel. The present kitchen has ample space and is installed with modern equipment's and appliances which have simplified the work.



Types of diet	Specific therapeutic diets	Special types of feed
<ol style="list-style-type: none"> 1. Clear liquid diet 2. Liquid diet 3. Semi-solid diet 4. Vegetarian diet 5. Non-vegetarian diet 	<ol style="list-style-type: none"> 1. High protein diet 2. Diet for Hypertension 3. Lactose (milk) free diet 4. Diet for cardiac patients 5. Bland diet 6. Diabetic diet 7. Low fiber 8. Diet for patients with renal issues 9. Diabetic Renal diet 	<ol style="list-style-type: none"> 1. Ryle's Tube Feed 2. Percutaneous Endoscopic Gastrostomy Feed 3. Jejunostomy feed

Dietary Services

Food service management:

The major activities that take places in the kitchen are:

- Receiving of raw materials.
- Proper storage of perishable goods in walk-in cooler and dry storage of non-perishable goods.
- Production of food where various meals are prepared according to prescribed diet plan.
- Serving of food according to the portion prescribed in the diet plan with the help of standardize cups and serving the diet tray at the patient's bed side.

Maintenance of Cleanliness in the Kitchen:

- Monitoring of cleanliness, hygiene and sanitation is conducted on a daily basis.
- Routine cleaning is done on a daily basis to ensure cleanliness and hygiene of all section which include the pre- preparation area, cooking area, washing area, dry storage area, vegetable storage area, blend section, juice counter, salad preparation, food trolleys, floors and tiles, ventilators and garbage disposal.

Medical Check-up and health of Food handlers:

- Annual health check- up and immunization is conducted for all the personnel working in the kitchen from staff clinic.

Role of Dieticians in Food Service Management of the Hospital Kitchen:

- Compilation of the diet sheets received from all the wards twice a day. Planning of therapeutic diet with the help of a meal card which specifies the calories and protein requirement. The meal card also has a list of food items to be served during each meal. Meal card will be placed on each therapeutic tray at the time of food serving so as to guide the service person on the type of diet, portion size and foods to be given.
- Planning of Ryle's tube feeds according to the required calories, protein and volume needed.

Dietary Services

- Evaluation of prepared food before serving to the patient.
- Checking the therapeutic tray of patients during the serving time to ensure that patient received the meal as per the plan given in the meal card.
- Monitoring of cleanliness of the various areas within the kitchen.



From Left to Right: Lawrence, Anthony, Anbu, Mathesan, Baskar, Narayana, Babu, Poornima, Saral, Lalitha, Mohan, Pillai, Sundar



From Left to Right: Anish, Kumara, Arjun, Balaraju, Michael, Vijay, Thrishna, Nalini



Dietary Services

SERVICES



From Left to Right: Anjali, Daiyana Mary, Susheela N M, Philip, Maheswari, Leema Rose, Ramesh, Jyothi, Susheela Mary, Vasanthi, Thirumalesh

DIETARY: Total Number of Staff- 100; Dietary in Charge- Sr. Sophy
Ph:08022065217; Email: sjmch.dietary@stjohns.in

SERVICES



Dietary

L Johnny

Art by: Dr. Rakesh Ramesh





LAUGHTER IS THE BEST MEDICINE...



My mother went for her first visit to her new doctor. The doctor looked through her extensive medical history and then looked at my mother. "I'm pleased to say," he told her, "with utmost certainty, that you look a whole lot better in person than you do on paper."



www.vectorstock.com

We took our two teenage kids to a restaurant that was packed with fans watching a sporting event on TV. The harassed waitress took our order, but 30 minutes later there was no sign of our food. Suddenly shouts of victory erupted from the bar. "You hear that?" said my 13-year-old. "Someone just got their food."



www.dreamstime.com

I recently asked a friend, "Has your son decided what he wants to be when he grows up?" "Yes, he wants to be a rubbish collector," my friend said. "That's an unusual ambition to have," I managed to reply. "Well," said the boy's father, "he thinks that rubbish collectors only work on Tuesdays."



