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ST.JAMES COLLEGE OF PHARMACEUTICAL SCIENCES, CHALAKUDY - 680 307
Ph: 0480 2710936, 2710981; E-mail: stjamespharmacycollege@yahoo.co.in, stjamesdruginfo@gmail.com

EARLY REPOLARIZATION SYNDROME- IS IT TRUELY BENIGN?

Dr. Manoj
Consultant Neurosurgeon
St. James Hospital, Chalakudy

Over the past couple of centuries we have witnessed revolutionary changes in many areas of science. Modern medicine has also benefitted heavily from these jaw dropping discoveries, the best being, in my opinion, the human genome project. At the same time we need to stay honest to ourselves and acknowledge that we only discovered a tiny fraction of what there is to know!

We are not "just another species". Humans are unique and special in many ways. Hence managing humans is a challenging "business".

There is a general agreement among the Medical fraternity that patient-centered care is one of the essential elements of high quality care.They define patient-centered care as 'respecting and responding to patients' wants, needs and preferences, so that patients can make choices in their care that best fit their individual circumstances'. Studies demonstrate that patient-centered care is associated with improved healthcare outcomes, particularly in patients with chronic diseases. It seems as if it would be both important and easy to deliver this kind of care. But, in fact, it is very difficult to do well.

Patient-centered care requires physicians and other healthcare providers to have the communication skills to elicit patients' true wishes and to recognise and respond to both their needs and their emotional concerns. As much as any technical skill, communication is a sophisticated procedure—one that needs to be taught and honed throughout one's career.

We are indeed privileged to be a part of the golden era of modern medicine, marked by spectacular discoveries in medical technology, pharmacology and disease prevention strategies. But most of us will agree that there is mismatch between the scientific advances and the heath care delivery system in our country. Is it due to financial issues, social issues or can it be attributed to "Culture of Medical Practice" in our area?

Let us take a closure look at these issues by reading about a story:

A 70 year old man, retired beedi worker from northern Kerala was referred to a hi-tech hospital in central Kerala with chronic cough, fever and weight loss. He had an MI five years back. Inspite of his multiple visits to different hospitals his symptoms were getting worse. In the HI-Tech hospital he was referred to various reputed specialists, each doing diagnostic tests relevant to their specialty. Finally he was referred to General Medicine as his condition was rapidly deteriorating. A history of smoking, pneumonia and weight loss not responding to antibiotics and ATT, the possibility of an underlying malignancy was considered by the treating team. Bronchoscopy, CT scan, Lung biopsy etcetc were done – everything negative. While the team of specialists were scratching their head deeper and deeper, patients condition deteriorated further and further. He developed an MI at two weeks of admission and was ventilated and was decaled dead after three days! Post mortem study revealed a rare and very elusive histological type of lung malignancy- bronchoalveolar carcinoma.

The questions that we need to ask are

1. Why did he go to the hi-tech hospital?

Frustration or lack of confidence in the treatment received locally. Or did he believe that hi-tech hospitals have cure for all illnesses!

2. Did he receive an appropriate care in the hi-tech hospital?

3. Was his treatment cost effective?

4. Did he die with dignity?

The lack of a holistic approach and compartmentalization proved futile and expensive for a retired beedi worker. The bulky case record of the patient did not mention anything about the person he was, his desires or his family background. Had he known that likely diagnosis is a malignancy, could he have preferred to die in the comfort of his home, close to his family members rather than isolated in an airconditioned environment on a ventilator, starring at a colourless ceiling,with tubes in all possible orifices, surrounded by capped and masked "professionals"!

Do we have a solution for this in the near future?

I don't think so. Hospitals and health care professionals won't change that fast as most of them have created a comfort zone of their own and prefer to dwell in it. But future has something to offer through technology.

Imagine that couples having the opportunity to select embryos that will not only be the least susceptible to disease but which also have particular hair colors, skin tones, temperaments, or other personal attributes.

