

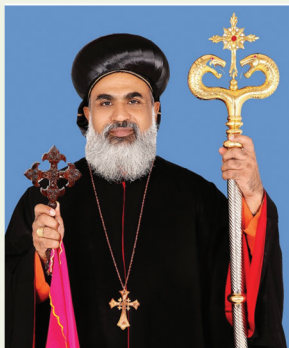


CLINICAL PHARMA PRACTICE NEWS ECHO

A Quarterly News Letter From Dept. of Pharmacy Practice

Vol. 4, Issue 4, 2020

= OUR PATRON =



H.G. Most Rev. Dr. Thomas Mar Koorilos
Metropolitan Archbishop
Catholic Archdiocese of Tiruvalla

= OUR VISION =

We Care... God Cure...

= OUR MISSION =

To work towards a knowledge society with a life in abundance, through science and technology, to improve health care.

= EDITORIAL BOARD =

Dr. Santhosh M Mathews
Mrs. Rani Manju
Mrs. Athulya Raj
Mrs. Archana Vijay
Dr. Jomin George Joseph
Mrs. Pheba Susan Thomas
Ms. Julie Mariam Joshua

Chief Editor:
Mr. Nithin Manohar R

MESSAGE FROM CEO

I am extremely happy to know that Pushpagiri College of Pharmacy is releasing a special newsletter from the Department of Pharmacy Practice. Let me thank each and every one for your wholehearted cooperation to the management especially in this COVID-19 pandemic. Heartfelt congratulations for the editorial team and wishing all the success to the Clinical Pharma Practice News Echo.



Fr. Jose Kallumalickal
(Chief Executive Officer,
Pushpagiri Group of Institutions)

MESSAGE FROM DIRECTOR

It gives me great pleasure to know about the forthcoming issue of the college newsletter. This newsletter will definitely help to showcase the activities that are allied with the Department of Pharmacy Practice. I wish it all success and hope that this culture of releasing Newsletter continues forever.



Fr. Aby Vadakumthala
(Director,
Pushpagiri Group of Institutions)

MESSAGE FROM PRINCIPAL

I am glad to see that Department of Pharmacy Practice put together the new edition of newsletter "Clinical Pharma Practice News Echo-2020". I do appreciate and applaud the editorial team for bringing out this newsletter in time. I wish all success to the team



Dr. Santhosh M Mathews
Principal

MESSAGE FROM CHIEF EDITOR

It gives me great pleasure to welcome you to another issue of Clinical Pharma Practice News Echo. The current issue highlights the overview of clinical activities processed by our students, review articles, case reports, Covid'19 awareness program, list of ongoing projects and MoU between Pushpagiri College of Pharmacy and Pushpagiri Medical College Hospital, Thiruvalla. Let me close by offering my sincere thanks for everyone's support and help especially for my colleagues Mrs. Rani Manju, Mrs. Athulya Raj, Mrs. Archana Vijay, Mrs. Pheba Susan Thomas, Dr. Jomin George Joseph and Ms. Julie Mariam Joshua. I hope that you will enjoy reading this issue. Please feel free to offer any suggestions for improvement.