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Haemoglobin thresholds to define anaemia in a national sample of healthy children and adolescents aged 1-19 years in India: a population-based study

Harshpal Singh Sachdev, Akash Porwal, Rajib Acharya, Sana Ashraf, Sowmya Ramesh, Nizamuddin Khan, Umesh Kapil, **Anura V Kurpad**, Avina Sarna

Paediatrics and Clinical Epidemiology, Sitaram Bhartia Institute of Science and Research, New Delhi, India. Population Council, India Habitat Centre, New Delhi, India. Department of Epidemiology, Biostatistics and Clinical Research, Institute of Liver and Biliary Sciences, New Delhi, India. Department of Physiology, *St John's Medical College*, Bengaluru, India.

Abstract

Background: WHO's haemoglobin cutoffs to define anemia were based on five studies of predominantly white adult populations, done over 50 years ago. Therefore, a general re-examination of the existing haemoglobin cutoffs is warranted for global application, in representative healthy populations of children and adults. Such data are scarce in low-income and middle-income countries; however, a 2019, large-scale, nationally representative survey of children and adolescents aged 0-19 years in India (Comprehensive National Nutrition Survey [CNNS]) offered an opportunity for this re-examination. Using this survey, we aimed to assess the age-specific and sex-specific percentiles of haemoglobin and cutoffs to define anaemia in the CNNS population.

Methods: For this population-based study, we constructed age-specific and sex-specific haemoglobin percentiles from values reported for a defined healthy population in the CNNS, which used rigorous quality control measures during sample collection and in the laboratory analyses. To obtain a healthy population, we excluded participants with iron, folate, vitamin B12, and retinol deficiencies; inflammation; variant haemoglobins (haemoglobin A₂ and haemoglobin S); and history of smoking. We considered age-specific and sex-specific 5th percentiles of haemoglobin derived for this healthy population as the study cutoff to define anaemia. We compared these with existing WHO cutoffs to assess significant differences between them at each year of age and sex for quantifying the prevalence of anaemia in the entire CNNS sample.

Findings: Between Feb 24, 2016, and Oct 26, 2018, the CNNS survey collected blood samples from 49,486 individuals. 41,210 participants had a haemoglobin value, 8087 of whom were included in our study and comprised the primary analytical sample. Compared with existing WHO cutoffs, the study cutoffs for haemoglobin were lower at all ages, usually by 1-2 g/dL, but more so in children of both sexes aged 1-2 years and in girls aged 10 years or older. Anaemia prevalence with the study cutoffs was 19.2 percentage points lower than with WHO cutoffs in the entire CNNS sample with valid haemoglobin values across all ages and sexes (10.8% with study cutoffs vs 30.0% with WHO cutoffs).

Interpretation: These findings support the re-examination of WHO haemoglobin cutoffs to define anaemia. Our haemoglobin reference percentiles, derived from healthy participants in a large representative Indian survey, are suitable for national use in India. Substantial variations in the 5th percentile of haemoglobin values across the 1-19 years age range and between sexes argue against constructing common cutoffs in stratified age groups for convenience.

Lancet Glob Health. 2021 Jun;9(6):e822-e831. doi: 10.1016/S2214-109X(21)00077-2. Epub 2021 Apr 16.

A simple x-ray scoring system for the diagnosis of chronic pulmonary aspergillosis

Priya Ramachandran, Jayanthi Savio, Priyadarshini Padaki, Ruchita Chhabra, Chitra Veluthat, Uma Devaraj, Kavitha Venkatanarayan, Uma M Krishnaswamy, Santu Ghosh, George A D'souza

Department of Pulmonary Medicine, Department of Microbiology, Department of Biostatistics, St. John's Medical college Hospital, Bengaluru, India.

Abstract

Background: Chronic pulmonary aspergillosis (CPA) is a severe form of post-tuberculosis lung disease (PTBLD). Considering the high burden of TB in India, it can be concluded that the prevalence of CPA is also high. Chest x-ray though most feasible, interpretation is subjective. Therefore, decision on evaluation for CPA cannot be based on x-ray alone.

Objective: Present study evaluated an x-ray score as a marker for extent of lung damage in patients with PTBLD presenting with haemoptysis and its utility to predict *Aspergillus* serum IgG levels.

Methods: We used a modified scoring system developed by Anna Ralph et al X-ray score cut-offs of >71 and 40, with or without history of massive haemoptysis, were compared with serum IgG levels.

