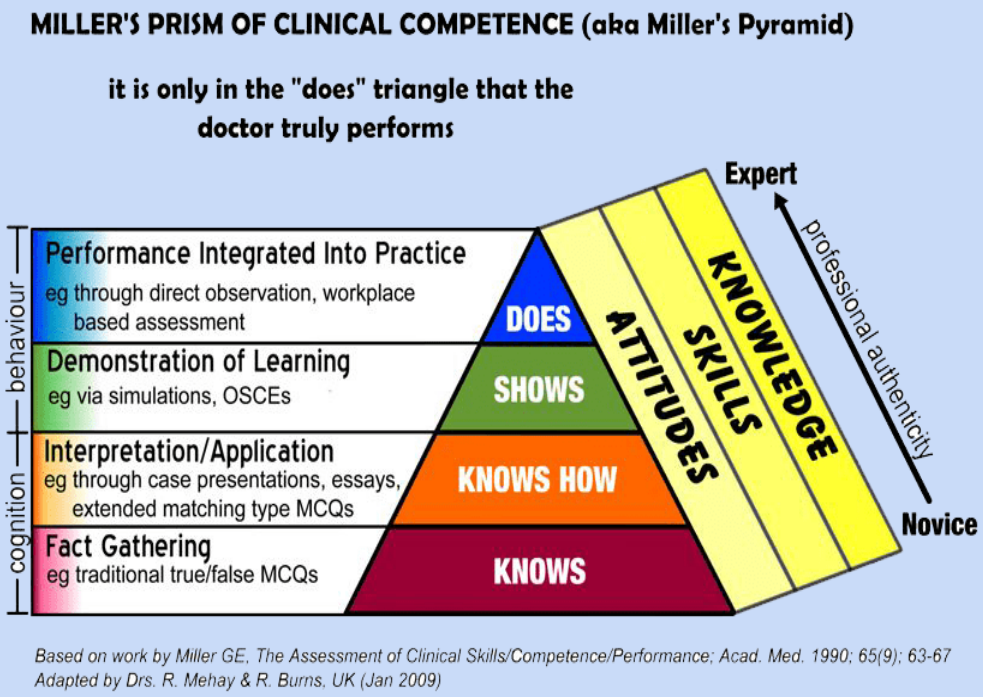
AFPI
Academy of Family Physicians of India
KARNATAKA

President's letter

Dear friends,

Recently, I have had opportunities to interact with medical students from various parts of the country and share time, thoughts, and aspirations pertaining to primary care, community health, and family medicine among other things.

For me as a Family Physician and Educator, for the last few years, the most useful frameworks for learning and growth in medicine (in general) and family medicine (in particular) have been the Miller's pyramid and the bio-psycho-social-ecological frameworks.



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AFPI KARNATAKA

Newsletter Volume 7 / Issue 2

However, in the recent past I find myself thinking a lot more about what "being" a deep generalist (which is the essence of Family Medicine and Primary Care) entails. It is also making me reflective of the nature of generalist inquiry. The best description that resonated with me was by Kurt Stange, a Family Medicine physician and research leader, who elucidates as follows: "Effective primary care is based on a generalist approach that involves certain ways of being, knowing, perceiving, and doing." Specifically, *Generalist ways of being* include an open stance that is receptive to diverse perspectives and co-created knowledge. It also involves humility that comes from being connected in key relationships. *Generalist ways of knowing* require broad knowledge of self, others, systems, the natural world, and their interconnectedness. *Generalist ways of perceiving* involve seeing the world in ways that foster integration—scanning and prioritising, then directing attention to the highest priority in that moment—in many moments over time, focusing on the particulars while keeping the whole in view. *Generalist ways of doing* this involve prioritised, joined-up action that engages with the most important parts in context, often doing multiple low-level tasks to enable higher-level integrative action over time—iterating among breadth/depth, subjective/objective, parts/whole, and action/reflection in service to a particular person and situation.

I also sense that *at the heart of translation in* being a primary care practitioner, it involves *weaving experiential wisdom with clinical evidence* and this requires actively cultivating values of humility and intellectual curiosity, diversity and inclusion, equity, holistic approach to evidence, integrity, transparency, accountability and adaptability, and communication.

As I look back at the newsletter and its content over the last 5 years, I see that one of the tacit things our editor, Dr. B.C. Rao has modeled through the newsletter, has been this way to be a family physician scholar.

Dr. Ramakrishna Prasad

President, AFPI Karnataka

Secretary's letter

Festive greetings to all. This edition of the newsletter is being released during the happy festivities season and with the announcement of the most awaited National Conference in Family Medicine & Primary Care 2024.

I express my gratitude to one and all who contributed directly or indirectly towards the success of the 4th State Conference hosted at Belagavi. The Conference objectives of sensitization of Family Medicine ,creating academic awareness of FM and its importance, taking colleges and institute along with AFPI engagement saw a silver lining with submission of application for Family Medicine postgraduation programme at KLE under the aegis of AFPI and initiative by Dr. Geeta Pangi.

The Conference organization including the logistics, the selection of the venue was very well chosen and executed by the team. The timing and date chosen seem to be appropriate, which is evident with the overwhelming number of registrations (250). The scientific sessions were a treat to all the attendees with very practical topics chosen.

However, we all agree that some sessions needed a little more time like that of diabetic foot workshop, snake bite scorpion bite etc. to name a few which AFPI KA would consider, as we all believe we have scope of improvement and there is always a desire to do better. This would do justice to the topics, the esteemed speakers and to the audience.

The participation from the Post Graduate Family Medicine students and the paper poster presentation was very heartwarming and delightfully contagious.

The team's thought process into minute details was evident with the beautiful Memento as gratitude to the esteemed speakers. Overall, it was a successful conference and thank you to each one of us for making it a very memorable event.

With regards,

Dr. Harshapriya Jyothinagar

General Secretary, AFPI Karanataka

Editor's note

There has been frequent discussion on ethics. One doctor commented that a gastroenterologist doing unnecessary and frequent endoscopies. I have personally known cases being unnecessarily admitted for procedures. Frequent health checkups whether necessary or not have come to stay. We doctors seem to accept this as inevitable and have begun to sail with the stream as evidenced by the mushrooming of the so-called wellness clinics. There is a large grey area in medical practice. Take the following examples. An 80-year-old who goes for a checkup, was found to have minor ST-T changes in his resting ECG. He was asked to undergo a TMT. Which was positive at stage 3. An angiogram and stenting were done and he was put on blood thinners. 6 months after he developed a major gastric bleed and passed away. This was a healthy man who walked an hour a day with no co morbid conditions and who rarely went to doctors!