Mr. Nithin Manohar R
Chief Editor

EDITORIAL BOARD

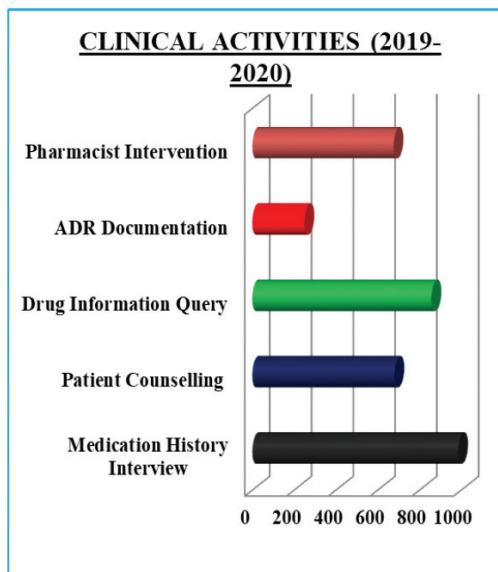
DEPARTMENT OF PHARMACY PRACTICE



CLINICAL ACTIVITIES AT A GLANCE

As the practice of pharmacy evolves, requiring more clinically oriented healthcare providers, Doctor of Pharmacy (PharmD) programs expand their training to more hospital sites to expose students to the provision of safe, effective, and economic drug therapy to patients. The main objective is to maximize the clinical effects of medicines, i.e., using the most effective treatment for each type of patient; minimizing the risk of treatment-induced adverse events, i.e., monitoring the therapy course and the patient's compliance with therapy trying to provide the best treatment alternative for the greatest number of patients.

Our present Pharm D students and interns were posted in various departments in Pushpagiri Medical college hospital namely General medicine, Cardiology, Nephrology, Neurology, Pulmonology & specialities



such as General Surgery, Orthopedics OBG, Paediatrics and Psychiatry performing various activities in association with clinical aspects of a pharmacist.

COVID 19: A CATASTROPHE FOR MENTAL HEALTH

The world has changed as never before! The COVID-19 pandemic has forced us to change everything- the way in which we used to interact with people, the way we used to communicate with each other, the way in which we have planned our everyday lives and above all, the way in which we had planned our future! A new world order is in place and we have no idea when we are able to get out of the stranglehold of the pandemic! This has serious implications on mental health.

A Catastrophe for Mental Health

COVID-19 has affected people in multiple ways- thousands are infected and hundreds have died. As of now, India has seen about 3,000,000 cases and nearly 60,000 deaths. Emotional trauma has been severe. Many have been affected with depression, anxiety, stress disorders and adjustment problems. We have also seen large number of suicides across the country. People who are infected with the virus, those who were in quarantine and those who fear the disease all, died by suicide! A large number of children and adolescents have taken their lives too. In Kerala alone, more than 70 children have died by suicide, hurting the conscience of all of us Besides this, a large part of the population has lost their livelihoods. Many are facing poverty at a scale which we could have never imagined before! Family incomes have crumbled and prosperity has become a distant dream! Educated and technologically qualified is also facing job loss. The loss of employment in the unskilled and unorganised sector is even worse. These are likely to lead to a mental health crisis in our state

Dr. Roy Abhraham Kallivayalil

Professor and HOD psychiatry,
Pushpagiri Institute of Medical Sciences,
Thiruvalla.
Secretary General,
World Psychiatric Association, Geneva



and in India. An impending wave of PTSD (Post Traumatic Stress Disorder) can also be expected. The state of affairs will not be different in many other countries of the world.

What can be done?

The first and foremost is to accord priority for mental health in our all our healthcare interventions. There is no health without a mental health! The following concrete steps will be helpful.

1. Prevent isolation: Man is a social animal and isolation is ruinous to his health and mental health. We may need to send people to hospitals and to quarantine when needed. But we can remain physically distant but socially and emotionally close! We should remain in constant touch with people either through telephone or various smart phone applications like WhatsApp, Facebook, YouTube and the like.
2. Regular physical activity like walking or jogging should be actively encouraged.
3. Every effort should be made to provide alternate employment opportunities.

4. Recreational activities should include reading newspapers, books, music, TV and the like.
5. Universal medical insurance should be made available, to cover the cost of treatment and illness
6. People below the poverty line should be supported with adequate food supplies and financial compensation. If the finances allow, this facilities should be extended to others as well.
7. Fight against stigma is very important. People who are afflicted with the illness, their relatives and family members should be shown empathy and understanding and should never be stigmatised.
8. Treatment of emotional and mental disorders should be seen as a priority. Common disorders like depression, anxiety and adjustment disorders can easily be treated and fully cured.
9. Prevention of domestic violence, which is increasingly being seen should be considered very important, to prevent the ruin of our family structure.
10. NGOs and civil society organisations: Since our resources are limited, they have a very important role to play in supplementing the services provided by the government and other agencies.