Would you want the option of harnessing the power of genetics to alter the DNA of your unborn baby? Would you want this to prevent disease? Select physical characteristics? Or "design" your baby by changing the genetic code?

Genetic science has the potential to provide prospective parents with unprecedented control over their unborn child's characteristics and attributes. In vitro fertilization and preimplantation genetic diagnosis allow couples to sort out "good" from "bad" embryos prior to the start of pregnancy

The patented process from 23andMe, an American company, whose main business is collecting DNA from customers and analyzing it to provide information about health and ancestry, could be employed to match the genetic profile of a would-be parent to that of donor sperm or eggs. In theory, this could lead to the advent of "designer babies," a controversial idea where genes would be selected to boost the chances of a child having certain physical attributes, such as a particular eye or hair color.

The parents could actually pick on computer the desirable characteristics they wanted in their baby from the genomic data of the egg or sperm provider. Characteristics on the shopping list include height, eye colour, muscle development, personality traits and genetic susceptibility to certain types of cancer and other diseases

Would you support the idea of genetic engineering?

Of course yes when it comes to incurable diseases that can cause life long disability or death. And a big NO when it comes to creating "super babies".

It seems almost like playing god. You can get rid of undesirable characteristics and only promote the desirable ones. This will essentially mean that some children will have more enhanced characteristics than others which would give them a better chance at life. Of course, we do have a society which is unfair. A child born in a rich, well-off family will simply have more chances of living a higher quality of life than a child born in a poorer family. But assuming this procedure is expensive, we could have a society where the rich can buy the desirable characteristics in their children. No matter how hard or long I practice, I will never run like Usain Bolt. I just don't have the genetic make-up for it, but a parent being able to buy that characteristic for his child is a scary thought indeed.Altering the DNA is not natural. It just cannot be mine! It is synthetic!

DEPARTMENT ACTIVITIES

- Our Pharm D students have actively participated in National Pulse Polio Immunization Programme which was held on January 19th & Feb 23rd of 2014 respectively.
- An awareness programme regarding Monsoon disease & its prevention was conducted by our M.Pharm Pharmacy Practice students on 7th of July at St. James Hospital, Chalakudy & July 23rd at St James Medical Academy, Chalakudy.
- One day seminar on topic "Patient Counselling-An international overview" was held by Pharmacy Practice department, St James College Of Pharmaceutical Sciences, Chalakudy on July 21st at St James Medical Academy. Seminar was blessed by the presence of Rev. Dr. Jojo Antony Thoduparambil Associate Director, St. James Medical Academy, Chalakudy. Ist session was conducted on the topic "Patient counselling" by an

Pharm D students have actively participated in National Pulse Polio Immunization Programme

An awareness programme on Monsoon disease & its prevention

eminent speaker Dr A Shyamsundar,Assistant Dean (academic affairs), University of Nizwa, Sultanate of Oman. He conveyed valuable topics of current interest in patient counseling which included two new operation models such as 5A & SAFER models.

- IInd session was conducted by an intellectual speaker Dr K T Manisenthilkumar, Professor, Dept of Pharmacology, KMCH College of pharmacy, Coimbatore on the topic "Clinical Research". We were inculcated with new aspects of clinical research which encompass challenges and ethical issues of Clinical Trials. The seminar ended with an interactive session with the speakers.

- An Exhibition "Medifest 2014" was conducted by St James Medical Trust on account of silver jubilee celebrations held at St James hospital on August 7th to 10th of 2014 at hospital campus. Staff & students of Department of Pharmacy Practice actively participated in the exhibition in different areas of patient care by providing patient counseling along with demonstration of insulin pen & different types of inhalers, by checking BMI, distributing patient leaflets and answering drug and disease information related queries.