Results: With a chest x-ray score cut-off of 71, specificity was 88%. With an x-ray score of >71 combined with history of massive haemoptysis, 86% cases were found to be IgG positive. The specificity of this combination was 96%.

Conclusion: This study concluded that a simple chest x-ray scoring system in addition to the symptom of massive haemoptysis helped in the decision on further evaluation of the subject for CPA, especially in resource constrained settings.

Mycoses. 2021 Jul;64(7):788-793. doi: 10.1111/myc.13284. Epub 2021 Apr 24.



PEARLS OF WISDOM

By perseverance, the snail reached the ark.

- Charles Spurgeon



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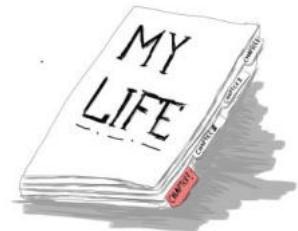


I believe that every human mind feels pleasure in doing good to another.

- Thomas Jefferson

I've learned that life is like a book. Sometimes we must close a chapter and begin the next one.

- Hanz



© live your life

REF: 365 Days of Wonder: R.J.Palacio.

Did You Know?

Our body loses up to 8 percent of water on a flight.

We lose about 8 percent of your body water while on a flight. This is because the humidity in the climate-controlled environment can be as low as 10 to 15 percent. (Ref: Readers Digest)



© Readers Digest

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GREY *Matters!*



Medical Trivia!

1. This stimulant drug was first extracted from the rye-fungus *Claviceps purpurea*. Name the drug and the chemist who synthesised it.
2. The first ECG recording involved a string galvanometer for recording cardiac electrical potential. Name the physiologist who performed this experiment
3. A first of its kind event at Massachusetts General Hospital in 1846 resulted in one of its ORs attaining the status of a medical monument. Name the event, its performer and the monument's name.
4. Which 'Founder of Operative Gynaecology' was the first to perform an ovarian tumour excision?
5. Which cereal was hailed as a miracle cure for tuberculosis in the 18th century?

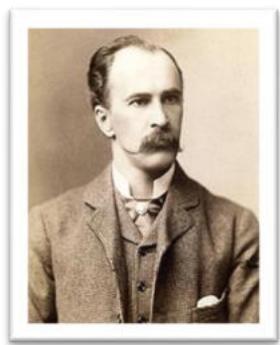


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THE QUOTABLE OSLER



SIR WILLIAM OSLER

Welcome your younger colleagues.

It is the duty of the older man to look on the younger one who settles near him not as a rival, but as a son. He will do to you just what you did to the old practitioner, when, as a young man, you started - get a good many of your cases; but if you have the sense to realize that this is inevitable, unavoidable, and the way of the world, and if you have the sense to talk over, in a friendly way, the first delicate situation that arises, the difficulties will disappear and recurrences may be made impossible.



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REF: The Quotable OSLER: Edited by Mark E Silverman, T. Jock Murray, Charles. S Bryan



MEDICINE THIS MONTH

A Bird's Eye View.....

Surgical left atrial appendage (LAA) occlusion for patients undergoing cardiac surgery.

LAA is the primary source of thromboembolism in patients with atrial fibrillation (AF). When patients with AF undergo cardiac surgery, LAA occlusion is commonly performed with limited supporting evidence. In a RCT on 4800 AF patients (with ≥ 2 risk factors for thromboembolism) undergoing cardiac surgery, the effects of surgical LAA occlusion was compared with no occlusion. At nearly 4 years of follow-up, stroke or systemic embolism was about 1/3rd less frequent in the occlusion group than in the no-occlusion group, and perioperative complications were similar in both groups. These results support use of surgical LAA occlusion as an adjunct to long-term anticoagulation for patients with AF.

- LAAOS III investigators NEJM.2021

Elexacaftor-tezacaftor-ivacaftor for children ≥ 6 years with cystic fibrosis (CF).

Elexacaftor-tezacaftor-ivacaftor is an important therapy for most patients with CF, but its use has been limited to adolescents and adults. The drug combination was evaluated in a 24-week open-label study in 66 children, 6 to 11 years old who were homozygous for F508del or heterozygous for F508del with a 2nd minimal function mutation. The safety profile & pharmacokinetics were similar to that in older individuals, & patients experienced improvement in pulmonary function (change in FEV₁, 10.2 percentage points; 95% CI 7.9-12.6); respiratory symptoms; sweat chloride; & body weight. On the basis of this study, the US FDA approved this drug for children ≥ 6 years with CF and eligible genotypes and we now recommend treatment in eligible patients starting at the age of six years.

