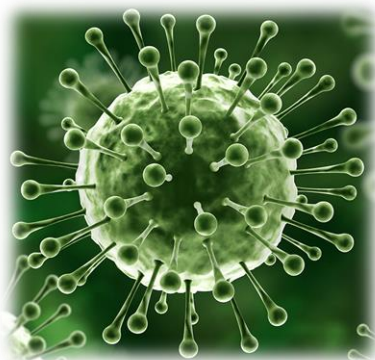


What's Up? @St John's Hospital

Issue 26, June 15th, 2019



The Radiotherapy Technologists, painted the thermoplastic mask which is used for immobilisation of patients undergoing cranial irradiation. This is helpful in pediatric patients – helps alleviating anxiety, hence reducing the need for sedation. [PC: Shibina Noorjahan]



A Virus Called **NIPAH!**



EDITORIAL TEAM:

Archana S, Avinash. H. U, Bhavyank Contractor, Blessy Susan Biji, Deepak Kamath, Jennifer Gabriela, Jyothi Idiculla, Manu. M. K. Varma, Merlin Varghese Susan, Nivedita Kamath, Rakesh Ramesh, Ruchi Kanhere, Sanjiv Lewin, Sanjukta Rao, Santu Ghosh, Saudamini Nesargi, Sheela Immaculate, Srilakshmi Adhyapak, Uma Maheshwari, Rev. Fr. Vimal Francis, Winston Padua



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

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MESSAGE FROM THE EDITORIAL TEAM

Sello All!!!

We are pleased to share the twenty sixth issue of “What’s Up? @ St John’s Hospital” magazine today. We welcome Dr. Uma Maheshwari (Professor and Head, Department of Pulmonology) to our Editorial team.

We present 2 new sections to our readers from this issue. Section ‘Grey Matters!’ to test the Grey Matter will bring out medical puzzles, riddles, quiz and crosswords. Section ‘St. John’s Fountainhead’ will publish abstracts of 2 published research articles from the year 2018. The articles are selected by a criteria laid down by the editorial team. If you want your article to be published, please mail it to us.

The present issue is themed brown and green to symbolize World No Tobacco day which was observed on 31st May 2019. The concept is to motivate people to move away from brown (tobacco) and to go green! We thank Dr. Nirmala S (Professor and Head, Department of Radiation Oncology) for providing us a write up on the tobacco awareness.

We also update you about recent ‘Nipah Virus outbreak’. Do not forget to go through the same.

Please feel free to communicate with us to publish your achievements and events. Your feedbacks motivates us to work harder. Happy Reading!!

Editorial Team

UPDATES THIS WEEK

Nipah virus infection: “Kerala alert”

Human Nipah virus (NiV) infection is an emerging zoonotic disease which was first recognized in a large outbreak of 276 reported cases in Malaysia and Singapore from September 1998 to May 1999. *In India*, during 2001 and 2007 two outbreaks in human were reported from West Bengal, neighbouring Bangladesh. Nipah cases tend to occur in a cluster or as an outbreak. The most recent outbreak in India was in Kerala in June 2018, where most of the transmission was hospital based.

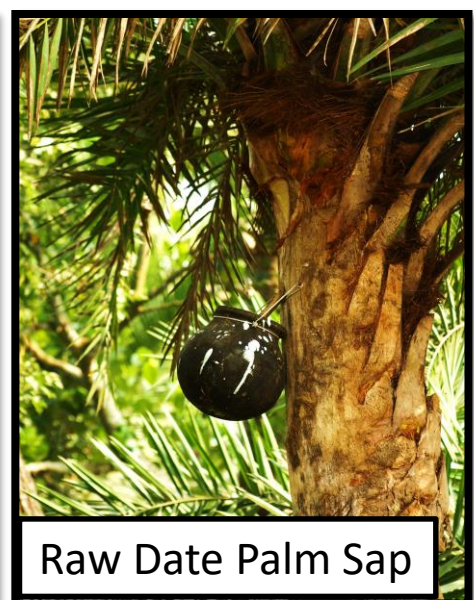
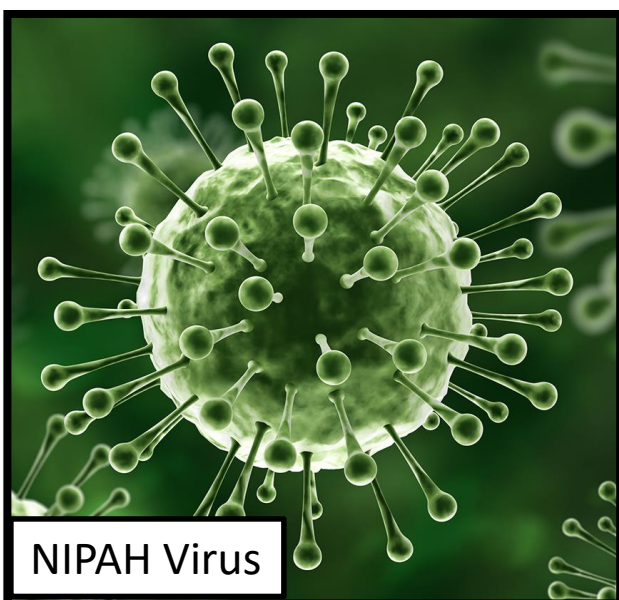
EPIDEMIOLOGY

Agent: NiV is a highly pathogenic paramyxovirus

Natural Reservoir: Large fruit bats of *Pteropus* genus are the natural reservoir of NiV. Pigs also may become infected after consumption of partially bat eaten fruits
Seasonality was strongly implicated in NiV outbreaks in Bangladesh and India. All of the outbreaks occurred during the months of winter to spring (December-May).

Incubation period: varies from 4-21 days.

Mode of Transmission: Transmission of Nipah virus to humans may occur after direct contact with infected bats, infected pigs, or from other Nipah virus infected people. Another route of transmission of Nipah virus has also been identified from its natural reservoir to human: drinking of raw date palm sap contaminated with NiV.



UPDATES THIS WEEK

Nipah virus infection: “Kerala alert”

CLINICAL FEATURES

1. Fever, altered mental status, severe weakness, headache, respiratory distress, cough, vomiting, muscle pain, convulsion, diarrhea.
2. In infected people, Nipah virus causes severe illness characterized by inflammation of the brain (encephalitis) or respiratory diseases.
3. In general, the case–fatality rate is estimated at 40–75%; however, this rate can vary between outbreaks and can be upto 100%.

TREATMENT:

1. Currently there is no known treatment or vaccine available for either humans or animals. Intensive supportive care with treatment of symptoms is the main approach to managing the infection.
2. There is no proven treatment recommended for Nipah virus disease. Some observational data suggests that Ribavirin may be of use in reducing mortality among patients with encephalitis caused by Nipah virus. There is no data/evidence of its usefulness as a prophylactic drug.
3. Intensive supportive care with treatment of symptoms is the main approach to managing the infection.

CASE DEFINITIONS:

Suspect Nipah Case	Probable Nipah Case	Confirmed Nipah Case	Contact
A person from outbreak area with Acute Fever and/or severe headache, altered mental state/seizure, cough or shortness of breath	A suspect case from the same family or neighbouring patient in a hospital.	Confirmed by PCR from body fluids/secretions	Come in direct contact with confirmed cases/ touched the body fluids/ clothes. They should be observed for 21 days or preferable 42 days (double the longest incubation period)

UPDATES THIS WEEK

Nipah virus infection: “Kerala alert”

DIAGNOSIS: The patient samples are sent to NIV (National Institute of Virology), Pune via NIV – Field station of Bangalore by Department of Microbiology.

ADVISORY FOR HEALTH CARE PERSONNEL

1. Wash hands thoroughly with soap and water for 20 seconds after contact with a sick patient.
2. Use appropriate mask and gloves during history- taking, physical examination, sample collection and other care-giving to suspected Nipah cases
3. Follow Standard precautions for infection control at hospital settings:
 - a) Hand Hygiene
 - b) Use of personal protective equipment (PPE), take special care while taking off PPE components.
 - c) Use disposable items (NG tube, ET tube, oxygen mask) while handling the patient.
 - d) Safe waste disposal for potentially infected material including used PPE, linen, clothing of patient.
4. All suspect cases should be admitted to the designated isolation ward/ facility in the hospital prior to any sample taking. Once the case is suspected of Nipah, bystanders should not be permitted in the ward. Movement of hospital personnel to and from the isolation areas to be minimized and should follow a ‘restriction for essential purposes’ protocol.
5. Segregate all suspect cases of Nipah from all patients in the isolation ward/ facility.
6. Avoid unnecessary contact with suspected Nipah cases or use barrier nursing. Maintain bed spacing of 2 metres at least.
7. Any spillage of body fluids in the OP/Ward should be managed as per infection control guidelines of the Directorate of Health Services .(see website).
8. Immediately report admission of a suspected Nipah case to the State surveillance officer.
9. Mortuary staff should wear PPE while handling a dead body. Designated sealed bag should be used for transportation of the dead body

REFERENCE: Directorate of Health Services, Kerala, NCDC interim guidelines, and WHO Bulletin

UPDATES THIS WEEK

WORLD NO TOBACCO DAY



TOBACCO AND LUNG HEALTH: DON'T LET TOBACCO TAKE YOUR BREATH AWAY

- Dr. Nirmala S (Professor and Head, Department of Radiation Oncology)

Every year, on 31st May, the World Health Organization (WHO) and global partners celebrate World No Tobacco Day (WNTD). The annual campaign is an opportunity to raise awareness on the harmful and deadly effects of tobacco use and second-hand smoke exposure, and to discourage the use of tobacco in any form.