Correct advice would have been to reassure him and no treatment. Another recent example. A lady doctor manning a wellness clinic found a person whose ultrasound scan showed gall bladder stones. She correctly advised no interference unless symptoms. She was hauled up by the management for not referring the patient for surgery! The self-respecting doctor resigned from her well-paying job. I have come across several doctors resigning from corporate hospitals and accepting less paying jobs elsewhere.

Were things better in the past? Answer is a reluctant yes. Reluctant because of the following example some 40 years back when I was a fledging GP. The consultant [very few of them in the city to choose from!] to whom I had referred sent the patient back with the advice that he be given weekly injection of B complex for 3 months. This made no sense to me and curiosity made me to ask the reason why this advice? To make you and the patient happy was his answer! In the course of time, I stopped taking his help is another matter.

Thus, exploiting this grey area or not is entirely left to us and our inner conscious.

Dr B C Rao. Family physician

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AFPICON 2023, A Journey

Our journey of AFPICON 2023 began with a call from Karnataka state president Dr. Ramakrishna Prasad with a proposal of hosting state conference in a place other than Bengaluru. After discussing with my colleagues of USMKLE IMP Belagavi we agreed to take this herculean task and decided to host it jointly.

Our team was a mix of senior and experienced doctors like Dr. Geeta Pangi and Dr. Sudhir Kamat from USMKLE and Dr Savita Ramakatti a renowned and dedicated family medicine expert from Nipani taluka, who had stayed away from limelight for a long time. Our team also had young doctors like Dr.Twinkle Behl and Dr.Virendra Ashtagi from USMKLE IMP. Dr Shashikala Pangi and I, both practitioners of family medicine in Sankeshwar town and Athani taluka respectively, had the experience of hosting and helping in organizing the national level conferences but for the rest of team organizing AFPI conference was totally a new experience. With extensive online and offline meetings, multiple changes in scientific program, agreements, and disagreements, we could design a scientific program keeping in mind the local needs.
Our next challenge was getting good number of attendees for the event. In this part, the success of the conference is measured by the number of delegates attending. Although it was mentioned by many members during the meetings that number is not important, we had our own apprehensions initially when the rate of registrations was slow. But with constant encouraging words from Dr. Mohan and Dr. Sowmya who told that last few days before the conference the momentum will pick up, which turned out into reality and we had 210 registrations. No doubt we all strived hard to bring more and more registrations by calling friends, family, getting the list of medical officers of government PHC, CHC etc. and personally calling them.

We were fortunate to have AVM (Dr) Sadhana S Nair VSM as our chief guest who by her vibrant presence and thoughtful speech inspired the young budding family physicians. We are thankful to Col (Dr) Mohan Kubendra for coordinating in contacting and bringing madam for this event.

National president AFPI Dr. Raman Kumar was kind enough to accept our invitation and he was present on both the days. His plenary address on Family Medicine in India enlightened everyone in the audience.

Our director, Dr. H B Rajasekhar volunteered to be the part of conference and spoke on an interesting topic “active and healthy ageing.” He himself is a proof for his chosen topic.

I sincerely appreciate the support and encouragement given by Dr. Ashok Pangi Phase II chairman USMKLE in organizing this event.

The retention rate for our scientific sessions was good. Most of the delegates were present till the last session. Majority of the senior practitioners of Belagavi district attended sessions and upgraded their knowledge.

This conference was different from other conferences where a unique feature “Heritage Walk” was introduced. Belagavi is known for its rich culture and heritage, so we decided to give glimpse of same to our delegates. Those who went for this heritage walk had a very pleasant and enriching experience as expressed by them.

As our local organizing team felt that conferences are remembered for hospitality, food, and banquets. So, we were keen on providing the good quality food with local flavor which was relished by all delegates and faculty.

The cultural program consisted of singing and dance performances by the EC, OC members and the delegates. All delegates have carried sweet memories with them.

We did have some challenges like maintaining the allotted timing for the sessions, last minute changes in couple of chairpersons, keeping balance of interests of both teams from Bangalore and Belagavi, getting sponsorships to keep conference expenses in control without burdening the attendees.

Few improvements I would like to suggest are, local team should have more free hand in deciding certain things that are relevant locally. We need to accept this fact that every 30 km the language, culture and thinking changes. So little bit of flexibility in approach is necessary. If local team is in financial crunch state and national executive committees should support them. Sometimes we make less profitable events but long-term relationships are developed and maintained.

As an organizing secretary of rural CME in Sankeshwar in 2016 and AFPICON 2023, I experienced two different canvasses. There it was one man show. I alone handling all the work, here I was working with a dedicated team which was ready to hold each other’s hand in the thick and thin of organizing and committed to the success of the conference My friend Dr. Virendra did fabulous job at our social media presence and entire canvassing during conference. His timely and informative flyers attracted many participants. Dr. Twinkle made technology aspects so well that we could focus on other work. She handled KMC approval, registrations smoothly. Dr. Shashikala and Dr. Savita with their rich experience, were able to bring out a rich scientific program. Dr Kruthika and Dr Shalini helped to design scientific program as per AFPI standards. Dr Jyotika Gupta and Spice Route team helped us in networking with postgraduates and under graduate students. This was reflected in getting as many as 48 postgraduate students’ participation and resulted in good number of paper and poster presentations.

Dr. Sudhir and Dr. Imran’s expertise in hospitality, transport, food venue management was a big help.

Above all Dr. Geeta with her 38 years of experience in the field of academics was our major source of guidance. She hand held us in all the tough times, understood our lows and highs of emotions like a true leader, she is.

At the end of the day, our team is happy that their hard work has resulted in an overall successful conference.

Dr Smruti Haval

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A special CME

"Vaccines and antibiotics have made many infectious diseases a thing of the past; we have come to expect that public health and modern science can conquer all microbes. But nature is a formidable adversary." — Tom Frieden

Well, we all know the importance of vaccinating our children. Starting from BCG and polio vaccines at birth , to whole gamut of vaccines up to 10 years of age. But we tend to forget the importance of adult vaccination in our daily practice. And as family physicians, it is a bigger duty, since we practice preventive medicine in the real sense.

Keeping this need in mind, we AFPI Karnataka ,organized a CME on National Doctor's Day , in collaboration with RxDx Healthcare, a well-established chain of primary care clinics, in Bangalore. The program was co organized by Dr Shalini Chandan, Scientific Head AFPI- KA and Dr Jyotika Gupta, Media Head – AFPI – KA. The program included presentations and a panel discussion, covering all adult vaccinations.