- Zemanick ET et al. Am J Respir Crit Care Med. 2021

REFERENCE 1: MEDICINE THIS MONTH

Randomized Controlled Trial N Engl J Med. 2021 Jun 3;384(22):2081-2091.

doi: 10.1056/NEJMoa2101897. Epub 2021 May 15.

Left Atrial Appendage Occlusion during Cardiac Surgery to Prevent Stroke

Richard P Whitlock¹, Emilie P Belley-Cote¹, Domenico Paparella¹, Jeff S Healey¹,
Katheryn Brady¹, Mukul Sharma¹, Wilko Reents¹, Petr Budera¹, Andony J Baddour¹, Petr Fila¹,
P J Devereaux¹, Alexander Bogachev-Prokophiev¹, Andreas Boening¹, Kevin H T Teoh¹,
Georgios I Tagarakis¹, Mark S Slaughter¹, Alistair G Royse¹, Shay McGuinness¹, Marco Alings¹,
Prakash P Punjabi¹, C David Mazer¹, Richard J Folkerlinga¹, Andrea Colli¹, Álvaro Avezum¹,
Juliet Nakamya¹, Kumar Balasubramanian¹, Jessica Vincent¹, Pierre Voisine¹, Andre Lamy¹,
Salim Yusuf¹, Stuart J Connolly¹, LAAOS III Investigators

Collaborators, Affiliations

PMID: 33999547 DOI: [10.1056/NEJMoa2101897](https://doi.org/10.1056/NEJMoa2101897)

Abstract

Background: Surgical occlusion of the left atrial appendage has been hypothesized to prevent ischemic stroke in patients with atrial fibrillation, but this has not been proved. The procedure can be performed during cardiac surgery undertaken for other reasons.

Methods: We conducted a multicenter, randomized trial involving participants with atrial fibrillation and a CHA₂DS₂-VASc score of at least 2 (on a scale from 0 to 9, with higher scores indicating greater risk of stroke) who were scheduled to undergo cardiac surgery for another indication. The participants were randomly assigned to undergo or not undergo occlusion of the left atrial appendage during surgery; all the participants were expected to receive usual care, including oral anticoagulation, during follow-up. The primary outcome was the occurrence of ischemic stroke (including transient ischemic attack with positive neuroimaging) or systemic embolism. The participants, research personnel, and primary care physicians (other than the surgeons) were unaware of the trial-group assignments.

Results: The primary analysis population included 2379 participants in the occlusion group and 2391 in the no-occlusion group, with a mean age of 71 years and a mean CHA₂DS₂-VASc score of 4.2. The participants were followed for a mean of 3.8 years. A total of 92.1% of the participants received the assigned procedure, and at 3 years, 76.8% of the participants continued to receive oral anticoagulation. Stroke or systemic embolism occurred in 114 participants (4.8%) in the occlusion group and in 168 (7.0%) in the no-occlusion group (hazard ratio, 0.67; 95% confidence interval, 0.53 to 0.85; P = 0.001). The incidence of perioperative bleeding, heart failure, or death did not differ significantly between the trial groups.

Conclusions: Among participants with atrial fibrillation who had undergone cardiac surgery, most of whom continued to receive ongoing antithrombotic therapy, the risk of ischemic stroke or systemic embolism was lower with concomitant left atrial appendage occlusion performed during the surgery than without it. (Funded by the Canadian Institutes of Health Research and others; LAAOS III ClinicalTrials.gov number, [NCT01561651](https://clinicaltrials.gov/ct2/show/study/NCT01561651)).