The focus of World No Tobacco Day 2019 is on "tobacco and lung health." The World No Tobacco Day 2019 campaign will raise awareness on the:

1. Risks posed by tobacco smoking and second-hand smoke exposure
2. Awareness on the particular dangers of tobacco smoking to lung health
3. magnitude of death and illness globally from lung diseases caused by tobacco, including chronic respiratory diseases and lung cancer
4. Emerging evidence on the link between tobacco smoking and tuberculosis deaths
5. Implications of second-hand exposure for lung health of people across age groups
6. Importance of lung health to achieving overall health and well-being
7. Feasible actions and measures that key audiences, including the public and governments, can take to reduce the risks to lung health posed by tobacco



UPDATES THIS WEEK

WORLD NO TOBACCO DAY

The campaign also serves as a call to action, advocating for effective policies to reduce tobacco consumption and engaging stakeholders across multiple sectors in the fight for tobacco control.

HOW TOBACCO ENDANGERS THE LUNG HEALTH OF PEOPLE WORLDWIDE?

Over 40% of all tobacco-related deaths are from lung diseases like cancer, chronic respiratory diseases and tuberculosis. World No Tobacco Day 2019 will focus on the multiple ways that exposure to tobacco affects the health of people's lungs worldwide.

These include:

Lung cancer. Tobacco smoking is the primary cause for lung cancer, responsible for over two thirds of lung cancer deaths globally. Second-hand smoke exposure at home or in the work place also increases risk of lung cancer. Quitting smoking can reduce the risk of lung cancer: after 10 years of quitting smoking, risk of lung cancer falls to about half that of a smoker.

Chronic respiratory disease. Tobacco smoking is the leading cause of chronic obstructive pulmonary disease (COPD). The risk of developing COPD is particularly high among individuals who start smoking at a young age, as tobacco smoke significantly slows lung development. Tobacco also exacerbates asthma, which restricts activity and contributes to disability. Early smoking cessation is the most effective treatment for slowing the progression of COPD and improving asthma symptoms.

Across the life-course. Infants exposed in-utero to tobacco smoke toxins, through maternal smoking or maternal exposure to second-hand smoke, frequently experience reduced lung growth and function. Young children exposed to second-hand smoke are at risk of the onset and exacerbation of asthma, pneumonia and bronchitis, and frequent lower respiratory infections.

Globally, an estimated 60 000 children die before the age of 5 of lower respiratory infections caused by second-hand smoke. Those who live on into adulthood continue to suffer the health consequences of second-hand smoke exposure.

UPDATES THIS WEEK

WORLD NO TOBACCO DAY

Tuberculosis. Tuberculosis (TB) damages the lungs and reduces lung function, which is further exacerbated by tobacco smoking. About one quarter of the world's population has latent TB, placing them at risk of developing the active disease. Active TB, compounded by the damaging lung health effects of tobacco smoking, substantially increases risk of disability and death from respiratory failure.

Air pollution. Tobacco smoke is a very dangerous form of indoor air pollution: it contains over 7,000 chemicals, 69 of which are known to cause cancer. Though smoke may be invisible and odourless, it can linger in the air for up to five hours, putting those exposed at risk of lung cancer, chronic respiratory diseases, and reduced lung function.

It is the single greatest cause of preventable disease in the developed world. Other than lung cancer, it is also responsible for cancers of oral cavity and throat, the liver, colon and rectum, esophagus, larynx (voice box), stomach, pancreas, bladder, kidney, and cervix, and acute myeloid leukemia.

“Every year, tobacco kills at least 8 million people. 3 million people die from tobacco related lung diseases. 1.5 million people dying from chronic respiratory diseases, 1.2 million deaths from cancer (tracheal, bronchus and lung) and 0.6 million deaths from respiratory infections and tuberculosis.

WHAT CAN BE DONE?

Every day should be No tobacco day.

WHO is urging countries to fight the tobacco epidemic through full implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC) and enforcing effective tobacco control actions, including WHO's recommended “MPOWER” policy measures, for example by reducing demand for tobacco through taxation, creating smoke-free places and cessation support.

The Organization also encourages parents and community leaders to take steps to safeguard the health of their families and communities by informing them of and protecting them from the harms caused by tobacco. Smokers should ensure they never smoke in the presence of an infant or young child.

UPDATES THIS WEEK

WORLD NO TOBACCO DAY

INDIAN SCENARIO:

In the Indian subcontinent tobacco use is centuries old. The tobacco problem in India is peculiar, with consumption of variety of smokeless and smoking forms. Tobacco in any form and disguise is harmful.

More than 4,000 different types of chemicals have been found in tobacco and tobacco smoke. Over 60 of these chemicals have been classified as carcinogens (cancer causing agents) by International Agency on Research in Cancer (IARC). Nearly 45% of all cancers among males and 17% among females in India and more than 80% of oral cancers are directly attributable to tobacco use in chewing form.

Among all tobacco related cancers in India, esophagus, lung, hypopharynx, and mouth were the leading cancer sites for both men and women.

In India as a measure to tackle this menace, **COTPA (Cigarettes and other tobacco products act) act** was enacted in **May 2003**. The key provisions of COTPA -2003 are as follows:

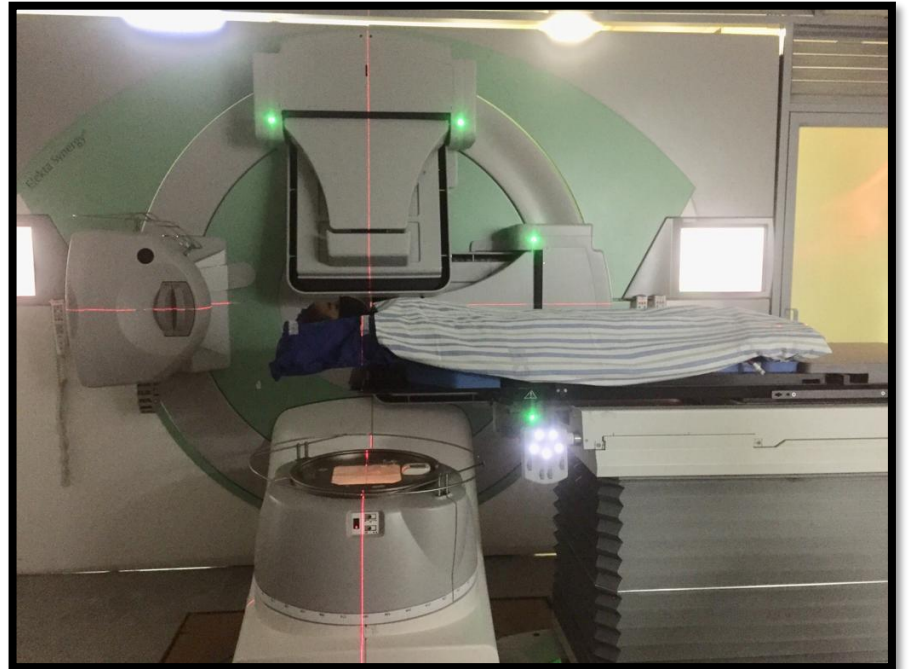
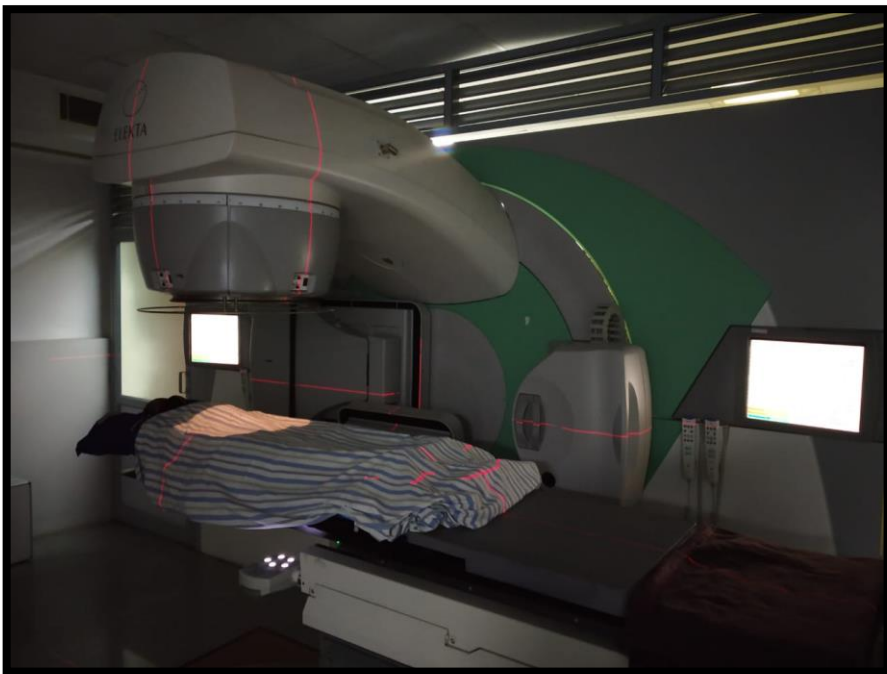
1. Prohibition of smoking in public places (including indoor workplaces).
2. Prohibition of advertisement, direct and indirect (point-of-sale advertising is permitted), sponsorship and promotion of tobacco products.
3. Prohibition of sales to minors (tobacco products cannot be sold to children less than 18 years of age and cannot be sold within a radius of 100 yards of any educational institutions).
4. Regulation of health warning in tobacco products packs. Pictorial health warnings also to be included.
5. Regulation and testing of tar and nicotine contents of tobacco products and declaring on tobacco products packages

