AFPI
Academy of Family Physicians of India

KARNATAKA

AFPI KARNATAKA QUARTERLY NEWSLETTER

President's letter

Dear friends,

In this issue of the AFPI Karnataka newsletter, I want to highlight two studies celebrating and documenting the contributions of Pioneering Family Medicine physicians in establishing Family Medicine in Southern India. These two studies have been published in PLOS Global Public Health, a prestigious and impactful global journal.

In the papers, you will recognize several pioneers from Karnataka including Dr. B. C. Rao, Dr. S. R. Jayaprakash, Dr. Swapna Bhaskar, and Dr. Bhaskara Puttarajanna.

Around the world, countries are introducing family medicine to strengthen primary health care, however, the process has been slow. Understanding the implementation of family medicine in a national context is complex but critical to uncovering what worked, the challenges faced, and how the process can be improved.

The first study explored how family medicine was implemented in India and how early cohort family physicians supported the field's emergence. In this qualitative descriptive study, several family physicians who were among the first in India and recognized as pioneers, were interviewed. The methodology included using Roger's Diffusion of Innovation Theory to describe and understand the roles of family physicians, as innovators and early adopters, in the process of implementation. Additionally, Greenhalgh's Model of Diffusion in Service Organizations was applied to identify barriers and enablers to family medicine implementation.

This research identified multiple mechanisms by which pioneering family physicians supported the implementation of family medicine in India. Notably, the study showed that pioneering FPs were: a) innovators who developed the first family medicine training programs; b) early adopters willing to enter a new field and support spread as educators and mentors for future cohorts of family physicians; c) champions who developed professional organizations to bring together family physicians to learn from one another; and d) advocates who pushed the medical community, governments, and policymakers to recognize family medicine's role in healthcare.

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Facilitators for implementation included the supportive environment of academic institutions and the development of family medicine professional organizations. Barriers to implementation included the lack of government support and awareness of the field by society, and tension with subspecialties. The study concluded that, in India, the implementation of family medicine has primarily occurred through pioneering family physicians and supportive educational institutions. However, for family medicine to continue to grow and have the intended impacts on primary care, government and policymaker support are needed.

Citation and link: Gupta A, Prasad R, Abraham S, Nedungalaparambil NM, Bhattacharyya O, Landes M, et al. (2023) The emergence of family medicine in India–A qualitative descriptive study. PLOS Glob Public Health 3(5): e0001848. https://doi.org/10.1371/journal.pgph.0001848

The second paper, aimed to understand the mechanisms by which family physicians strengthen primary health care (PHC). The premise of this study was that; a) Improved primary care and primary health care play an integral role in overcoming health disparities and b) Family medicine is a subset of primary care—delivered by family physicians, characterized by comprehensive, continuous, coordinated, collaborative, personal, family and community-oriented services—and may be able to fill these gaps.

In this qualitative descriptive study, the Contribution of Family Medicine to Strengthening Primary Health Care Framework was used to understand the potential mechanisms by which family medicine strengthens primary health care. Iterative inductive techniques were used for analysis. This research identified and highlighted multiple mechanisms by which family physicians strengthen primary health care in India including: 1) By being skilled primary care providers themselves; 2) Supporting mid and low-level health care providers' ongoing training and capacity building; 3) Developing relationships with specialists, ensure appropriate referral systems are in place; 4) When necessary, work with governments and organizations to access the essential resources needed to deliver care; 5) Motivating the workforce and change how care is delivered by ensuring providers' skills match the needs of communities and engage communities as partners in healthcare delivery. These findings strongly support the need for investments in postgraduate training in family medicine and integrating family physicians into the primary care sector, particularly the public sector, could address health disparities.

Citation and link: Gupta A, Prasad R, Abraham S, Nedungalaparambil NM, Landes M, Steele Gray C, et al. (2023) Pioneering family physicians and the mechanisms for strengthening primary health care in India—A qualitative descriptive study. PLOS Glob Public Health 3(6): e0001972. https://doi.org/10.1371/journal.pgph.0001972

Note: Both the papers above were part of Dr. Archna Gupta 's PhD thesis. Many thanks and congratulations to her and all the co-authors for leading these insightful and important studies. Felicitations are also due to all the study participants (each of whom has contributed significantly to the field), the Academy of Family Physicians of India (AFPI), the National President of AFPI, and other leaders of Family Medicine for having created a platform for enabling engagement and advancement of much needed work like this.

Quote Number	Quote	Participant
1	"Some of us thought it is time that we started an organization of our own to look after the education and interests of doctors who are in FM practice and that's how the Physicians Association—in those days we used to call it as IAGP, Indian Association of General Practitioners—came into being. . .then I made a smaller group which could share the practice experiences and then update, I felt the requirement of this kind of neighbourhood practice, so I started a club in my area with three members, and again it grew to five, then ten, and then it became fifteen, always these meetings were held in the homes of doctors."	Dr. B.C. Rao, Karanataka
2	"I was covering General Medicine, but I realized having worked for a short time that the more vulnerable people around the community were not accessing healthcare despite it being of lower cost. They were accessing healthcare often in a delayed or not at all, and therefore the best way to try and care for those sections of the community is through FM. That is why I chose to do FM, and I felt that one of us is supposed to train people in that specialty of FM."	Dr. Rajkumar Ramasamy, Tamil Nadu
3	"One of the pediatric surgeons graduated from CMC, Dr. Vinod Shah. He was managing 25 mission hospitals in an organization called Emmanuel Hospital Association. . .He realized that even though he was managing complex problems in the mission hospitals, the root of the problems were not managed well in primary care. So, he realized that he should develop a course for teaching the existing general practitioners."	Dr. Venkatesh S., Tamil Nadu

https://doi.org/10.1371/journal.pgph.0001848.t002

I also hope that the work of the FM pioneers and the FM scholars involved will serve as a source of inspiration to you on your own journey as FM physicians, educators, scholars, and leaders.