Dr A Shyamsundar,Assistant Dean (academic affairs), University of Nizwa delivering lecture on "Patient counselling"

Dr K T Manisenthilkumar, Professor, Dept of Pharmacology, KMCH College of pharmacy delivering lecture on "Clinical Research"

Pharmacy Practice students interacting with public at Medifest 2014

Patient Counselling

Today there are so many people prone to medication errors due to patient's ignorance about medicines and their usage. Patient counseling plays an important role in avoiding such errors and improving medication adherence, thereby enhancing the quality of life (QOL).

Patient Counselling - data analysis

Ward	DM	HTN	PUD	BA	UTI	COPD	Spondylitis
General	30	27	1	15	2	2	2
Surgery	15	11	6	6	4	6	1
Gynecology	10	5	1	2	11	2	1
Orthopedic	5	4	8	5	5	5	2
Cardiac	5	10	3	10	3	10	1

Drug Information - data analysis

Department has provided reliable and up to date information on various queries.

MOA	Indication	ADR	General	Dose	Interactions
17	21	11	28	18	7

HIGHLIGHTS

SEMINAR & CONFERENCES

- Second year M Pharm Pharmacy Practice students actively participated in one day national seminar on ' PHARMACEUTICAL CARE' organised by National College of Pharmacy, Dec 2013.
- Mr. Joseph Cherian, Mrs. Bincy Baby and Pharm D students actively participated in conference on the theme 'Advancing Pharmacy Practice in India: The Next Generation Pharmacist'. organized by Indian Association of Colleges of Pharmacy (IACP), Feb 2014.

PUBLICATIONS

- Lincy George*, L. Panayappan, K. Krishnakumar. Antibiotic usage in urinary tract infection. Journal of Pharma Innovative Research. 2014; 1(1): 66-71.
- Alfet Raju Anthraper*, Lincy Goerge, L. Panayappan, K. Krishnakumar. Case study on neonatal seizures. Journal of Pharma Innovative Research. 2014; 1(1): 60-65.
- Ivin Jayandran*, Cincy M M , Lincy Geogre, Panayappan L, Krishnakumar K, Dineshkumar B. Timing of Pre-operative Antibiotics in Relation with Surgical Site Infection. Scholars Journal of Applied Medical Sciences (SJAMS). 2014; 2(2A):522-525.
- Jini. K. Bose, Treesa. P. Varghese, Panayappan L, Lincy George, Kirshnakumar K. Tuberculoma of Brain – A Review. Current Research in Medicine and Medical Sciences. 2014; 4(1): 7-8.
- Jasmine George*, Hari. A, Lincy George, L. Panayappan, K. Krishnakumar. Choice of Drug Eluting Stent: A Review. Scholars Academic Journal of Pharmacy (SAJP). 2014; 3(2): 150-152.

ONGOING RESEARCH

- A study on impact of neurologic drugs in reducing back pain by comparing safety and efficacy of combination therapy of neurologic drugs and NSAID's with monotherapy of each.
- A prospective study on the etiological factors and troponin levels in patients with acute coronary syndrome.
- A prospective observational study to evaluate the antimicrobial resistance pattern of inpatients with UTI & LRTI.
- An insight into the case management and treatment with special emphasize on on guidelines to prevent the substance addiction.
- An assessment of rational use of drugs in type -2 Diabetes Mellitus.
- Assessment of quality of life and evaluation of drug use in stroke survivors.
- Comparative study of prasugrel and clopidogrel for platelet reactivity on patients who underwent angioplasty.
- Identification of human population at high risk for stroke and guideline for the prevention of stroke.
- Timing of pre -operative antibiotics in relation with surgical site infections: a prospective study.
- Drug utilization pattern of NSAIDs and health related quality of life of patients with osteoarthritis.
- Assessment of health related quality of life and pharmacoeconomics of the drugs used in type 2 DM.
- An assessment of health related quality of life of hypertensive patients and pharmacoeconomics of the drugs used in hypertension.
- An assessment and evaluation of patient compliance in type 2 Diabetes Mellitus.
- Monitoring and evaluating of medication in elderely with DM and hypertension using Beer's criteria.
- COPD- An assessment of health related quality of life of the patients and pharmacoeconomics of therapeutic alternatives.
- Risk stratification and prevention strategy in diabetic foot ulcer.