Dr Belliappa C M, a practicing GP, kick started the session and introduced us to the new kid in the block, the shingles vaccine. It was followed by a talk on the one vaccine, which can prevent cancer, and that is, the HPV vaccine, by Dr Vijaya Vathsa, practicing physician. A fruitful interaction followed, and the sessions were chaired by Col(Dr) Mohan Kubendra.

Next, Dr Akshaya N, specialist family physician, spoke about the schedule and side effects of the tetanus and rabies vaccinations. Dr Venkatesh, Consultant Family Physician, presented about the importance of Travel vaccination, which has come of importance in the recent past, with increase in travel and study outside of own country. These sessions were chaired by Dr Roshni Jhan Ganguly, a senior FP, and an active member with the MRCGP board.

Next, Dr Aarthi Doss, gave us a full description of the National Immunization Schedule and UIP, for children. This session was chaired by Dr Gurmeet Bhalla, a pediatrician from RxDx.

The CME ended with a panel discussion, moderated by Dr Siddharth Hooli, a GP, on flu and pneumococcal vaccines. Dr Jyotika Gupta (FP), Dr Uma (FP) and Dr Sachin Kumar (Pulmonologist) were the panelists and discussed about the importance and the detailed schedule of these two vaccinations, keeping in mind the prevalence of influenza and pneumonia, in our country, especially in co morbid patients. It was a very interactive discussion with active participation from the audience giving tips from their own practices.

Dr Sowmya B Ramesh, Vice President, AFPI- KA proposed the vote of thanks, and then we all proceeded for a sumptuous lunch. All in all, it was an enlightening session about the

importance of adult vaccination, not just in patients with co morbidities, but in normal individuals too.

Dr Jyotika Gupta
Consultant Family Physician- RxDx Samanvay, Malleswaram
Media head- AFPI Karnataka
National Secretary, The Spice Route India- AFPI

Sharing a few glimpses

The Spice Route India Movement

WONCA Definition

A Young Doctor is defined in the WONCA Bylaws

“as those in family medicine training and in the first five years of family medicine practice”.

World over there are many such YDMs, and the South Asian one is called the Spice Route Movement. In India, the Spice Route India Movement is under the aegis and guidance of AFPI (Academy of Family Physicians of India).

In India, the core council consists of National Chair, Dr Serin Kuriakose; National Secretary, Dr Jyotika Gupta and FM 360 Coordinator, Dr Gunjan Jha . Dr Nitish Garg is the Image Editor and Dr Bishnu B S is the PG Coordinator.

Objectives:

- To improve education and training of young family doctors (YFDs)
- To increase opportunities to develop skills in research, publication, presentations at national/international fora and exchanges.
- To give a platform for YFDs to share concerns, doubts and aspirations and to help in addressing them.

- To encourage YFDs' leadership through participation in the Spice Route executive structure

Activities:

- CPD programmes
- Pre-conferences
- Spice route Cafe
- Workshops/symposia in national and international fora
- Research
- Social media activities
- Exchange programmes (FM 360 programme)
- Networking

The current council was nominated in Nov 2019 and took charge by early 2020. Various activities were planned, and just then the pandemic hit. It turned in our favour as we were all able to connect virtually. We expanded to many more states and nominated State Leads from about 10+ states. We conducted the first virtual meeting on Skype with 8 state leads and 3 national council members. From then on, there was no looking back, and we started conducting academic session every month, taken up by each state of India. Post graduate students and young practitioners presented cases or topics of interest, and the senior faculty moderated these sessions.

We had a virtual Musical Open House, the first of its kind, which had an overwhelming participation in the form of singers, dancers, and musicians.

A virtual exchange program was also conducted wherein people from 3 different states took us on a virtual tour of their practices and scenes and gave us an insight on various opportunities too.

When the pandemic was under control, at FMPC 2022, we had our first physical meet, with a specially curated panel discussion, PG update session, and a quiz for all young minds which also included MBBS students . Post that, we had a few meet and greet sessions at Bangalore, Delhi NCR, Trivandrum, and Chennai.

Currently, the Spice Route India movement has taken charge of forming the AFPI PG wing, to bring together all the FM PG students(MD, DNB, M Med, Diploma, MRCGP, and the like).

Do visit spicerouteindia.in for all the information about this YDM.

Dr Jyotika Gupta

Consultant Family Physician

National Secretary, TSRIM

New drug

Fluticasone-Umeclidin-Vilanter inhaler

Generic name: fluticasone-umeclidin-vilanter

This product is used to control and prevent symptoms (such as wheezing and shortness of breath) caused by asthma and ongoing lung disease (chronic obstructive pulmonary disease-COPD, which includes chronic bronchitis and emphysema). Controlling symptoms of breathing problems helps one to stay active. This inhaler contains 3 medications: fluticasone, umeclidinium, and vilanterol. Fluticasone belongs to a class of drugs known as corticosteroids. It works by reducing swelling of the airways in the lungs to make breathing easier. Umeclidinium belongs to a class of drugs known as anticholinergics and vilanterol is a LABA medication. Both drugs work by relaxing the muscles around the airways so that they open, and you can breathe more easily. Both drugs are also known bronchodilators.

When used alone, long-acting beta agonists (such as vilanterol) may rarely increase the risk of serious (sometimes fatal) asthma-related breathing problems. However, combination products containing both an inhaled corticosteroid and long-acting beta agonist, such as this product, do not increase the risk of serious asthma-related breathing problems. For asthma treatment, this product should be used when breathing problems are not well controlled with two asthma-control medications (such as inhaled corticosteroid and long-acting beta agonist) or if your symptoms need combination treatment.

This medication must be used regularly to be effective. It does not work right away and should not be used to relieve sudden shortness of breath. If sudden breathing problems occur, use your quick-relief inhaler as prescribed.

Available in India as Trilegy Ellipta [GSK]

Precision Oncology

"The person who takes medicine must recover twice, once from the disease and once from the medicine." by William Osler

This is very true in Cancer medicine. The dream has always been that there is a therapy which will be very effective and not cause side effects or minimal side effects. This dream was the basis of imagineering precision oncology for the research scientists.

Precision oncology is also known as personalized cancer therapy. It is the buzz word today, innovative approach that tailors the anti-treatment to the unique genetic and molecular make-up of the patient as well as the cancer. Studying the patient's genomic profile also indicates drug metabolism that can guide us in choosing therapy.