Conclusion

This pandemic is a war which we have to win, for the humanity to survive and progress. There is no need for pessimism as humans have tackled pandemics in the past and survived! Vaccines are being developed and we will take hold of this novel corona virus disease, just as we have done in fighting smallpox, poliomyelitis, HIV and the like. Covid-19 has also taught us an important lesson- the value of public health and that it should never be neglected!

INSIGHT INTO COVID-19 VACCINE–CURRENT HEADACHE OF MEDICAL RESEARCHERS



Mrs. Rani Manju
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A COVID-19 vaccine is a biotechnology product intended to provide acquired immunity against coronavirus disease 2019 (COVID-19). As of October 2020, there were 321 vaccine candidates in development, a 2.5 fold increase since April. However, no candidate has completed clinical trials to prove its safety and efficacy. In October, some 42 vaccine candidates were in clinical

research: namely 33 in Phase I–II trials and 9 in Phase II–III trials.

Previous work to develop a vaccine against the coronavirus diseases SARS and MERS established considerable knowledge about the structure and function of coronaviruses – which accelerated rapid development during early 2020 of varied technology platforms for a COVID-19 vaccine. Advancements in science and technology have given researchers new tools to try against the coronavirus. Scientists can deliver genetic material into the body's cells, turning them into vaccine factories and skipping time-consuming steps such as manufacturing viral protein or growing

the whole virus in chicken eggs. The core of the coronavirus SARS-CoV-2 is a single strip of ribonucleic acid (RNA) surrounded by a protein shell. The virus is named for the iconic spikes that project from its center like a crown, or “corona” in Latin. These spike proteins aren’t just decoration. They are critical for the virus to get inside cells and make copies of itself.

Vaccines work by teaching the body’s immune system to recognize and block viruses. Each category of vaccine technology works under this basic principle. Vaccines aim to activate the immune system’s T-helper cells, which are responsible for detecting the presence of a virus. They instruct B-cells to create antibodies that block the virus from being able to replicate and T-killer cells to destroy infected cells. Some vaccines may activate only part of this immune response.

Each vaccine may vary somewhat in how it works.

DNA vaccines contain genetic material that carries the blueprint for the spike protein. To get the DNA into cells, researchers use an electrical pulse to disrupt the cell membrane. Once inside, the DNA is used as a template to create spike protein.

RNA vaccines contain a strip of genetic material within a fat bubble. Once inside the cell, the RNA generates a protein found on the surface of the virus. The immune system, presented with the protein, learns to recognize the virus.

These vaccines have the advantage of speed – they can be quickly designed and manufactured. But they have never been approved for us outside of

medical research and will likely require two doses.

Viral-vectored vaccines use a virus that has been engineered to be harmless to ferry a gene from the coronavirus into cells. The gene codes for a distinctive part of the coronavirus, and the immune system learns to recognize it. Viral-vectored vaccines can be designed quickly. One concern is that people can develop immunity to the viral vector, making this approach potentially less useful.

The most advanced clinical candidates are now in phase III trials, and data to support licensure are anticipated to be available later this year. For the leading candidates, large-scale manufacturing of vaccine has already been initiated to enable rapid distribution if approval is obtained.

The majority of vaccine candidates currently in clinical trials target the spike (S) protein and its variants as the primary antigen. However, candidates that target other or multiple antigens are progressing, including candidates that target N protein, attenuated vaccines, inactivated vaccines and peptide vaccines.

A coronavirus vaccine being developed by Johnson & Johnson started phase-3 clinical trials in the United States on Wednesday, becoming the fourth company to reach this stage. The candidate vaccines of AstraZeneca, Pfizer and Moderna are already undergoing phase-3 trials in the US, though there is a pause on the AstraZeneca trials for the time being.