RECENTLY APPROVED DRUGS BY FDA

GENERIC NAME	BRAND NAME	INDICATION	DATE OF APPROVAL
Vortioxetine	Brintellix	Major depressive disorder.	30/9/13
Conjugated estrogens/ bazedoxifene	Duavee	To treat moderate-to-severe hot flashes associated with menopause and to prevent osteoporosis after menopause.	3/10/13
Riociguat	Adempas	Pulmonary hypertension.	8/10/13
Macitentan	Opsumit	Pulmonary arterial hypertension (PAH)	18/10/13
Flutemetamol F 18 injection	Vizamyl	A radioactive diagnostic drug for use with positron emission tomography (PET) imaging of the brain in adults being evaluated for Alzheimer's disease (AD) and dementia.	25/10/13
Obinutuzumab	Gazyva	For use in combination with chlorambucil to treat patients with previously untreated chronic lymphocytic leukemia	1/11/13
Eslicarbazepine acetate	Aptiom	As an add-on medication to treat seizures associated with epilepsy.	8/11/13
Ibrutinib	Imbruvica	Mantle cell lymphoma (MCL)	13/11/13
Luliconozole	Luzu	Topical treatment of interdigital tinea pedis, tinea cruris, and tinea corporis	14/11/13
Simeprevir	Olysio	Chronic hepatitis C virus infection.	22/11/13
Sofosbuvir	Sovaldi	Chronic hepatitis C virus (HCV) infection.	6/12/13
Umeclidinium and vilanterol inhalation powder	Anoro Ellipta	Long-term maintenance treatment of airflow obstruction in COPD	18/12/13
Dapagliflozin	Farxiga	To improve glycemic control, in adults with type 2 diabetes	8/1/14
Tasimelteon	Hetlioz	Non-24- hour sleep-wake disorder ("non-24") in totally blind individuals.	31/1/14
Elosulfase alfa	Vimizim	Mucopolysaccharidosis Type IVA	14/2/14
Droxidopa	Northera	Neurogenic orthostatic hypotension (NOH)	18/2/14
Metreleptin for injection	Myalept	To treat the complications of leptin deficiency	24/2/14
Florbetaben F 18 injection	Neuraceq	For (PET) imaging of the brain	19/3/14

Miltefosine	Impavido	Leishmaniasis	19/3/14
Apremilast	Otezla	Active psoriatic arthritis	21/3/14
Albiglutide	Tanzeum	To improve glycemic control, in adults with type 2 diabetes	15/4/14
Ramucirumab	Cyramza	Advanced stomach cancer or gastroesophageal junction adenocarcinoma	21/4/14
Siltuximab	Sylvant	To treat patients with multicentric Castleman's disease (MCD)	23/4/14
Ceritinib	Zykadia	Certain type of late-stage (metastatic) non-small cell lung cancer	29/4/14
Vorapaxar	Zontivity	To reduce the risk of heart attacks and stroke in high-risk patients	8/5/14
Vedolizumab	Entyvio	Moderate to severe ulcerative colitis and moderate to severe Crohn's disease	20/5/14
Dalbavancin	Dalvance	Skin infections	23/5/14
Efinaconazole	Jublia	Mild to moderate onychomycosis	6/6/14
Tedizolid phosphate	Sivextro	Skin infections	20/6/14
Belinostat	Beleodaq	Peripheral T-cell lymphoma (PTCL)	3/7/14
Tavaborole	Kerydin	Topical treatment of onychomycosis of the toenails	7/7/14

DRUG PROFILE

Dapagliflozin

Approved date 8-1-2014

Indication

Dapagliflozin is an oral diabetic medicine. Indicated as an adjunct to diet and exercise to improve glycemic control in adults with Type 2 Diabetes.