History

Progress in cancer treatment was accompanied and driven by advances in diagnostics. In the late 1980s, presence of human epidermal growth factor-2 (ERBB2 / HER2) overexpression or amplification in breast cancer was understood and demonstrated by immunohistochemistry. In the following few years, Dr Slamon engineered a humanized anti-human epidermal growth factor receptor 2 (HER2) antibody, Trastuzumab which was the turning point in treatment of otherwise aggressive subtype of breast cancer that was Her 2 positives. Subsequent years were marked by development of several targeted therapies such as Imatinib, a small molecule, which inhibits the BCR-ABL tyrosine kinase, in chronic myeloid leukemia (CML), and Gefitinib, a small molecule inhibitor of epidermal growth factor receptor (EGFR), in non-small cell lung cancer (NSCLC).
Another important step was Human genome sequencing which allowed deeper knowledge of the molecular and genetic landscape of cancers. Many mutations were identified that functioned as "drivers", conferring a selective growth advantage, along with other "passenger" mutations.

A key aspect of precision therapy is to identify a molecular target and biomarkers. These markers help us to identify patients who are most likely to benefit from therapies, enabling a personalized approach.

The targeted therapy can today be classified as tumor agnostic and tumor specific.

Tumor agnostic therapy

They assume that a biomarker could predict the response to a targeted therapy independently from tumor origin or histology. These therapies were suggested by the Basket trials, which are a type of master protocol, which study the activity of a single drug in patients with different sites of cancer origin but sharing the same molecular aberration.

Following is the list of approved drugs as tissue agnostic therapy:
2017: Pembrolizumab for patients with tumors deficient in mismatch repair (MMR) or with high microsatellite instability (MSI)
2018: Larotrectinib for patients with neurotrophic receptor tyrosine kinase (NTRK) fusions-positive tumors
2019: Entrectinib in patients with NTRK fusions-positive tumors
2020: Pembrolizumab for patients affected by tumors with high tumor mutational burden (TMB)
2021: Dostarlimab-gxly for patients with mismatch repair deficient tumors
2022: Dabrafenib + Trametinib in patients with BRAF V600E mutated tumors
2022: Selpercatinib in patients with REarranged during Transfection (RET) fusion-positive tumors

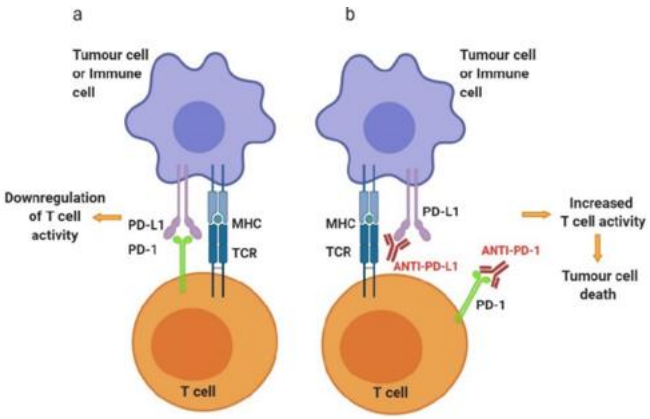
Tumor specific targeted therapies:

These therapies focus on specific molecular changes within cancer cells.
Examples
Tyrosine kinase inhibitors: Block signals that promote cancer growth and new blood vessel formation e.g., Lenvatinib, Sorafenib

Monoclonal antibodies: Bevacizumab targets vascular endothelial growth factor (VEGF) to inhibit blood vessel formation. Rituximab targets CD20 receptor in B cell lymphoma, Trastuzumab targets Her 2 neu positive breast and stomach cancer cells.
PARP inhibitors: Block enzymes involved in DNA repair, specifically active against BRCA mutated cancers of ovary, prostate, breast, pancreas. E.g., Olaparib, Niraparib, Talazoparib
EGFR inhibitors: Certain EGFR mutations of lung can be targeted by Osimertinib, Gefitinib, Erlotinib
ALK inhibitors: Target ALK gene mutations in certain types of lung cancers e.g. Crizotinib, Alectinib, Lorlatinib
Immunotherapy: They are checkpoint inhibitors which enhance immune system's ability to recognize and attack cancer cells

Immunotherapy:

We know that T cells are the cells that come to the body's rescue during viral and fungal infections. The same T cells also have the capability of recognizing the abnormal cancer cells and kill them through their PD1 receptors (also known as check point). The cancer cell, however, to evade this destruction, gives inhibitory signals – the PDL1 ligand that attaches itself to the PD1 of T cells and block the T cell function. When PD-1 binds to PD-L1, it basically tells the T cell to leave the other cell alone and thereby escaping destruction. Some cancer cells have large amounts of PD-L1, which known as magic anti-cancer therapy. The drug does not kill the cancer cell directly as is what happens with chemotherapy, but it stimulates the T cells which will go and kill the cancer cells.



helps them hide from an immune attack. This is also a biomarker to predict if immunotherapy is likely to work against that cancer. The Immunotherapy drugs hence either inhibit PD1 e.g., Nivolumab, Pembrolizumab or may block PDL1 e.g., Atezolizumab, Avelumab, Durvalumab.

These drugs, also known as Immune check point inhibitors, are approved for almost all cancers e.g., breast, lung, kidney, melanoma, urinary bladder, skin, intestines, stomach, breast, head and neck, lymphomas and are also

Schematic representation of PD-1 and anti-PD-1/PD-L1 mechanisms of action on T cell activity. Activated T cells at secondary lymphoid organs/tumour tissue (a) will upregulate the expression of co-inhibitory cell surface receptor PD-1. Binding of PD-1 to its ligands, PD-L1 or PD-L2, found on the surface of several immune cells as well as tumour cells, will inhibit signalling downstream of the TCR, thus downregulating T cell activity. (b) Targeting PD-1 or PD-L1 with antibody therapeutics can reinvigorate exhausted T cells at the tumour site, increase the activity, consequently allowing T cell-mediated tumour cell killing.
[Adapted from - Advances in Anti-Cancer Immunotherapy: Car-T Cell, Checkpoint Inhibitors, Dendritic Cell Vaccines, and Oncolytic Viruses, and Emerging Cellular and Molecular Targets; July 2020. Cancers 12 (7), DOI:10.3390/cancers12071826]

CTLA-4 inhibitors:

CTLA-4 is another checkpoint protein on some T cells that acts as a type of "off switch" to help keep the immune system in check. Ipilimumab (Yervoy) and Tremelimumab (Imjuno) are monoclonal antibodies that attach to CTLA-4 and stop it from working. This can help boost the body's immune response against cancer cells. These drugs

are typically used along with a PD-1 or PD-L1 inhibitor. These combinations can be used to treat several types of cancer.