The concluding message, is every day should be No tobacco day. As health care professionals our responsibility in the society is higher, educating the patients, their family members and the general public about the harmful effects of tobacco on health, society is essential.

UPDATES THIS WEEK

Total Body Irradiation (TBI) DEPARTMENT OF RADIATION ONCOLOGY

29th May 2019



PC: Dr. Sandeep Muzumder and Dr. Prashanth Bhat

Dept of Radiation Oncology, St. John's Medical College Hospital performed first case of Total body radiation on a 9 year old child suffering from chronic myeloid leukaemia in blast crisis. This was as a conditioning procedure before the Autologous bone marrow transplant done by paediatric oncology department. The child completed the treatment, which was delivered in 6 sessions, two sessions per day 6 hrs apart. He underwent bone marrow transplant the next day as scheduled and is on his way to recovery.

This technology requires meticulous planning over 4-5 days, and dry run before the actual treatment to ensure that treatment will be delivered accurately and safely. A team of Radiation Oncologists, Medical Physicists and radiation therapy technologists were involved in this endeavour.

Congratulations Radiation Oncology Team.

UPDATES THIS WEEK

Medical Camp in West Bengal

7th and 8th June 2019

রুথ ফাউন্ডেশন
RUTH FOUNDATION

রুথ ইংলিশ স্কুলের (জুগিন্দা) পরিচালনায়
এই প্রথম ডোমকল মহকুমায় সুদূর ব্যঙ্গালোর থেকে আসছেন
সেন্ট জনস্ মেডিক্যাল কলেজ হস্পিটাল
St. John's Medical College Hospital

মহিলা ক্যান্সার বিশেষজ্ঞ ডাঃ প্রেমালতা টি.এস MBBS, DGO, DNB Professor & In charge Staff ID No. T0942, KMC No. 34673 St. John's Medical College Hospital Bengaluru- 560 034	এর ডাক্তার রেডিওলজি ক্যান্সার বিশেষজ্ঞ ডাঃ সন্দিপ মজুমদার MBBS, MD, Fellowship Assistant Professor Staff ID No. T1599, KMC No. 108529 St. John's Medical College Hospital Bengaluru- 560 034	জেনারেল ফিজিশিয়ান ডাঃ বি. রামাকৃষ্ণা গৌড় MBBS, MD Professor & Head Dept. of Community Health Regd. No - 45374, St. John's Medical College Hospital Bengaluru - 560034
শীরা বিশেষজ্ঞ ডাঃ অজয় এম MBBS, MS, M.Ch Associate Professor Neuro Surgery : Staff ID No. T 2030, KMC No. 76000 St. John's Medical College Hospital, Bengaluru - 560034	হাট বিশেষজ্ঞ ডাঃ শ্রীকার বালী সুন্দরাম MBBS, MS, DNB (GI), DNB CCTH Associate Professor Neuro Surgery : Staff ID No. T 1093, KMC No. 46669 St. John's Medical College Hospital, Bengaluru - 560034	

রোগী দেখিবার স্থান **রুথ ফাউন্ডেশন** ০৭ ও ০৮ ই জুন, ২০১৯
শুক্র ও শনিবার

ঘূর্ণিকা (বুখা যানত মহাশয়ের সামনে), ডোমকল, মুর্শিদাবাদ, গুজিঘর, পিন-৭৯২ ৪০৮, ভারত
Tele Phone: +91 3461 230 110, Tele-Fax: +91 3461 230 136
Mobile: +91 98444 41237, +91 9844 41238, +91 9844 41239, +91 9844 41232



St. John's Medical College Hospital in collaboration with Ruth foundation conducted a specialty health camp in Murshidabad, West Bengal. A team of specialists from Department of Gynaecologic Oncology, Radiation Oncology, Cardiothoracic Surgery, Cardiology, Community health and Medical social workers participated in the camp.

UPDATES THIS WEEK

Clean and Green Drive

World Environment Day 2019

8th June 2019



Clean and Green drive of St. John's National Academy of Health sciences as a part of World Environment Day 2019 was initiated by Staff cultural society, National Service Scheme (NSS) of St John's Medical College, St. John's College of Nursing and Department of Ecologics.

Students and faculty from all the departments actively participated in this noble cause. About 720kg of paper and plastic waste was collected from this drive, 3 tractors were required to move the waste out of the campus.

UPDATES THIS WEEK

Indigenously made 'FEEL' Model for Breast Self Examination

10th June 2019



June 10th 2019 (Hospital Based Cancer Registry): The hospital nursing aids underwent breast cancer awareness program. The self breast examination was taught using the indigenously made 'FEEL' model of breast. The same was used in the recent cancer awareness programs conducted in Thirthahalli, Karnataka on 3rd June 2019.

FRIDAY CLINICAL MEETING

31st May 2019

WORLD NO TOBACCO DAY

The theme for the Friday clinic meeting held on 31st May 2019 was WORLD NO TOBACCO DAY, "***Don't let tobacco take your breath away***" conducted by Dr Johnson Pradeep, Department of Psychiatry and his team.

"CHOOSE LIFE NOT TOBACCO" - Out of 5.7 crore annual deaths, 80 lakh deaths are due to tobacco use. Out of it, 10 lakh deaths are due to second hand smoking. Second hand smoking is the risk factor for various conditions like tuberculosis, asthma and COPD. Tobacco increases the risk of lung cancer by 22%. One in five smokers develop COPD. Around 50% of COPD cases are attributable to smoking. Smoking increases the risk of preterm birth, still birth, low birth weight, SIDS, ectopic pregnancy and cleft lips. Children with smoking mothers have decreased lung growth and function and develop chronic respiratory disorders in adulthood. Smoking decreases sperm count, decreases fertility and increases the risk of miscarriage and birth defects.

Dr Priya spoke ***about pharmacological management of tobacco cessation***. Pharmacotherapy has to be considered whenever the patient is self motivated and asks for it. The types of drugs used are nicotine replacement, bupropion and varenicline. Nicotine replacement therapy is given in various forms like patches, gums, lozenges, inhalers and nasal spray. Oral preparation of nicotine is given in 2-4mg in 1-2 pieces every 2 hours. Nicotine patches have a dosage of 14-20 mg. the nuts and bolts of using NRT are as follows,

- Start NRT from the quit date.
- Don't use tobacco and NRT at the same time.
- Follow up after 1 week for 4 weeks

Dose is adjusted on the follow up visit. After 4 weeks of abstinence, tapering of dosage has to be done every 2 weeks. From 21 mg to 14 mg then to 7 mg and then stop. NRT can be used in adolescents above 12 years.