Mechanism of action

Dapagliflozin selectively inhibits sodium – glucose co transporter 2 (SGLT-2) in the proximal renal tubules, reduce absorption of filtered glucose from the tubular lumen, increases urinary excretion of glucose and lowers blood glucose level.

Dosage & administration

The recommended starting dose is 5 mg once daily, taken in the morning, with or without food. In patients tolerating 5 mg once daily who require additional glycemic control, the dose can be increased to 10 mg once daily.

Contraindications

Dapagliflozin is contraindicated in patient with history of hypersensitivity to drug, severe renal impairment, end stage renal disease or patients on dialysis.

Special precautions

Before taking this medication tell the doctor if you are allergic to it, any kidney diseases, bladder cancer, dehydration, low blood pressure, history of yeast infection in vagina or penis etc. Limit alcohol while taking this medication because it can increase your risk of developing low blood sugar.

Drug interactions

The hypoglycemic effect of dapagliflozin may be en-

hanced when used in combination with other drugs such as MAO inhibitors, salicylates, SSRIs and other hypoglycemic agents.

Adverse Drug Reactions

Adverse drug reactions are female genital mycotic infections, nasoparyngitis, urinary tract infection, dyslipidemia, breast cancer, liver toxicity etc.

Side effects

Most common side effects include hypoglycemia with concomitant use with insulin, genital tract infection, increase in LDL, frequent urination, dehydration, bladder cancer etc.

Adverse Drug Reaction

The following are some of the adverse drug reactions either reported to or detected by the department of pharmacy practice during the period November 2013-July 2014

Sl.no.	Drugs	Category	Route	Nature of ADR
1	Penicillin	Antibiotic	IM	Steven johnsons syndrome
2	Warfarin	Anticoagulant	Oral	Hematuria
3	Lornoxicam	Analgesic	Oral	Itching and swelling on face,eyelids
4	Ranitidine	H2 receptor antagonist	Injection	Erythema on hands
5	Piperacillin & Tazobactum	Antibiotic	Injection	Antibiotic associated diarrhoea
6	Amoxicillin	Antibiotic	Oral	Itching,dyspnoea,lethargy,hypotension
7	Potassium citrate		Oral	vomiting
8	Aztreonam	Antibiotic	Injection	Rash & itching on the body
9	Aspirin + clopidogrel		Oral	Hematuria
10	Ibuprofen	Analgesic	Oral	Itching,swelling on face
11	Ciprofloxacin	Antibiotic	Eye drops	Generalised rashes,swelling all over face,neck,back region crusting over both eyelids
12	salbutamol	Short acting beta 2 adrenergic receptor	Oral	Tremor
13	Diclofenac	Analgesic	Oral	Redness & puffiness on face , rashes all over the body
14	Gemifloxacin	Antibiotic	Oral	Glossitis
15	Ceftriaxone	Antibiotic	Injection	Rashes under eye
16	Levosulphiride	Antipsychotic & prokinetic	Oral	Irregular talking, slurring of speech(neuroleptic malignant syndrome)

H.E. Mar pauly Kannookadan, visiting the Pharmacy Practice stall at "Medifest 2014"

Inaugural function of the seminar on 'Patient Counselling - An Overview'

Student interaction with Dr. A. Shyamsundar on the seminar day

Audience for the seminar on 'Patient Counselling - An Overview '

Activities at Department of Pharmacy Practice

We Acknowledge: the doctors of St. James' Hospital, Chalakudy for their interaction with the students during ward rounds and queries directed to our Drug Information Centre which in-turn help us to train the students. Their constant support keeps us growing.

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ST. JAMES COLLEGE OF PHARMACEUTICAL SCIENCES, ST. JAMES MEDICAL ACADEMY, CHALAKUDY - 680 307

Ph: 0480 2710936, 2710981; E-mail : stjamespharmacycollege@yahoo.co.in, stjamesdruginfo@gmail.com

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