There is some additional excitement with regard to the Johnson & Johnson candidate since it is the first one that could potentially be a single-shot

vaccine. All the other leading contenders right now would require double, or multiple doses, to remain effective. The Johnson & Johnson candidate has been developed a single-dose vaccine, but only the results of phase-3 trials would be able to establish whether it is effective as a single-dose vaccine or not.

The Johnson & Johnson trials are also planned to be the biggest till now. The company plans to enrol 60,000 participants for the trials. Pfizer is testing its vaccine on 44,000 participants, while Moderna and AstraZeneca have enrolled about 30,000 each.

Johnson & Johnson said it expected to know by December whether its vaccine was effective or not. That is more or less in line with the schedules announced by Modern and AstraZeneca as well. Pfizer, on the other hand, has said it hoped to get the

effectiveness data by the end of October itself. If the results are satisfactory, it intends to immediately apply for emergency authorisation. The Food and Drug Administration, the regulatory body in the United States, has said it was open to granting emergency use authorisation even before the completion of phase-3 trials, if the benefits outweighed the risks.

The progression of COVID-19 vaccine candidates into clinical development is beginning to lead to insights that may be useful for informing future COVID-19 vaccine development efforts, as well as vaccine R&D strategies for future outbreaks. The WHO has also released a target product profile for COVID-19 vaccines, which provides guidance for clinical trial design, implementation, evaluation and follow-up.

RITTER'S DISEASE IN CHILD: A CASE REPORT



Riya Antony
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Ritter's disease which is medically known as Staphylococcal Scalded Skin Syndrome (SSSS), is an acute epidermolysis caused by exfoliative toxins produced by 5% of staphylococcus aureus. Group II coagulase-positive staphylococci, is the major organism involved. This organism elaborates two types of exfoliatins, ETA and ETB. The exact mechanism by which the toxin produces exfoliation is still unknown.

A 2 year old female child came with the complaints of erythematous lesions first noticed over lower jaw and neck for 4 days and then noticed over the groin and umbilicus. On day 5 these erythematous lesions were noticed on the right eye and the child had complaints of pain and irritability upon touching the lesions. Child also complained of itching of palm and soles. She also had associated wet cough for 4 days and a fever spike on 3rd day. On day 5, she was done head to foot examination and was found to have erythematous macule below right eyes and around lower jaw. These macules showed peeling upon minimum pressure. This

was an indication of positive Nikolsky's sign, in view of which an initial diagnosis of Staphylococcal Scalded Skin Syndrome (SSSS, Ritter's disease) was done. The patient was then immediately initiated on oral Ampiclox. On day 6, the child complained of perioral redness and redness all over the body. The patient was switched to intravenous Ampiclox (275mg, 6 hourly). Syp. paracetamol (150mg, s.o.s.) was initiated in view of fever. The laboratory investigations showed leucocytosis (11,100 cells/cu.mm.), mild neutropenia (21%) , eosinophilia (17%) and borderline ESR levels. CRP was negative and blood culture showed no growth. The rest of the investigations were normal. Syp Atarax (5mg B.D.) was initiated in view of eosinophilia. By the 4th day of admission (day 8 of disease) child improved showing healing of the lesions, no new lesions were observed and pain and

itching sensations were reduced. On day 5 the child was discharged with advice to continue syp. Amoxicillin-clavulaunate (285mg, B.D.) for 3 days and saline compress for 3 days.

Ritter's disease occurs almost exclusively in infants and children under the age of 6. It is a potentially fatal condition but can respond well to conventional treatment if prompt diagnosis is made. Due to high prevalence of fever and exanthema in children there is high chance of misdiagnosis that can occur for this disease, especially as Staphylococcal scalded skin syndrome is mainly a clinical diagnosis. This case raises awareness on the importance of a multidisciplinary approach to be done in patients presenting with cutaneous symptoms of unknown etiology.