Advantages of precision medicine

1. Enhanced efficacy – by specifically targeting cancer cells.
2. Reduced side effects – by sparing healthy cells leading to fewer side effects and better tolerability.
3. Personalized treatment – The use of biomarkers enables a personalized approach matching the most suitable treatment to individual patient.
4. Combination potential – combining with other treatment modalities including chemotherapy and radiation to maximize treatment outcomes.
5. Proactive approach – high risk mutations can be identified, and disease course predicted to some extent, anticipate future needs.
6. Scope for early intervention – by early detection

Challenges and Future Directions

Despite the promising results of targeted therapies, challenges remain. Cancer cells can develop resistance to these treatments over time, necessitating ongoing research and development. Additionally, the identification of reliable biomarkers for many cancers remains a hurdle.

The future of targeted therapies lies in precision medicine, where treatment decisions are based on an individual's genetic profile, lifestyle, and environmental factors. Advancements in genomics and artificial intelligence are poised to revolutionize cancer treatment further.
As research progresses and new discoveries emerge, the field of targeted therapies will continue to evolve, driving us closer to a future where cancer becomes a manageable and ultimately curable disease.

Dr Poonam Patil
Oncologist
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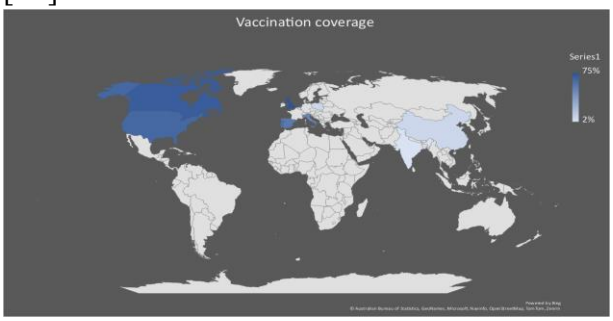
Adult immunization over the age 65 years- observational study Dr Udata Pranavi[1], Dr Ramya S[2], Dr G D Ravindran[3] – Paper presentation at the Belgavi conference.

1.1st year PG,2. Senior resident,3. Professor & HOD, Department of Family Medicine, St Johns Medical College

Introduction

- Leading infectious causes of morbidity and mortality in the elderly are influenza, streptococcus pneumoniae, tetanus and herpes zoster [1] and all these infections can be prevented by vaccination.
- WHO recommends vaccines for all these above diseases in elderly except zoster.
- Vaccination recommendations in USA include covid -19, influenza vaccine, tetanus with diphtheria, zoster vaccine, pneumococcal vaccine irrespective of co morbidities [2]
- Current guidelines for vaccination in India include tetanus for all age groups, which has a case fatality rate of 53.6% in India [3]
- When mortality statistics have been studied, influenza had >65% in western countries like USA, followed by, >35% in UK, and India has >55% mortality due to influenza in elderly [4,5,6,7]
- Elderly mortality due to streptococcus pneumoniae in about 10% in Europe and >30% in India [8,9]

- The vaccination coverage data of the influenzae around the world in elderly >65 years shows us that UK has one the highest coverage with 75%, followed by 70% in Canada, 65% in USA and India being one of the least covered with 1.5% [10]



- Vaccination efficacy studies suggest influenza vaccination alone reduced hospitalizations by 52% and death by 70%. Pneumococcal vaccination alone resulted in a reduction in hospitalizations by 27% and death by 34%.[11]
- Reports suggest that the vaccinations are also cost-effective because of the high per capita cost of medical treatment for pneumonia in elderly with multiple co-morbidities. [12,13]

Objectives

1. Vaccination coverage in elderly population >65 years.
2. The factors affecting the vaccination of elderly

Criteria

- **Inclusion criteria**:
    - Adults >65 years attending St Johns Health center- Brigade meadows
- **Exclusion criteria**:
    - Critically ill patients
    - Allergies to previous vaccination

Materials and methods

- **Study type**:
    - Observational study
- **Study population**:
    - Patients aged >65 years attending St Johns Health center- Brigade meadows from 1st January, 2023 to 30st June, 2023.
- **Sample type-**
    - Convenient sampling- 526 elderly patients were selected who were fulfilling the criteria
- **Study period** –
    - 1st January, 2023 to 31st July, 2023.
- **Method**
    - Case records were scrutinized for vaccination status.

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- All the vaccinated individuals were administered a questionnaire
- A sample of Non-vaccinated individuals in the study who were willing to participate were administered a questionnaire.

Questionnaire

Vaccinated elderly

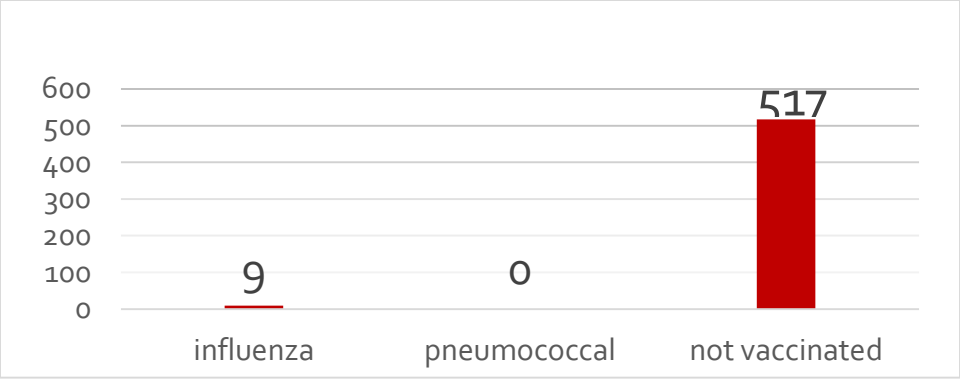
- Have you been vaccinated with influenza or pneumococcal vaccine in between 1st January, 2023 to 31st July, 2023?
- Which vaccine?
    - Influenza? Y/N
    - Pneumococcal vaccine? Y/N
    - Both? Y/N
- What made you take the vaccine?
    - Recommended by doctors?
    - Recommended by friends?
    - Self-awareness

Non vaccinated elderly

- Have you been vaccinated with influenza or pneumococcal vaccine in between 1st January, 2023 to 31st July, 2023?
- Why you have not taken vaccine?
    - Do not know
    - Physician not advised
    - Cost of the vaccine
    - Due to vaccine side effects
    - Do not know anyone who was vaccinated