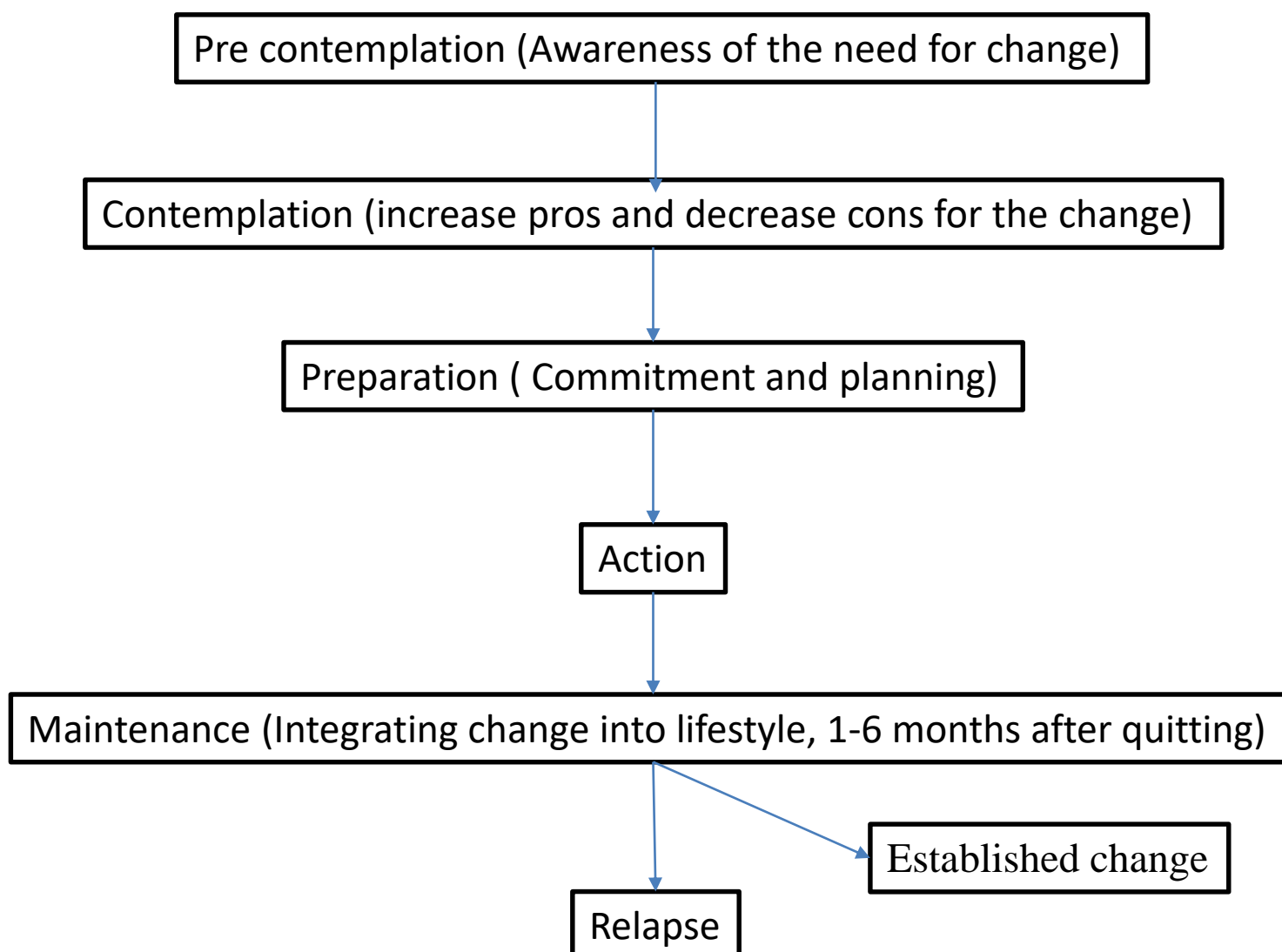
Bupropion is usually used as an antidepressant. 150 mg once daily for 3 days, then 150 mg twice daily for 3 days then continue at 150 mg twice daily for 12 weeks.

FRIDAY CLINICAL MEETING

WORLD NO TOBACCO DAY

Varenicline has maximum effectiveness in tobacco cessation. 0.5 mg once daily for 3 days then 0.5 mg twice daily for 3 days. Then take 1 mg for 12 weeks. Varenicline can be stopped abruptly and is reasonably safe in cardiovascular conditions and pregnancy.

Dr Uttara Chari, Assistant professor, Department of Clinical Psychology spoke about ***psychology of tobacco cessation***. The focus of intervention is to make changes towards quitting. The steps involved in tobacco cessation are as follows :



Dr Reni Thomas, Assistant Professor spoke about the ***psychosocial management of tobacco cessation***. Strong, clear and personalised messages has to be given to the patient in a non judgemental manner. The meeting came to an end with the vote of thanks by Dr Johnson, Associate Professor, Department of psychiatry.

Tobacco

- Dr. Jyothi Idiculla

Extracted from a variety of nightshade
Cigars, pipes and cigarettes are made

With tobacco as the compound prime
Stimulating senses to a state sublime



Doll and Hill in the British Doctors study
Proved beyond doubt that it brings malady

In throat, pancreas, larynx and lung
And obstructive lung in old and young

Small and large arteries are unspared
With atherosclerosis all vessels snared



The last Friday of the month May
Marked the world no tobacco day

Let all move away from this venom
And gain back a health momentum



RESEARCH SNIPPETS

CONFIDENCE INTERVAL

One of the terms that shakes the confidence of most young researchers is "confidence interval".

Expressed in simple terms, confidence interval (C.I) is a level, a range that the researcher can be certain (usually 95% or 99%) certain that it represents the true proportion of the population being represented by the sample in the study.

Confidence Interval is a range of values above and below, within which the actual value of the study finding is likely to fall. It represents the accuracy or precision of an estimate which is an interval estimation. No research finding can be narrowed down to a point estimate. Hence the concept of a confidence interval.

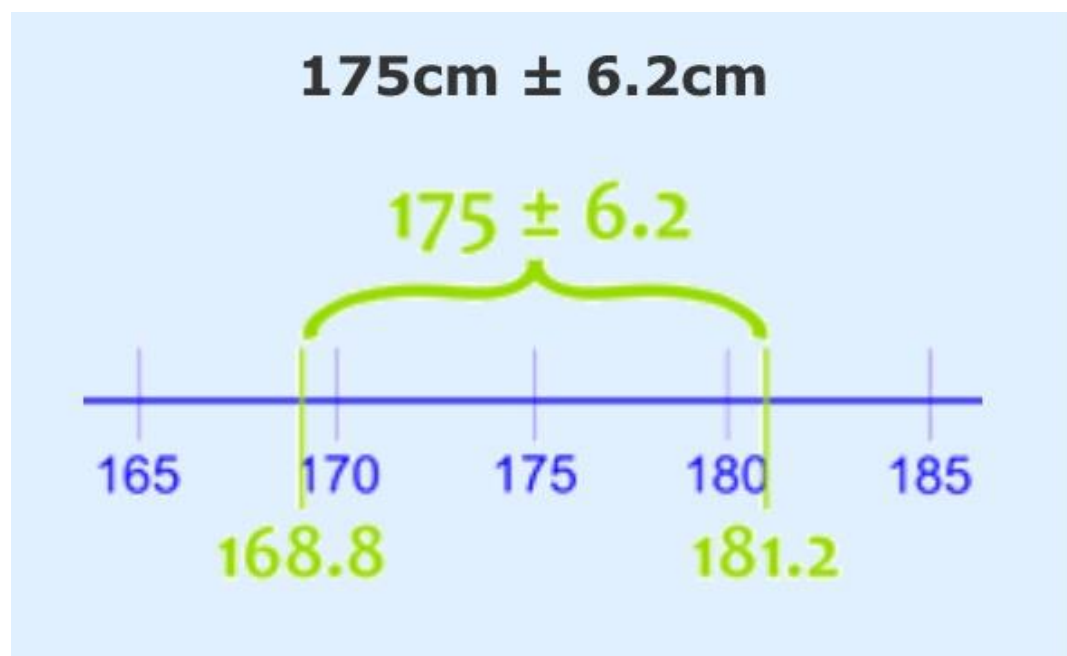
Given below is a simple example:

Average height of 40 male students is 175 cm with standard deviation (SD) of 20 cm. The 95% confidence interval for the above finding is between 168.8 cm and 181.2 cm. That is, **mean \pm 6.20 cm**.

6.20 is arrived at using the formula

$$\text{mean} \pm Z(\text{SD}/\sqrt{\text{no of samples}})$$

where Z is a constant, 1.96 for 95% CI and 2.57 for 99% CI.



The concept of CI can be expressed in the following saying "An approximate answer to the right problem is worth a good deal more than an exact answer to an approximate problem" - John Tukey.

IG NOBEL



1994 - NUTRITION

John Martinez

Luak (Luwak) Coffee

John Martinez of J. Martinez & Company in Atlanta, Georgia, for educating the world about Luak Coffee, the world's most expensive coffee, which is made from coffee beans ingested and excreted by the luak (aka, the palm civet), a bobcat-like animal native to Indonesia.



DIALYSIS UNIT IN ST. JOHN'S MEDICAL COLLEGE & HOSPITAL

The hemodialysis unit is part of the Nephrology department. Dialysis is one of the greatest technological innovation which allows a patient with end stage renal failure to live long and productive life.