A CASE REPORT ON AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE WITH UROLITHIASIS

Autosomal Dominant Polycystic Kidney Disease (ADPKD) is a genetic disorder characterised by the growth of numerous cysts in the kidneys. ADPKD is a progressive disease and symptoms tend to get worse over time. The most common symptoms are kidney cysts, pain the back and the sides and headaches. Other symptoms include liver and pancreatic cysts, urinary tract infections, abnormal heart valves, high blood pressure, kidney stones and brain aneurysms.

ADPKD is most often caused by changes in the PKD1 and PKD2 genes

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and less often by changes in the GANAB genes. Treatment for ADPKD involves managing the symptoms and prevalence of urolithiasis among ADPKD patients is 20% which is 5 to 10 times more than general population.

Urolithiasis is rare during childhood and commonly develops after the age

of 20. However, in patients with known ADPKD presenting with flank pain, urolithiasis must be taken in to consideration.

A 22 year old female patient presented to urology department in a tertiary care hospital with complaints of flank pain and haematuria for 1 week. Physical examination was normal other than right costovertebral angle tenderness. Her BP was 140/90mmHg. Urinalysis showed 10-12 pus cells and 5-6 RBCs. Serum biochemistry including renal and liver functions, electrolytes, CBCs was normal. Abdominal ultrasonography showed Grade 2 hydronephrosis with moderate rigid perinephritic collection, Right lower ureteric calculus of 9MM and some B/L non obstructing renal calculi in the lower poles of right and left kidneys. In addition, there was an ovarian cyst of size 3.9MM and also uterine fibroids.

The patient's family history revealed that her mother, grandmother and siblings also had PKD. Furthermore, her grandmother deceased due to CKD while undergoing haemodialysis.

The patient was hospitalised and started antibiotics. Along with prophylactic potassium citrate, parenteral hydration was also given with precaution for ureterolithiasis. Hyoscine butylbromide was given for pain. CT scan of KUB revealed Right distal ureteric calculus measuring 8MM with density of 800HU at the level of L5 vertebral body with mild hydronephrosis. As the stone does not pass in her urine after 1 month of prophylactic therapy, Right RGP/URS/Lithotripsy/DJ stenting was done and calcium oxalate stones were impacted from Right SIJ level with infected HUN. Stone fragments were removed using grasper.

In conclusion, in patients with ADPKD, multiple factors contribute to the development of urolithiasis including anatomic, metabolic and hereditary abnormalities. Presence of urolithiasis in this 22 year old female indicates the importance of the evaluation and follow up for renal disease and increased BP.

CORONA VIRUS AWARENESS PROGRAMME AND COMMUNITY COUNSELLING

Corona Virus Awareness Programme and Community Counselling” was organised on 17th February 2020 at Pushpagiri College of Pharmacy by the Students Union 2020 and Department of Pharmacy Practice in association with the NSS unit of the institution. The programme was officially inaugurated by the chief guest, Mr. S. Sajeev, Circle Inspector, Excise Department, Thiruvalla.

The pamphlet for community counselling of corona virus disease was unveiled by the chief guest and handed over to Rev. Fr. Aby Vadakumthala thus inaugurating the community awareness program.

Mr. George Varghese, Assistant professor and virology in-charge, Dept. of Microbiology, Pushpagiri Medical College, Thiruvalla, delivered the lecture on the topic ‘Novel Coronavirus: Current state of

Knowledge and Public Health Response’.