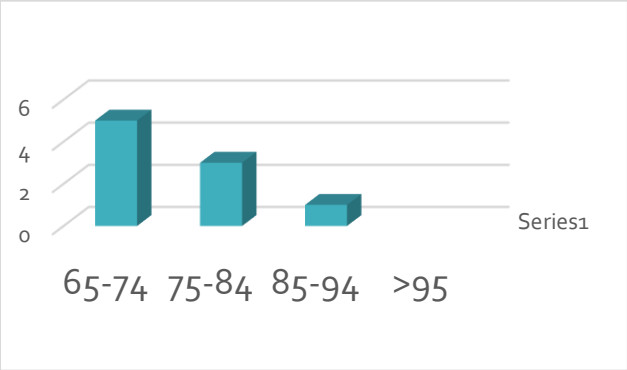
Results

- There were total number of 526 patients visiting St Johns Health Centre, Brigade Meadows were identified. 275 (52.2%) were males and 251 (47.7%) were females.
- Of the patients fitting the criteria, 9 (1.71%) were administered with adult vaccination

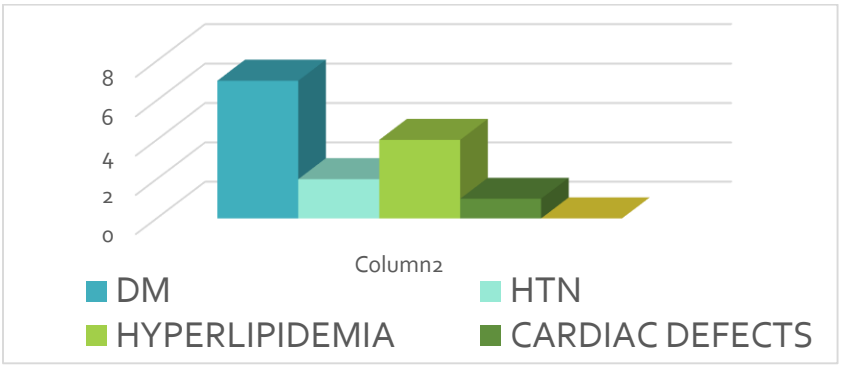


- All of the 9 adults were vaccinated with influenza.
  None were vaccinated with pneumococcal vaccine or with covid.

- Of the ones who were vaccinated, 5 (56%) were in 65-74 age group, 3 (33%) were in 75-84 age group, 1 (11%) was from 85-94 age group and none in age group more than 95



- 66% of the vaccinated individuals had DM, 33% has hyperlipidemia, 22% had hypertension, 11% had structural cardiac defects, none has ischemic heart disease.



- When the factors for vaccination was assessed among the vaccinated elderly, 77% took the vaccines because of primary prevention and 33% took it because of secondary prevention.
- A sample of the nonvaccinated individuals were asked about the factors for non-vaccination, among them all of them revealed that they did not know the existence of the vaccine, physician had not advised them, and did not know anyone who had taken the vaccine.

Take home message

- These vaccines play an imminent role on the health status of elderly.
- Hence all family practitioners and physicians must advocate the vaccination in elderly and try to increase awareness

among the peer practitioners and also the patients.

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Case report 1

A case of Plummer Vinson syndrome

Introduction

Plummer Vinson syndrome was first described by Patterson Kelly in 1919. It consists of the triad of Dysphagia, Iron deficiency anaemia, upper esophageal web. Along with it, features of atrophic oral mucosa , cracks , or fissure at the corners of mouth along with painful tongue , koilonychia , nails that are brittle and break easily. Dysphagia is usually progressive over years and limited to solids. Most of the patients affected are middle aged women and it is very rare in childhood.

21-year-old female came with complaints of pain while swallowing since 9 months, which is more towards the solid foods. Pain was insidious in onset, vague, mild , progressive in nature , with some foreign body sensation in throat. Pain also increased while taking food. 9 months back patient came to medicine OPD with the symptoms and was initially treated as GERD. pain subsided while taking medication but after some months she was reported again in surgery OPD with the same complaint, after examining her she was found to have pallor with koilonychia and was found to have anaemia and basic investigations was carried out. Her HB was found to be 8.1gms and mcv was 64.5. She was diagnosed with gastritis and was treated for the same and for anaemia correction oral tablet was prescribed. Patient was asymptomatic for 3 months and then she came with the same complaints, and at that time in ENT OPD, where we PGs were posted. We suspected some abnormalities, and we did her

routine investigations like CBC, peripheral smear. And, this time, we found that the patient had sores in angle of mouth and persisting pallor. Peripheral smear was found to be microcytic hypochromic, and HB was 10.1gms. Oropharynx x-ray was taken, it was normal and indirect laryngoscopy was done, it was found to be normal, and we sent her to gastroenterologist to look for suspected Circoid web. On doing upper GI endoscopy, cricoid webs were found, it was only then, we concluded Plummer Vinson Syndrome and started her on Ferrous bis glycinate, Zinc Biglycinate, folic acid, and Methyl cobalamin. During endoscopy, fracture of web was performed by the gastroenterologist and as per his opinion patient was asked to follow up after 4weeks to observe for possible cancerous changes.

Conclusion-Through Plummer Vinson syndrome is rare entity it can be present in any health care facility. The imaging modalities and endoscopy helps to reach the proper diagnosis.

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Case Report 2

A case of Edwards syndrome [Trisomy18]

Prenatal Screening for Common Aneuploidies

A rather uncommon but serious case of Edwards syndrome is presented. Early and timely detection will help in termination of pregnancy and the investigations done will help to predict the outcome in future pregnancies as it was done in this case.

Clinical history

Mrs X, 26-year-old, and a known case of PCOS who was treated with exercise and dieting conceived. There was no history of ovulation induction. Hers was a consanguineous marriage (married to maternal uncle).

She was referred for a routine antenatal scan for viability. Ultrasonography showed an intrauterine, singleton pregnancy corresponding to a period of six weeks and five days. Normal cardiac activity with a heart rate of 150 BPM was seen (Trisomies 18 and 13 generally have increased heart rate).

On 3/4/2021 her obstetric examination and routine antenatal profile were normal.

Scan done on 4/5/21 (for embryonic wellbeing) reported a single viable intrauterine gestation of 9 weeks.

Another scan was scheduled in the first trimester for combined screening. The combined screening includes USG (nuchal scan) along with maternal blood test for biochemical markers (double marker – free beta HCG and PAPP-A). Scan performed on 1/6/21, 12 weeks after conception, showed the following anomalies.