In the year 1961, dialysis was introduced in the Indian health care system. Bangalore received first dialysis unit in 1979.

St. John's Medical College Hospital started Dialysis services in 1985.

Hemodialysis Unit of Nephrology Department at St. John's Medical College Hospital is one of the largest units in Karnataka with state of art touch screen functioning machines and 43 hemodialysis stations. Currently the department is headed by Dr Renuka S.

LOCATION & TIMING

TIME: Dialysis Unit works 24/7 - 1st shift starts at 4 a.m. and last shift gets over at 2 a.m. From 2 a.m to 4 a.m. machine is cleaned and disinfected and next day shift starts.

LOCATION: The Dialysis Unit is located on the second floor opposite to Operation Theatre.

THE SERVICES:

The Dialysis unit provides following services:

1. Hemodialysis
2. CAPD (Continuous Ambulatory Peritoneal Dialysis)

The dialysis unit performs approximately 3400 hemodialysis sessions and 4 new CAPDs (Home Dialysis) per month.

RESEARCH ACTIVITIES:

The department takes active part in research & planning innovative devices for patient care and currently 10 research projects are being conducted in collaboration with St. John's Research Institute.

The two innovative devices are developed as a part of research work by Dr Ravi Prakash and team. These devices are not patented yet but are being used in the unit on trial basis. These devices are patient friendly, economic and helps to provide better care:

1. AV fistula sensor
2. Smart urine collector

KEY HIGHLIGHTS:

The dialysis unit in St. John's Medical College hospital is the only center in Karnataka running maintenance hemodialysis program for HIV patients at economical price.

Dialysis patients require social and financial support and keeping that in consideration, the unit has collaboration with Medical Social Work Department and has formed support groups for hemodialysis patients; as of now in this support group 30 below poverty line patients are enrolled and they are given concession of Rs.200/- per dialysis. Some of the medicines like antihypertensives are also given free to enrolled patients. Women hemodialysis patients who are home makers are given additional concession. The support group services are well appreciated by the patients.

The dialysis unit has developed education guidelines for dialysis patients. These guidelines are displayed on TV screens in patient waiting area in English and Kannada languages.

THE TEAM

Hemodialysis is a team work consisting of Nephrologists, Nurses, Dialysis Technologists, Social Worker, Nutritionist & other support staff.

Know Your Hospital!

DIALYSIS
UNIT

DIALYSIS UNIT IN **ST. JOHN'S MEDICAL COLLEGE & HOSPITAL**



The TEAM: From left to right:

1st row – Sweatha, Jaxy V.J., Dr. Renuka S., Dr. Athira, Mercy C.

2nd row – Anuista, Pinky N. Jainy, Shinju, Kavya

3rd row – Antony, Pavan Kumar, Lawrence, Leena Mary, Chinchumol

UNIT



GREY Matters!



WHODIDIT???

Match the medical breakthrough with its inventor/ discoverer

Sl.no	BREAKTHROUGH	Sl no	INVENTOR/DISCOVERER
1	Blood pressure	A	James Blundell
2	Circulation	B	Robert Brown
3	Laughing gas	C	Walter Flemming
4	Lemons for scurvy	D	Alexander Fleming
5	Blood transfusion	E	Christian Barnard
6	Vaccination	F	William Harvey
7	Cell nucleus	G	J Watson, F Crick, M Wilkins
8	Evolution	H	M Roshbash, M Young, J Hall
9	Mitosis	I	Joseph Priestly
10	White blood cells	J	Robert G Edwards
11	Penicillin	K	Stephen Hales
12	Heart transplant	L	Ellie Metchinkoff
13	DNA	M	James Lind
14	In vitro fertilisation	N	Charles Darwin
15	Circadian rhythm	O	Edward Jenner

Brain booster:

Which of the above scientists are Nobel Laureates?





Team of The Month

LAUNDRY AND LINEN SERVICE DEPARTMENT

St. John's Medical College and Hospital has set up a laundry and linen service department which is next to Mercy hostel. This department is headed by Mr. Stephen [General Manager] and laundry in-charges – Sr.Lovely and Mrs. Mini Simon. This department aims to provide a safe and appropriate linen supply which minimizes the risk of infection and cross infection. This applies to the management of hospital's linen, ensuring adequate cleaning of the linen for better hygienic hospital environment and their proper accountability.

The department utilizes 54 employees where 40 staff members are permanent and 14 staff members are under contract basis to maintain adequate linen stock and timely supply with accountability. Their duty timings are from 8am to 4.30pm.



The department handles about 14000 pieces of linen on a given day which includes bed sheets and other linen used in O T and wards, doctors and nurses hospital dress and also blood soaked items from various medical activities which need special treatment before wash.



Team of The Month

LAUNDRY AND LINEN SERVICE DEPARTMENT

Workflow process overview

- 1. Collection:** From inpatient departments on every floor, clothes are collected and sent through the chute. The linen is further collected in a covered trolley. Infected linen [patients who are positive for MRSA, HIV, HBsAG, Hepatitis A and C] is rinsed and soaked in 1% hypochlorite for 15 minutes and is sent to laundry for washing, which is collected separately by the laundry staff.
- 2.** The collected linen is weighed and then loaded [90kg] into the washing machine to rinse with cold water. Washing time for each load is 45 minutes.
- 3. Washing:** Hot water wash or steam wash at 100 Degree Celsius for 15 minutes is carried out which kills most of the vegetative bacteria and an alkaline booster 250ml and fabric liquid detergent 250ml are the solutions used for washing linens.
- 4.** After the washing cycle, linens are moved towards hydro extractor for 7 minutes to squeeze out of the remaining water.
- 5.** Then the wet linens are dried either in sunlight or tumble drying [linen dryer], followed by Ironing, Folding, temporary storage and finally distributed to ward according to due count.





Team of The Month

LAUNDRY AND LINEN SERVICE DEPARTMENT



MACHINES WHICH ENHANCES THE WORKFLOW:

The steam services are available from a HSD 2000kg, Forbes Marshal boiler which was installed in 2004. The department has about 300kg wash capacity by means of Belly washers, front loading/side loading washers and washer extractors. The department is also equipped with tumble drier and calendaring machine [flat work ironer] and has extensive captive built in drying area adjacent to the department.

SLUICING MACHINE

It ensures that the blood soaked items are decontaminated in the sluicer before entering the main stream steam wash





Team of The Month

LAUNDRY AND LINEN SERVICE DEPARTMENT

CALENDERING AND PRESSING MACHINES All clothes washed by laundry department needs to be pressed to ensure neatness and diligence of laundry services

TUMBLE DRYERS – to dry the washed clothes

TAILORING SERVICES

The linen department caters to the replacement linen that is required for the hospital as well as uniforms of various department, both provisioning and replacement.

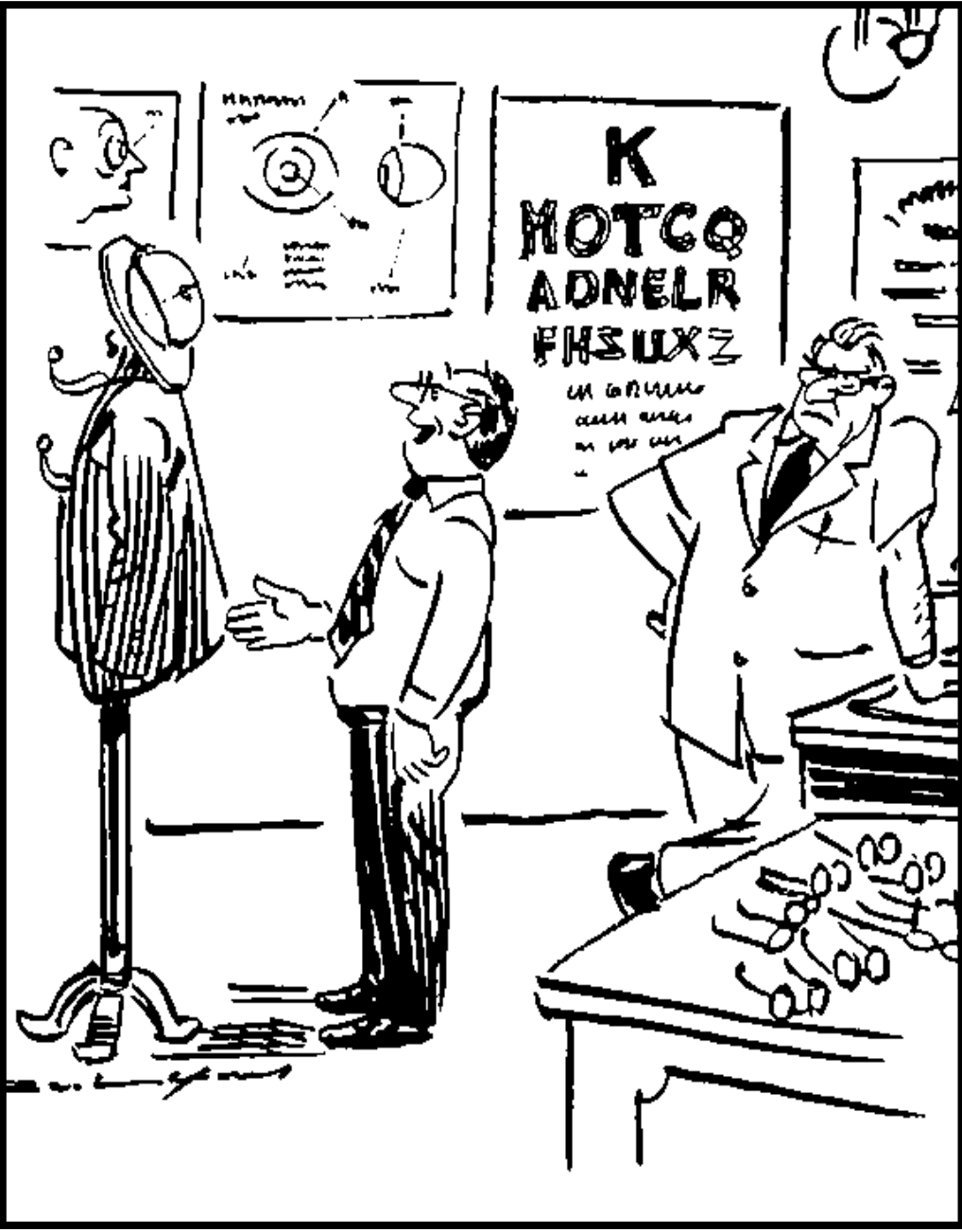
The linen department has staff strength of 4 tailors and 7 tailor helpers. The output of the linen department per day is 100 pieces of stitched items.