On behalf of corona virus awareness, a community counselling programme

was carried out by students and staffs of pharmacy practice department to the nearby areas of college



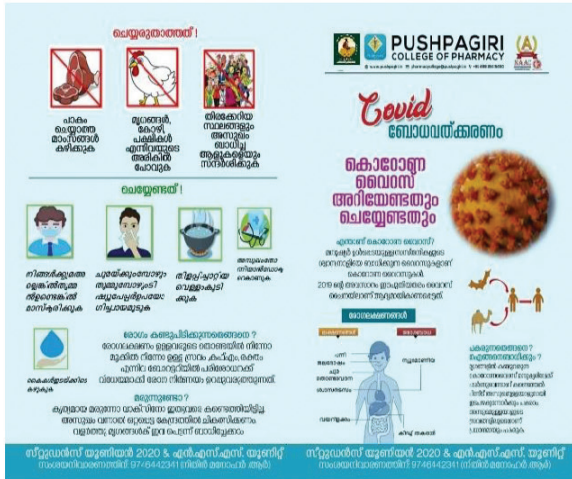
Unveiling of pamphlet for community counselling of corona virus disease



Mr. George Varghese delivering the lecture during the programme



Community counselling team for Corona Virus Awareness Programme



Pamphlet prepared by Students Union & providing counseling about the corona virus awareness

INTERNATIONAL CONFERENCE @ PCP

An International conference ‘PCP INTERCON 2020’ was organized in Pushpagiri College of Pharmacy at Mar Theophilos Annexe Auditorium on 3rd-4th January 2020. The conference was based on the theme ‘Profession of pharmacy for advanced pharmaceutical care’. There were four scientific sessions led by eminent speakers from various reputed organizations, abroad and India viz. Dr. Uday Venkat Mateti (‘Role of clinical pharmacist in evidence based

practices’), Mr. Joseph K (‘Modern concepts on drug Stability’), Prof. Dr. Rajan Radhakrishnan (‘Pain pathway and analgesic mechanisms’) and Dr. George Varghese (‘Role of clinical pharmacist in hospital settings’). As part of PCP INTERCON, oral presentations and e-poster competitions was organized and around 100 students from various pharmacy colleges inside and outside Kerala were participated.



Inauguration of PCP INTERCON 2020 by H. G. Most Rev. Dr. Thomas Mar Koorilos



E-poster presentations during PCP INTERCON

PCP HIGHLIGHTS



Inauguration of new Pharm D block by Pathanamthitta district panchayat member Shri Sam Eapen



Inauguration of PCOS awareness programme by Honorable Vice Chancellor Dr.M.K.C Nair



Hand sanitizers prepared by Pushpagiri College of Pharmacy according to WHO guideline



Inauguration of distribution of hand sanitizers by Shri. Jacob Punnoose IPS



Break the chain campaign was inaugurated by the distribution of hand sanitizer by Prof. Dr. Santhosh M Mathews to Dr. Jomin George Joseph, representing the faculty



Break the chain kiosk was established for students and staff of college as part of 'stage II fight against COVID-19'



Pharm d outgoing batch (2014-2020) with Principal Prof. Dr. Santhosh M Mathews



Mini marathon awareness organised by Excise department of Kerala against substance abuse



Award of excellence in participation of 'Vimukthi' programme organized by Excise department of Kerala