1. There was early onset IUGR (growth by USG was not corresponding to the gestational age).
2. Fatal movements appeared restricted.
3. There was a single umbilical artery (two vessel cord).

4. There was persistent clenched fist (overlapping fingers).

All the above are markers of Trisomy 18 (Edward syndrome).

Discussion

Double marker (serum screening) report combined with first trimester scan showed increased risk for Trisomy 18. This test involves screening of maternal blood for levels of beta human chorionic gonadotrophin [beta hCG] and pregnancy associated plasma protein A [PAPP-A]. The levels can be either higher or lower than normal (both will be low in T18). Abnormal values are a valuable predictor of possible trisomy. These tests along with NT Scan will, in a very high percentage of cases can predict the possibility of Trisomy and in the above case that of Trisomy 18.

Since there were multiple anomalies pertaining to T18 and generally these have reduced chances of recurrence [T18 is a random occurrence. Additionally, only those cases which have trans locations in chromosomes, in either of the parents, tend to recur]. No further invasive testing (amniocentesis/CVS) was performed in this case due to cost implications. The couple opted for termination of pregnancy at thirteen weeks. The abortus confirmed the findings from the nuchal scan.

First Trimester Combined Screening – Significance

The combined screening in the first trimester includes scanning the foetus between 11^{+6} weeks and 13^{+6} weeks, along with serum assessment of biochemical markers in the mother (double marker). The combined screening provides risk assessment for the common aneuploidies, namely T21, T18, T13, monosomies, sex chromosomes and 22q11 deletion. By performing combined screening, most of the high-risk foetuses can be identified with a sensitivity of 95%, with less than 2% false positive results.

Her viability and nuchal scan were normal. The combined risk for Trisomy was negative. [NT Scan and double marker test]. Her anomaly scan in the fifth month and the growth scans were also normal. She delivered a healthy, 3.2kg baby at term.

Since some of the aneuploidies have subtle USG findings, the combined test increases the sensitivity of detection. All screen positive cases are considered high risk, and all screen negative cases are considered low risk. Confirmation of all high risk and intermediate risk cases is obtained by invasive procedures like testing samples obtained by amniocentesis. This helps to reduce invasive procedures in most of the cases, as only high-risk cases need invasive testing for confirmation.

She conceived after six months (natural conception).

Edward Syndrome

While trisomy 21 [Moon syndrome] is relatively common [one in 700 births] and with reasonable life expectancy, whereas Edward's syndrome also called

as trisomy 18 is far more serious and fortunately rare [one in 5 to 6000 births] and mortality is very high and very few live up to a year after birth. It is a severe genetic abnormality due to an extra chromosome 18. Although rare, it is a serious condition due to multiple structural abnormalities and delayed mental development. Most of these fetuses either result in miscarriage or die within a year of birth. It is a random chromosomal error which cannot be prevented

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Faecal Calprotectin.

A biomarker of clinical relevance

Calprotectin

Calprotectin is a calcium- and zinc-binding protein of the S-100 protein family which is mainly found within neutrophils and throughout the human body. The presence of calprotectin in faeces is due to neutrophil migration into the gastrointestinal tissue because of any inflammatory process. Faecal calprotectin concentrations demonstrate good correlation with intestinal inflammation and is used as a biomarker in gastrointestinal disorders.

Calprotectin is useful for the differentiation of inflammatory bowel disease (IBD) from irritable bowel syndrome (IBS). It is used in practice to differentiate inflammatory bowel disease (IBD) from irritable bowel syndrome (IBS) where the signs and symptoms are very similar, but the pathology is different. IBD is an organic disease due to the inflammation of the intestinal wall whereas IBS has a functional pathology due to gut motility disorders. It is used for the diagnosis, monitoring disease activity, treatment guidance and prediction of disease relapse and post-operative recurrence in IBD.

It may also be useful, in other inflammatory conditions of GI tract such as ulcer disease, chronic colonic infections, diverticulitis and colonic malignancy.

An additional utility of faecal calprotectin is that changes in its levels are a good indicator of mucosal healing or recurrence of inflammation. Therefore, faecal calprotectin can be used for monitoring of

patients with IBD and to identify the patients at risk of relapse.

Although faecal calprotectin is a very sensitive marker for inflammation in the gastrointestinal tract, it is not a specific marker for IBD. Increased levels are also seen in gastrointestinal malignancies, infections, polyps and with the use of nonsteroidal anti-inflammatory drugs. However faecal calprotectin has many clinical advantages over other inflammatory markers such as plasma C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR]

This test is a useful addition to Colonoscopy and sometimes this can even eliminate the need for colonoscopy especially in follow up cases and when the procedure cannot be performed.

Clinical enquiry

What is the best way to manage pyuria during dengue fever?

Evidence based answer:

The incidence of pyuria during Dengue fever is a finding we cannot ignore. We have very limited studies on this topic but there has been some evidence that may help us come to a consensus on approach to Pyuria in dengue now.

Pyuria can be present as sterile or culture positive, the incidence of culture positive pyuria is far lesser than sterile pyuria. In the latter no treatment is recommended but in the former culture specific antimicrobial therapy will be necessary to ensure appropriate resolution of infection and symptoms.

Discussion & evidence summary:

Dengue fever is an important tropical infectious disease of note. It is endemic in more than 110 countries globally and known to infect more than a 100 million people every year. The case fatality rate in India alone is about 1-5% for severe dengue.

While it has been noted to be one of the common tropical viral fevers with a typical monsoon occurrence but there has been sporadic increase in incidence almost biannually in the Indian subcontinent.

Most people with dengue present with typical symptoms of high-grade fever with chills, headache, body ache, pain abdomen, nausea, and vomiting. Often these symptoms can resemble UTI and can confuse the clinician especially when evidence of pyuria pops up among routine investigations. It may result in unnecessary antibiotic prescriptions and confounding of diagnosis as some antibiotics may even confound with clinical presentations like rash and lab results like thrombocytopenia.

The incidence of pyuria in a study conducted at BMCRI, Bangalore published by Prashanth V.N et all where previously healthy subjects with no preexisting medical conditions of note and especially not diabetic or HIV positive, not having active TB, UTI and not treated with antibiotics in past one week, but having active Dengue infection with positive Dengue test was found to be 40%. A further 25% of these were found to be culture positive. Though the sample size is small and only 100 subjects were studied. It gives us sufficient direction to make informed clinical decisions on this subject and of course opens the door for further evidence gathering and practice-based research.