For further queries, dial 5215/5216



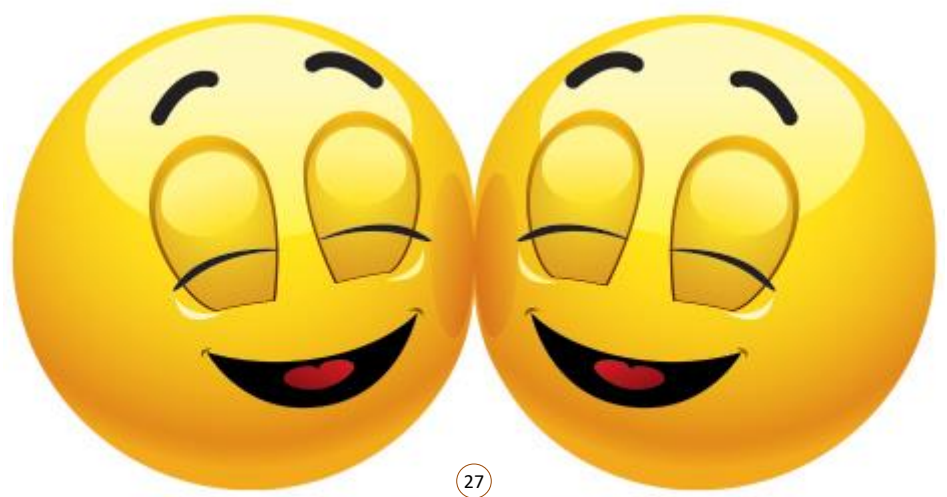


LAUGHTER IS THE BEST MEDICINE...



Thanks Doctor, I can see better now!

Eureka! I found it!- A way to emigrate





New Section!!!

**“ST. JOHN’S
FOUNTAINHEAD”**

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Articles published in the year 2018 (1st
January to 31st December 2018)

**BIOLOGICS AND RISK OF TUBERCULOSIS IN AUTOIMMUNE RHEUMATIC DISEASES:
A REAL-WORLD CLINICAL EXPERIENCE FROM INDIA.**

Shobha V¹, Chandrashekara S², Rao V³, Desai A¹, Jois R⁴, Dharmanand BG⁵, Kumar S⁶, Kumar P⁷, Dharmapalaiah C⁷, Mahendranath KM⁸, Prasad S⁹, Daware MA¹⁰, Singh Y³, Karjigi U⁷, Nagaraj S⁶, Anupama KR².

¹St. John's Medical College Hospital, Bangalore, India. ²ChanRe Rheumatology and Immunology Center and Research, Bangalore, India. ³Manipal Hospital, Bangalore, India. ⁴Fortis Hospital, Bangalore, India. ⁵SAKRA Hospital, Bangalore, India. ⁶Columbia Asia Hospital, Bangalore, India. ⁷Apollo Hospital, Bangalore, India. ⁸Samarpan Health Centre, Bangalore, India. ⁹Vikram Hospital and Heart Care, Mysore, India. ¹⁰Narayana Health City, Bangalore, India.

Abstract

AIM:

Tuberculosis (TB) is one of the major adverse events of concern associated with the use of biologics for managing autoimmune inflammatory rheumatic diseases (AIRDs). The study presents the data on incidence of TB in relation to biologic used, screening test and TB prophylaxis in a real-world setting.

METHODS:

The cross-sectional, observational, retrospective study was conducted across 12 centres in Karnataka, India. The study included patients receiving biologics therapy for AIRDs, established based on the respective diagnostic criteria. The development of TB after receiving biologic therapy and other clinical variables and the predictability of the test performed for latent TB were evaluated.

RESULTS:

One hundred and ninety-five AIRDs patients with an average age of 41 years were initiated on biologic therapy. Twenty-one patients were latent TB positive and were given antitubercular prophylaxis, prior to biologics treatment. During follow-up, seven patients belonging to the negative test group (n = 174) developed TB. The negative predictive values noted for Mantoux test (n = 120) and quantiFERON TB gold test (n = 178) were 96.52% and 96.25%, respectively. Patients on anti-tumor necrosis factor were more likely to develop TB. Presence of comorbidities and steroid use increased the likelihood of developing TB by 1.5 and 4.6 times, respectively.

CONCLUSION:

Close monitoring of patients receiving biologics is essential for early identification of adverse events, especially in test negative patients. Prophylaxis can effectively reduce the risk of developing TB in patients positive for screening.

OPTIMAL TECHNIQUE OF RADIOTHERAPY FOR CARCINOMA CERVIX IN DEVELOPING COUNTRIES: DOSIMETRIC AND LOGISTIC COMPARISON.

Arul Ponni TR¹, Avinash HU², Nirmala S², Janaki MG¹, Kirthi Koushik AS¹.

¹Department of Radiation Oncology, MS Ramaiah Medical College Hospital, Bengaluru, Karnataka, India. ²Department of Radiation Oncology, St. John's Medical College Hospital, St. John's National Academy of Health Sciences, Bengaluru, Karnataka, India.

Abstract

PURPOSE:

Carcinoma cervix is the most common malignancy affecting women in developing countries. Radical radiotherapy is the mainstay of treatment in more than 90% of patients. The present study is a dosimetric and logistic comparison of various techniques of radiotherapy, namely two-dimensional conventional radiotherapy (2DCRT), three-dimensional conformal radiotherapy (3DCRT), and intensity-modulated radiotherapy (IMRT).

METHODS:

All the patients underwent contrast-enhanced computed tomography (CT) scans for simulation. 2DCRT, 3DCRT, and IMRT plans were generated in 24 patients and dosimetrically compared. Radiotherapy treatment time involved in each technique was analyzed in 27 treated patients.

RESULTS:

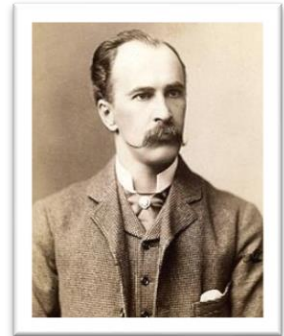
The planning target volume (PTV) coverage was best in 3DCRT technique with a median coverage of 99.9% as compared to IMRT (99.3%) and 2DCRT (82.2%). There was progressive sparing of all the organs at risk in IMRT as compared to 3DCRT. The total planning time was longest in IMRT (332.1 min) and shortest in 2DCRT (11.7 min). The mean treatment time for the delivery of each fraction of 2DCRT, 3DCRT, and IMRT were 14.3, 13.6, and 24.7 min, respectively.

CONCLUSION:

3DCRT technique is the most optimal technique for radical radiotherapy of cervical cancers with optimum PTV coverage, acceptable planning time, and minimal treatment time as compared to IMRT. 2DCRT technique should be limited to the setting where CT simulation is unavailable.

J Cancer Res Ther. 2018 Oct-Dec;14(6):1207-1213.