Stall arranged by Pharmacy Practice Department at Thiruvalla Pushpamela 2020

CONFERENCE ATTENDED BY FACULTIES AND STUDENTS



ONGOING PROJECTS

1. A PROSPECTIVE STUDY ON THE PRESCRIBING PATTERN, SAFETY AND EFFECTIVENESS OF IRON ERYTHROPOIETIN COMBINATION OVER ERYTHROPOIETIN MONOTHERAPY IN CHRONIC KIDNEY DISEASE PATIENTS WITH HAEMODIALYSIS.
2. A PROSPECTIVE OBSERVATIONAL STUDY TO EVALUATE THE PRESCRIBING PATTERN OF ANTIBIOTIC FOR SAFETY, EFFECTIVENESS AND RATIONALITY IN PATIENTS WITH URINARY TRACT INFECTION
3. DRUG UTILISATION REVIEW OF ANTI DEPRESSANTS IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER AND BIPOLAR DEPRESSION IN A TERTIARY CARE HOSPITAL.
4. A COMPARATIVE PROSPECTIVE STUDY OF THE EFFICACY OF SUMATRIPTAN/ NAPROXEN COMBINATION AND NAPROXEN MONOTHERAPY FOR SYMPTOMATIC RELIEF IN MIGRAINE PATIENTS.
5. SAFETY AND EFFECTIVENESS OF INHALED LONG ACTING MUSCARINIC ANTAGONISTS IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE.
6. COMPARISON OF THE EFFECTIVENESS AND SAFETY OF ANGIOTENSIN RECEPTOR BLOCKERS AND CALCIUM CHANNEL BLOCKERS IN CHRONIC KIDNEY DISEASE PATIENTS WITH HYPERTENSION IN A TERTIARY CARE HOSPITAL.
7. AN OBSERVATIONAL STUDY ON SAFETY AND EFFECTIVENESS OF ASPIRIN ON PREVENTION OF EARLY RECURRENT STROKE AFTER TIA OR MINISTROKE.
8. STUDY ON THE SAFETY PROFILE AND CLINICAL OUTCOMES IN PATIENTS USING TULOButEROL TRANSDERMAL PATCH AS AN ADD ON THERAPY IN STABLE CHRONIC OBSTRUCTIVE PULMONARY DISEASE.
9. A PROSPECTIVE STUDY ON THE IMPACT OF CLINICAL PHARMACIST INTERVENTIONS IN THE OPTIMISATION OF WARFARIN THERAPY IN CARDIOLOGY OUT PATIENTS.
10. A PROSPECTIVE STUDY ON THE EFFECT OF DOSE COUNTER INHALERS AND COUNSELLING BY CLINICAL PHARMACIST ON ADHERENCE IN ASTHMA PATIENTS.
11. A PROSPECTIVE STUDY ON THE SAFETY AND EFFECTIVENESS OF METFORMIN AND INSULIN IN GESTATIONAL DIABETES PATIENTS.
12. EVALUATION OF CHEMOTHERAPY INDUCED NEUTROPENIA IN PATIENTS WITH BREAST CANCER.
13. A PROSPECTIVE STUDY ON PATTERN OF INFECTION AND APPROPRIATENESS OF ANTIBIOTICS IN HEMODIALYSIS PATIENTS.
14. A STUDY ON UTILIZATION PATTERN AND ASSESSMENT OF QUALITY OF LIFE IN PATIENTS WITH PARKINSON'S DISEASE.
15. ASSESSMENT OF DRUG PRESCRIPTION AND IMPACT OF CLINICAL PHARMACIST INTERVENTION ON KNOWLEDGE, ATTITUDE AND PRACTICE IN COPD PATIENTS.
16. A PROSPECTIVE STUDY ON EFFECT OF PATIENT COUNSELLING AND HEALTH RELATED QUALITY OF LIFE ON STROKE PATIENTS IN A TERTIARY CARE HOSPITAL.
17. A PROSPECTIVE STUDY ON PRESCRIBING PATTERN AND ASSESSMENT OF QUALITY OF LIFE IN PATIENTS WITH ALZHEIMER'S DISEASE.

MOU BETWEEN PUSHPAGIRI COLLEGE OF PHARMACY AND PUSHPAGIRI MEDICAL COLLEGE HOSPITAL

Pushpagiri College of Pharmacy has signed a MoU with Pushpagiri Medical college hospital located at Thiruvalla, Pathanamthitta to establish a strategic framework for collaboration to conduct hospital training for Pharm D and M Pharm students. This opportunity gives pharmacy students an introduction to patient advocacy, interaction in an interdisciplinary environment and connect with a diverse patient population.



PUSHPAGIRI COLLEGE OF PHARMACY

(Approved by AICTE, PCI & Government of Kerala,

Affiliated by Kerala University of Health Sciences)

MEDICITY CAMPUS, PERUMTHURUTHY, P.O, THIRUVALLA, KERALA 689107

Courses Offered:

B.Pharm, Pharm.D, M.Pharm, Pharm.D (PB)

M pharm (Pharmacology, Pharmaceutical Chemistry, Pharmacy Practice)