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ORIGINAL ARTICLE

⊗ A Phase 3 Open-Label Study of Elexacaftor/Tezacaftor/Ivacaftor in Children 6 through 11 Years of Age with Cystic Fibrosis and at Least One *F508del* Allele

Edith T. Zemanick^{1*}, Jennifer L. Taylor-Cousar^{2,3*}, Jane Davies⁴, Ronald L. Gibson⁵, Marcus A. Mall^{6,7,8}, Edward F. McKone⁹, Paul McNally¹⁰, Bonnie W. Ramsey^{5‡}, Jonathan H. Rayment¹¹, Steven M. Rowe¹², Elizabeth Tullis¹³, Neil Ahluwalia¹⁴, Chenghao Chu¹⁴, Thang Ho¹⁴, Samuel M. Moskowitz¹⁴, Sabrina Noel¹⁴, Simon Tian¹⁴, David Waltz¹⁴, Tanya G. Weinstock¹⁴, Fengjuan Xuan¹⁴, Claire E. Wainwright^{15§}, and Susanna A. McColley^{16,17§}; for the VX18-445-106 Study Group

¹Department of Pediatrics, University of Colorado Anschutz Medical Campus and Children's Hospital Colorado, Aurora, Colorado; ²Department of Medicine and ³Department of Pediatrics, National Jewish Health, Denver, Colorado; ⁴National Heart and Lung Institute, Imperial College London, National Institute for Health Research Imperial Biomedical Research Centre and Royal Brompton and Harefield National Health Service Foundation Trust, London, United Kingdom; ⁵University of Washington/Seattle Children's Hospital, Seattle, Washington; ⁶Department of Pediatric Pulmonology, Immunology and Intensive Care Medicine, Charité-Universitätsmedizin Berlin, Berlin, Germany; ⁷Berlin Institute of Health, Berlin, Germany; ⁸German Center for Lung Research, Berlin, Germany; ⁹St. Vincent's University Hospital and University College, Dublin, Ireland; ¹⁰Children's Health Ireland and Royal College of Surgeons in Ireland University of Medicine and Health Sciences, Dublin, Ireland; ¹¹British Columbia Children's Hospital, Vancouver, British Columbia, Canada; ¹²University of Alabama at Birmingham, Birmingham, Alabama; ¹³St. Michael's Hospital, Toronto, Ontario, Canada; ¹⁴Vertex Pharmaceuticals Incorporated, Boston, Massachusetts; ¹⁵University of Queensland, Brisbane, Queensland, Australia; ¹⁶Ann and Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois; and ¹⁷Northwestern University Feinberg School of Medicine, Chicago, Illinois

Abstract

Rationale: Elexacaftor/tezacaftor/ivacaftor (ELX/TEZ/IVA) was shown to be efficacious and safe in patients ≥12 years of age with cystic fibrosis and at least one *F508del-CFTR* (cystic fibrosis transmembrane conductance regulator) allele, but it has not been evaluated in children <12 years of age.

Objectives: To assess the safety, pharmacokinetics, and efficacy of ELX/TEZ/IVA in children 6 through 11 years of age with *F508del*-minimal function or *F508del-F508del* genotypes.

Methods: In this 24-week open-label phase 3 study, children (N = 66) weighing <30 kg received 50% of the ELX/TEZ/IVA adult daily dose (ELX 100 mg once daily, TEZ 50 mg once daily, and IVA 75 mg every 12 h) whereas children weighing ≥30 kg received the full adult daily dose (ELX 200 mg once daily, TEZ 100 mg once daily, and IVA 150 mg every 12 h).

Measurements and Main Results: The primary endpoint was safety and tolerability. The safety and pharmacokinetic profiles of

ELX/TEZ/IVA were generally consistent with those observed in older patients. The most commonly reported adverse events included cough, headache, and pyrexia; in most of the children who had adverse events, these were mild or moderate in severity. Through Week 24, ELX/TEZ/IVA treatment improved the percentage of predicted FEV₁ (10.2 percentage points; 95% confidence interval [CI], 7.9 to 12.6), Cystic Fibrosis Questionnaire-Revised respiratory domain score (7.0 points; 95% CI, 4.7 to 9.2), lung clearance index_{2.5} (-1.71 units; 95% CI, -2.11 to -1.30), and sweat chloride (-60.9 mmol/L; 95% CI, -63.7 to -58.2); body mass index-for-age z-score increased over the 24-week treatment period when compared with the pretreatment baseline.

Conclusions: Our results show ELX/TEZ/IVA is safe and efficacious in children 6 through 11 years of age with at least one *F508del-CFTR* allele, supporting its use in this patient population. Clinical trial registered with www.clinicaltrials.gov (NCT03691779).