THE QUOTABLE OSLER



SIR WILLIAM OSLER

Equanimity is difficult to obtain but necessary:

Let me recall to your minds an incident related of that best of men and wisest of rulers, Antoninus Pius [2nd Century Roman emperor], who, as he lay dying, in his home at Lorium in Etruria, summed up the philosophy of life in the watchword, *Aequanimitas*. As for him, about to pass *flammantia moenia mundi* [the flaming ramparts of the world]. So for you, fresh from Clotho's spindle [a Greek goddess, youngest of the three fates, who spun the thread of human life], a calm equanimity, in success as in failure!



© Tricycle: The Buddhist Review

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



MEDICINE DIS WEEK

A Bird's Eye View....

Opioid Therapy not effective in chronic non-cancer pain.

Opioid therapy for the treatment of chronic non-cancer pain is controversial due to insufficient evidence of long-term efficacy and the known risk of serious harm, including addiction and abuse. Lack of clinically important efficacy was demonstrated in a 2018 meta-analysis of 42 randomized trials that compared opioids with placebo for chronic non-cancer pain. The use of opioids was associated with a small reduction in pain (0.69 cm on a 10 cm scale) and slight improvement in function (2.8 points on a 100 point scale). The decision to begin opioid therapy for patients with chronic non-cancer pain must be weighed carefully..

- Busse JW et al. JAMA. 2018 Dec 18;320(23):2448-2460.

Can intracutaneous suturing in ileostomy prevent stoma related complications.

Ileostomy construction is a common procedure but can be associated with morbidity. The stoma is commonly secured to the skin using transcutaneous (TC) sutures. It is hypothesized that intracutaneous (IC) sutures result in tighter adherence of the peristomal skin to the stoma plate to prevent faecal leakage. In a multicentric randomised controlled study 339 patients were compared between IC and TC groups. The faecal leakage was higher in IC than TC (52.4% versus 41.4%). There were no significant difference in quality of life or costs between the two groups.

-Sier MF et al., Br J Surg. 2018 May;105(6):637-644..

JAMA | Original Investigation

Opioids for Chronic Noncancer Pain

A Systematic Review and Meta-analysis

Jason W. Busse, DC, PhD; Li Wang, PhD; Mostafa Kamaleldin, MB BCh; Samantha Craigie, MSc; John J. Riva, DC, MSc; Luis Montoya, DDS, MSc; Sohail M. Mulla, PhD; Luciane C. Lopes, ScD, MSc; Nicole Vogel, PhD; Eric Chen, BHSc; Karin Kirmayr, MD; Kyle De Oliveira, MD; Lori Olivieri, MD; Alka Kaushal, MBBS, DA; Luis E. Chaparro, MD; Inna Oyberman, MD; Arnav Agarwal, MD; Rachel Couban, MA, MSt; Ludwig Tsoi, MBChB; Tommy Lam, MBBS; Per Olav Vandvik, MD, PhD; Sandy Hsu, BA; Malgorzata M. Bala, MD; Stefan Schandelmaier, MD; Anne Scheidecker, MD; Shanil Ebrahim, PhD; Vahid Ashoorion, MD, PhD; Yasir Rehman, MD, MSc; Patrick J. Hong, BMSc; Stephanie Ross, PhD; Bradley C. Johnston, PhD; Regina Kunz, MD, MSc; Xin Sun, PhD; Norman Buckley, MD; Daniel I. Sessler, MD; Gordon H. Guyatt, MD, MSc

IMPORTANCE Harms and benefits of opioids for chronic noncancer pain remain unclear.

OBJECTIVE To systematically review randomized clinical trials (RCTs) of opioids for chronic noncancer pain.

DATA SOURCES AND STUDY SELECTION The databases of CENTRAL, CINAHL, EMBASE, MEDLINE, AMED, and PsycINFO were searched from inception to April 2018 for RCTs of opioids for chronic noncancer pain vs any nonopioid control.

DATA EXTRACTION AND SYNTHESIS Paired reviewers independently extracted data. The analyses used random-effects models and the Grading of Recommendations Assessment, Development and Evaluation to rate the quality of the evidence.

MAIN OUTCOMES AND MEASURES The primary outcomes were pain intensity (score range, 0-10 cm on a visual analog scale for pain; lower is better and the minimally important difference [MID] is 1 cm), physical functioning (score range, 0-100 points on the 36-item Short Form physical component score [SF-36 PCS]; higher is better and the MID is 5 points), and incidence of vomiting.

RESULTS Ninety-six RCTs including 26 169 participants (61% female; median age, 58 years [interquartile range, 51-61 years]) were included. Of the included studies, there were 25 trials of neuropathic pain, 32 trials of nociceptive pain, 33 trials of central sensitization (pain present in the absence of tissue damage), and 6 trials of mixed types of pain. Compared with placebo, opioid use was associated with reduced pain (weighted mean difference [WMD], -0.69 cm [95% CI, -0.82 to -0.56 cm] on a 10-cm visual analog scale for pain; modeled risk difference for achieving the MID, 11.9% [95% CI, 9.7% to 14.1%]), improved physical functioning (WMD, 2.04 points [95% CI, 1.41 to 2.68 points] on the 100-point SF-36 PCS; modeled risk difference for achieving the MID, 8.5% [95% CI, 5.9% to 11.2%]), and increased vomiting (5.9% with opioids vs 2.3% with placebo for trials that excluded patients with adverse events during a run-in period). Low- to moderate-quality evidence suggested similar associations of opioids with improvements in pain and physical functioning compared with nonsteroidal anti-inflammatory drugs (pain: WMD, -0.60 cm [95% CI, -1.54 to 0.34 cm]; physical functioning: WMD, -0.90 points [95% CI, -2.69 to 0.89 points]), tricyclic antidepressants (pain: WMD, -0.13 cm [95% CI, -0.99 to 0.74 cm]; physical functioning: WMD, -5.31 points [95% CI, -13.77 to 3.14 points]), and anticonvulsants (pain: WMD, -0.90 cm [95% CI, -1.65 to -0.14 cm]; physical functioning: WMD, 0.45 points [95% CI, -5.77 to 6.66 points]).

CONCLUSIONS AND RELEVANCE In this meta-analysis of RCTs of patients with chronic noncancer pain, evidence from high-quality studies showed that opioid use was associated with statistically significant but small improvements in pain and physical functioning, and increased risk of vomiting compared with placebo. Comparisons of opioids with nonopioid alternatives suggested that the benefit for pain and functioning may be similar, although the evidence was from studies of only low to moderate quality.

JAMA. 2018;320(23):2448-2460. doi:10.1001/jama.2018.18472

← Editorial page 2427

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Author Affiliations: Author affiliations are listed at the end of this article.

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Randomized clinical trial of intracutaneously *versus* transcutaneously sutured ileostomy to prevent stoma-related complications (ISI trial)

M. F. Sier¹, D. D. Wisselink², D. T. Ubbink², R. J. Oostenbroek³, G. J. Veldink², B. Lamme³, P. van Duijvendijk⁴, A. A. W. van Geloven⁵, Q. A. J. Eijsbouts⁶ and W. A. Bemelman², on behalf of the ISI trial study group

Departments of Surgery, ¹University Medical Centre Leiden, Leiden, ²Academic Medical Centre Amsterdam, Amsterdam, ³Albert Schweitzer Hospital, Dordrecht, ⁴Gelre Hospital, Apeldoorn, ⁵Tergooi Hospital, Hilversum, and ⁶Spaarne Gasthuis, Hoofddorp, The Netherlands

Correspondence to: Mrs M. F. Sier, Department of Surgery, Room D6-32, Leiden University Medical Centre, Albinusdreef 2, 2300 RC Leiden, The Netherlands (e-mail: mfsier@hotmail.com)

Background: Ileostomy construction is a common procedure but can be associated with morbidity. The stoma is commonly secured to the skin using transcutaneous sutures. It is hypothesized that intracutaneous sutures result in a tighter adherence of the peristomal skin to the stoma plate to prevent faecal leakage. The study aimed to compare the effect of intracutaneous *versus* transcutaneous suturing of ileostomies on faecal leakage and quality of life.

Methods: This randomized trial was undertaken in 11 hospitals in the Netherlands. Patients scheduled to receive an ileostomy for any reason were randomized to intracutaneous or transcutaneous suturing (IC and TC groups respectively). The primary outcome was faecal leakage. Secondary outcomes were stoma-related quality of life and costs of stoma-related materials and reinterventions.

Results: Between April 2011 and February 2016, 339 patients were randomized to the IC (170) or TC (169) group. Leakage rates were higher in the IC than in the TC group (52.4 *versus* 41.4 per cent respectively; risk difference 11.0 (95 per cent c.i. 0.3 to 21.2) per cent). Skin irritation rates were high (78.2 *versus* 72.2 per cent), but did not differ significantly between the groups (risk difference 6.1 (95 per cent c.i. -3.2 to 15.10) per cent). There were no significant differences in quality of life or costs between the groups.