Another study by Uday Shankar et all, reported that 8.5% of all dengue patients had secondary bacterial infections, 6% of them had bacteremia and 20% had UTI. The cause for the high incidence of UTI could

however not be established in that study. He however noted that longer duration of fever >5days

is associated with secondary bacterial infection (P=0.020). This is clinically important to suspect

and look for secondary infections especially in endemic areas like India.

A study published in the European Medical Journal by Christopher Thiam Seong Lim et all suggests although acute renal infection/injury brought on by dengue infection is a potentially fatal complication, it is also one of the least researched. Because several pathways could independently result in acute kidney damage caused by dengue, the underlying process is complicated. Therefore, swift assessment and identification of the population at risk and early administration of appropriate supportive care should be the cornerstone of dengue-associated acute renal damage management.

A case report published by Somsri W et all in the Asia Pacific Journal of Tropical Disease suggests the routine use of Urine Routine analysis in all cases of suspected Dengue fever to ensure concomitant UTI's are not missed and timely treated.

Conclusion:

Pyuria can be present as sterile or culture positive, the incidence of culture positive pyuria is far lesser than sterile pyuria. In the latter no treatment is recommended but in the former culture specific antimicrobial therapy will be necessary to ensure appropriate resolution of infection and symptoms. It could be good practice to include routine urinalysis sampling along Dengue panel tests for suspected Dengue fever patients with fever more than 5 days, extremes of age and those with comorbidities in endemic areas to pick up pyuria and treat as necessary.

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Practice Experience

Mrs. S, a 40 year old woman made an anxious video call telling me about her passing red colored urine with some discomfort while voiding. There was no stinging, frequency, chills, or fever. This happened on two consecutive days [0n14/8 and 15/8/23]. She was asked to see me with her urine analysis and culture antibiotic sensitivity reports. This she duly did and saw me on 21/8/23. Physical examination did not reveal any abnormality. To exclude and pathology in the kidneys and the collecting systems, she was asked to get an abdominal scan done and a renal function test done [blood creatinine and eGFR]

The same evening. She called and told me she has again passed red colored urine and she had eaten red dragon fruit which she had also eaten on the days she had passed the red colored urine.

This is what I found on searching the internet.

If you eat enough red dragon fruit, it might turn your pee pink or red. This symptom looks more alarming than it is. The same thing can happen if you eat a lot of beets. Your pee should turn back to its normal color once the fruit is out of your system.

Dragon fruit

The dragon fruit (Hylocereus undatus) is a tropical fruit that belongs to the climbing cacti (Cactaceae) family. Widely cultivated in Vietnam, the fruit is popular in Southeast Asia. Apart from being refreshing and tasty, it has been noted that the dragon fruit is a rich source of vitamin C, calcium and phosphorus.

Origin and distribution
The dragon fruit's scientific name is derived from the Greek word hyle (woody), the Latin word cereus (waxen) and the Latin word undatus, which refers to the wavy edges of its stems. The origin of the dragon fruit is unknown, but it is probably native to Central America. It is also known as pitahaya in Mexico, and pitaya roja in Central America and northern South America. The Spanish name pitahaya may also refer to several other species of tall cacti with flowering fruit. Countries such as Vietnam, Thailand, Israel, northern Australia, southern China, the Philippines, and Hawaii and lately India are growing this fruit.

Description
The plant is a climbing cactus vine that grows well in dry areas. Because of its epiphytic nature, it grows best in soil with a high level of organic materials. Its flowers bloom only at night; hence the plant is sometimes also called the "moonflower" or "Lady of the Night." The flowers, are white and large, measuring 20 cm long or more. They are bell-shaped and are fragrant when in
bloom. Pitahaya plants can have between four to six fruiting cycles in one year. It can be propagated by seed or by stem cutting

The dragon fruit has a dramatic appearance, with bright red, purple or yellow-skinned varieties and prominent scales.[17] The fruit is oval, elliptical or pear-shaped. The flesh has a subtly flavored sweet taste or sometimes slightly sourish taste. The flesh is either white or red, with edible black seeds dotted all over.

The dragon fruit is closely related to the orchid cacti, or epiphyllum, which are known for their large and impressive flowers. The pitahaya can be cross-pollinated with the epiphyllum.

What is interesting to me is that the cactus plant which yields an extraordinarily beautiful flower, Brmhakamal and the dragon fruit flower appear the same, but then, I have not seen the Brmhakamal cactus blossoming into a dragon fruit in my back yard. I have watched this beautiful one night's wonder with fascination over the years. The botanical name for dragon fruit cactus is Hylocerus Undatus and that of Brmhakamal is Saussurea Oballata, obviously these two belong to different genre. But the flowers are so similar, and one can understand the prevailing confusion because of this.

I advised the lady not to do any more tests and to her query as to eat or not, I told her to eat it to her heart's content.

Death of a patient

Mr. Vijay Raghavan Thiruvadi has been my patient and friend for over 15 years. That we had common interests made the bond between us strong. He had multiple health problems and these needed constant care and surveillance. That he lived 82 years with these many serious health problems, a full life, is in itself a lesson for others.

He died suddenly of a heart attack yesterday morning leaving a legion of nature lovers grieving. Vijay was justifiably famous for his encyclopedic knowledge of trees of the subcontinent, especially that one see in the urban set up such as in the city of Bengaluru. His weekly walks taking a group of enthusiasts in Lalbagh were a must for nature lovers who lived in the city and those who visited from outside. In one of my recent articles, when I was at a loss to identify a set of trees that I had come across and sought his help. I was rewarded not only with the name of the tree but also with the ancestry and the legend associated with it [Kauri Pine].

He was also a Historian and based his talks on well researched facts, His walks in the Lalbagh and Cubbon Park Garden and in the sprawling campus of the MEG center were like history books of the past 300 years opened in front of you. Adding to the knowledge, a flair for storytelling and keeping himself in the background made Vijay a unique person.

His death is an irreparable loss.

Miscellany

A friend of mine once asked me, what is it that makes you watch birds. It was tough to answer that question. So, I sent him the following quote which I borrowed from Salim Ali's book on birds.

"Quite apart from the purely materialistic aspect, however, it must not be forgotten that man cannot live by bread alone. By the gorgeousness of their plumages and the liveliness of their forms, by the vivaciousness of their movements and the sweetness of their songs, birds typify life and beauty. They rank beyond a doubt among those trifles that supplement bread in the sustenance of man and make living worthwhile."

Dr B C Rao. Family physician

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