Keywords: cystic fibrosis; elexacaftor; tezacaftor; ivacaftor; child

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*These authors contributed equally to this work.

‡B.W.R. is Associate Editor of *AJRCCM*. Her participation complies with American Thoracic Society requirements for recusal from review and decisions for authored works.

§These authors contributed equally to this work.

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RESEARCH SNIPPETS

Sample size for prevalence study: Part-II

Determining Precision (d): What is the appropriate precision for prevalence studies? Investigators generally ends up with the ball-park figures of the study sizes usually based on their limitations such as financial resources, time or availability of subjects. However, we should calculate the sample size with a reasonable or acceptable precision and then allowing for other limitations. It is appropriate to have a precision of 5% if the prevalence of the disease is going to be between 10% and 90%. However, when the prevalence is going to be below 10% or more than 90%, the precision of 5% seems to be inappropriate. Therefore, we recommend d as a half of p if p is below 0.1 (10%) and if p is above 0.9 (90%), d can be $\{0.5(1-p)\}$. However, if there is a resource limitation, investigators may use a larger d . In case of a preliminary study, investigators may use a larger d (e.g. >10%). However, justification for the selection of d should be stated clearly (e.g. limitation of resources) in their research proposal so that reviewers will be well informed.

Normality assumption: The above sample size calculation formula is based on the assumption of normal approximation. It says that np and $n(1-p)$ must be greater than 5. In other words, both cases and non-cases in the selected sample must be greater than 5. Small sample sizes might not fulfil this assumption, and we should check this assumption after calculating the sample size. The recommended precision (d) of half of p and $0.5(1-p)$ in case of expected prevalence >90 and <10 will also ensure to meet this assumption.

Finite population Correction: The above sample size formula is valid if the calculated sample size is smaller than or equal to 5% of the population size ($n/N \leq 0.05$). If this proportion is larger than 5% ($n/N > 0.05$), we need to use the formula with finite population correction as follows if N is the population size.

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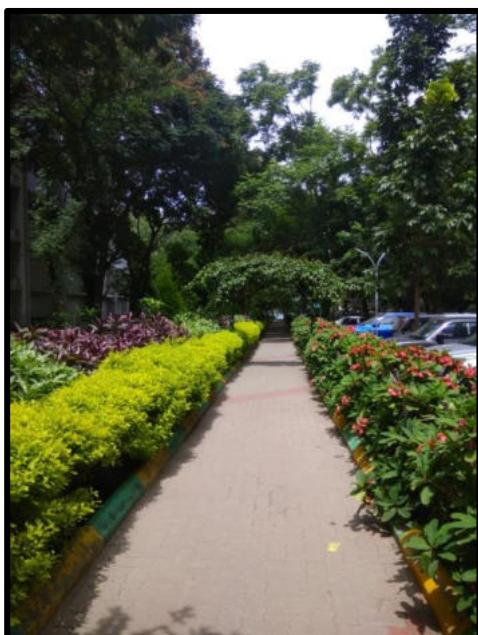
RESEARCH SNIPPETS

Sample size for prevalence study:

$$n = \frac{NZ_{1-\frac{\alpha}{2}}^2 \times p(1-p)}{d^2(N-1) + Z_{1-\frac{\alpha}{2}}^2 \times p(1-p)}$$

Adjust for design effects: The above sample size formulae are valid only if we apply the simple random or systematic random sampling methods. Cluster or multistage sampling methods require a larger sample size to achieve the same precision. Therefore, the calculated sample size using the above formulae need to be multiplied by the design effect. In case it is not available, one can assume 2 by a thumb rule.

Borrowed and modified from: L. Naing, T. Winn , B.N. Rusli. Practical Issues in Calculating the Sample Size for Prevalence Studies. Archives of Orofacial Sciences 2006; 1: 9-14



Cover photo of the magazine, 'On a sunny day' along the walk way next to Golden Jubilee Block.

PC: Dr. Deepti Shanbhag.





GREY Matters!



Medical Trivia! ANSWERS

1. Lysergic Acid Diethylamide [LSD], Albert Hofmann
2. Willem Einthoven
3. First public demonstration of ether anaesthesia by William TG Morton.
The OR was christened as ETHER DOME
4. Ephraim McDowell
5. Tuscarora rice



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