Conclusion: Intracutaneous suturing of an ileostomy is associated with more peristomal leakage than transcutaneous suturing. Overall stoma-related complications did not differ between the two techniques. Registration number: NTR2369 (<http://www.trialregister.nl>).

Paper accepted 3 October 2017

Published online 1 March 2018 in Wiley Online Library (www.bjs.co.uk). DOI: 10.1002/bjs.10750

Introduction

Ileostomy construction is a common procedure, with an estimated 50 000 ileostomies formed annually in the USA, most commonly to divert a downstream low anastomosis¹. The morbidity rate is high, ranging from 21 to 60 per cent². This results in decreased quality of life (QoL), and disturbed physical and psychological well-being³⁻¹⁰.

Peristomal dermatitis may occur in up to 65 per cent of patients with an ileostomy¹¹. The most important factor contributing to peristomal dermatitis is leakage of faeces under the stoma plate. Causes of leakage include inappropriate stoma site, inappropriate use of stoma

materials, stoma retraction, high BMI or a parastomal hernia. Leakage requires frequent changes of the stoma plate, which may result in further damage to the peristomal skin. In addition, ileostomies tend to produce frequent watery stool containing proteolytic enzymes with a high acid content, which can further damage the surrounding epidermal structure.

Although consensus exists on how to fashion an ileostomy, there is no standard method for suturing the stoma to the skin. This can be done transcutaneously, keeping the stitches exposed, or intracutaneously, burying the resorbable stitches below the skin surface. Most surgeons use a transcutaneous technique as it is technically

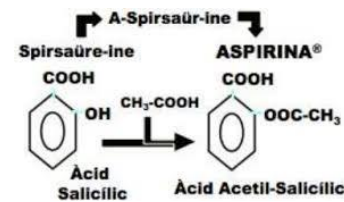
Background of Aspirin

There was a need for relief of miseries caused by pain due to chronic disorders, such as arthritis, or short-term conditions, such as headaches and toothaches.

In the summer of 1758, the Rev. Edward Stone, of Chipping Norton, in Oxfordshire, England, chewed on a twig of the white willow tree (*Salix alba*). Despite its "extraordinary bitterness". He was astounded to find that it relieved his "ague".

In the 1820s, the Swiss pharmacist Johann S. F. Pagenstecher began extracting a substance from the leaves of the plant meadowsweet (*Spirea ulmaria*) and well known as a pain reliever in folk medicine. Pagenstecher's report in a scientific journal was read in 1835 by the German chemist Karl Jacob Lowig, who, using the extract, obtained an acid he called 'spirsauere', later to be known as **salicylic acid**.

Its molecular structure was discovered in 1853 by Karl Friedrich Gerhardt, a chemistry professor at France's Montpellier University. He also tried to modify it, to eliminate its severe side-effect, the painful irritation of the stomach lining, but he found the procedure so time consuming that he abandoned the drug as "of no further significance".

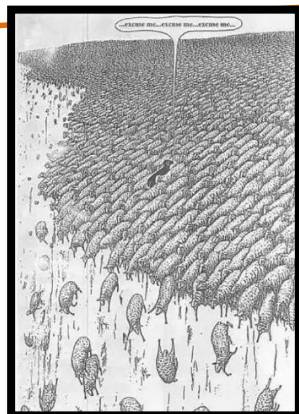


PEARLS OF WISDOM

Be the person who can smile on the worst day
- Cate



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Don't just go with the flow, take some dares through the rapids.

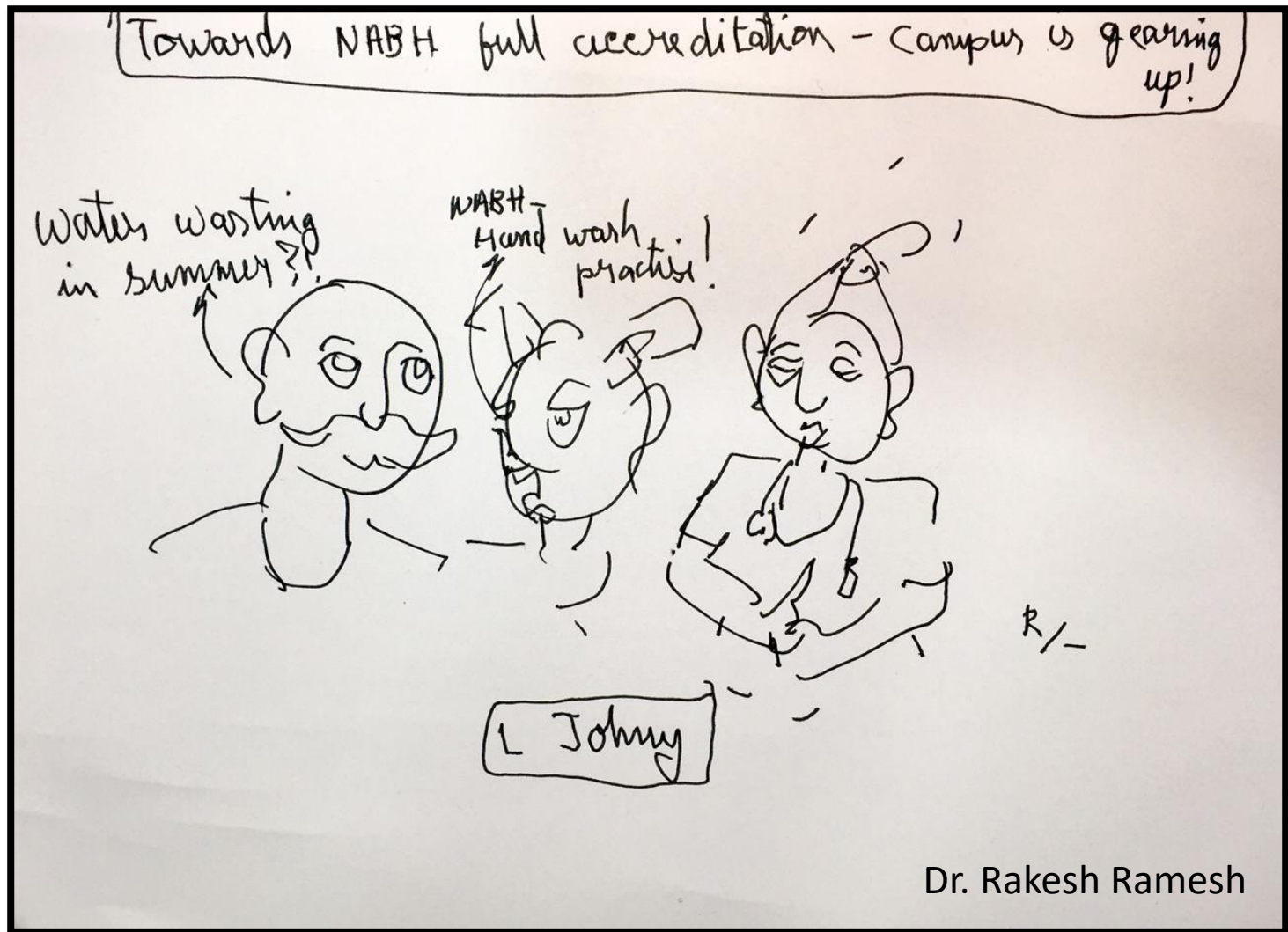
- Isabelle

Where there is love, there is joy.
- Mother Teresa



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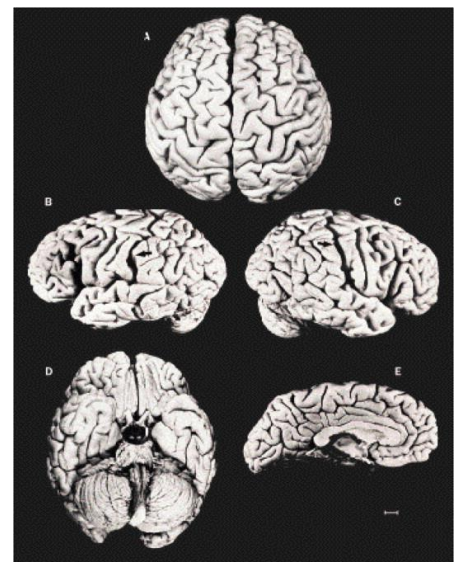
L Johnny



Did You Know?

Albert Einstein's brain was stolen after his death? Einstein did not want his body or brain to be studied and had specially requested that he be cremated and the ashes scattered after his death. However, Thomas Harvey, the Pathologist on call at Princeton Hospital where Einstein died, did not comply- in fact he stole the "special" brain that gave us the theory of relativity and the photoelectric effect and even had an article published in the Lancet about it!! The photograph taken in 1995 shows 5 views of Einstein's Brain.

Source- The National Geographic



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