With warm regards,

Ramakrishna Prasad

President, AFPI Karnataka

Editor's note

A question that has always bothered me and more so when I see the concerned correspondence in the AFPI groups as to what is in store for the young doctors who complete their training in family medicine. Except for a few state governments, others are still to give this training a specialist status and or give a comprehensive career structure either in the department of medical education or health delivery cadres. In this connection Col Dr Mohan Kubendra's write up is of special significance. The future appears to be not too bad. But the policy makers must first overcome the resistance from other specialist bodies who feel threatened that these specially trained Family physicians will tread on to their domains.

There is also a felt need in the community for these family doctors and the government should think of considering these ventures by family doctors as startups and provide interest free loans and tax-free years. This will facilitate these start up clinics/ day care centers to begin functioning by making the start easy. This can be done by having a single point agency which will take care of all the procedures such as licensing and the like.

From the organizing committee, Belagavi conference.

Education, Learning and Training are the backbone of AFPI's mission to improve health status of communities, and to build an environment of change and reform. In pursuit of the same, we embark on another scientific and cultural journey this August in the city of Belagavi, Karnataka. On 5th and 6th August 2023, AFPICON-KA "RRR – Right Place, Right Time, Right Care", is being hosted jointly by AFPI-Karnataka and Department of Family Medicine, USM-KLE IMP. "With the growing medical tourism, Belagavi is emerging as a vital hub for cost-effective healthcare services", says Dr Smruti Haval, organizing Secretary "RRR", "and we need to update ourselves constantly, to cater well to the growing needs of our people. The focus of this conference is to proffer recent advances and developments in the medical sciences and provide valuable insight into technology and its increasing influence in the practice of medicine, to both seasoned experts in the field as well as the budding young practitioners of tomorrow."

Through this conference we aim to achieve not only high standards of academics but standardization of clinical practice. Requesting all our readers to be a part of this movement and participate in huge numbers.

Dr Twinkle Behl

Scientific Coordinator

Secretary's letter

The AFPI Karnataka newsletter is released quarterly, and at a blink of an eyelid, is already time for the next edition of our newsletter. If not for the driving force of Dr. B C Rao, it would have been impossible for me to come up with this write up. I take this opportunity of this quarter being Guru Poornima, to express my gratitude to him. "THANKYOU Rao Sir".

In the previous newsletter, the joy of completion of 3rd State conference and the idea of the 4thconference is evident,

This quarter has been the Process of inception to designing to execution of the 4th State conference.

The inception of a completely new team with their outright enthusiasm and willingness to take forward the vision of the EC team to conduct the State conference in a new city other than Bangalore was an overwhelming experience, which was experienced during our visit to Belagavi.

In continuum to what I had mentioned in the previous newsletter, I am glad that we are trying to implement what we learnt from our past experiences.

Yes, Our 4th State conference is happening in the heritage city, which has cultural rich mix of more than 2 states ..i.e. **BELAGAVI on the 5th**

It is one of the first conference which is being organized by the new team of organizers. The conference has been conceived for the varied audience which would benefit from the rich scientific session, put together by our vibrant scientific team.

Before we realize, its already a year of the current EC team. Reflecting the past one year, what we set out with our vision of conducting the state conferences outside Bangalore coming true seems like a dream and proves again that we are a great team of EC members.

AFPI Karnataka, has the potential to create a benchmark with every step towards strengthening of primary care in whatever ways possible and am proud of being a part of it.

As general secretary of AFPI Karnataka, on behalf of the Executive committee, I take this opportunity to invite each of you to attend the 4th State conference and experience the rich and culturally strong scientific sessions along with the beautiful Heritage City of Belagavi.

Look forward to seeing you all, create memories to Cherish .....

Dr. Harshapriya J

drharshapriyaj@gmail.com

Guest Article: Changing Paradigms of Primary Health Care in India

The role of GPs

This article explores the author's reflections on the changing paradigms of primary health care in India, with a special reference to the way GPs are positioned in the current system.

Health care system in India is going through a transformative phase and Primary health Care sector for once is keeping pace with the evolving system. India's primary health care system has witnessed significant changes in last decade and COVID-19 pandemic has acted as a catalyst to say the least. The pandemic has had a profound impact on healthcare systems worldwide, leading to a significant shift in the needs and expectations of communities. As we transition into the post-COVID era, the role of general practitioners (GPs) becomes increasingly crucial in meeting the evolving healthcare demands. GPs have always been at the forefront of primary care, and their adaptability and responsiveness are now more critical than ever. The stellar role played by GPs in mitigating the COVID-19 pandemic has been grossly undermined by the media and policy makers while glorifying the care provided to a small proportion of critical cases at tertiary hospitals. As the primary point of contact for individuals seeking healthcare, GPs continue to play a vital role in ensuring accessible, comprehensive, and patient-centered primary health care services. Their contribution is instrumental in building a resilient and responsive healthcare system for a healthier India.

Across the world, Primary Health Care has been recognized as the most inclusive, equitable, cost-effective, and efficient approach to enhance people's physical and mental health, as well as social being. But in India Primary Health care has always been a neglected sector relegated to being just overemphasized in the policy documents. However, in recent years we are seeing transformational changes in primary healthcare services both in the public and private sectors.

In the public sector significant efforts have been made to strengthen primary health care infrastructure across the country. This includes the expansion of PHCs, sub-centers, and the establishment of health and wellness centers (HWCs) under the Ayushman Bharat scheme which aims to provide comprehensive primary care and improved access to quality health care in rural and underserved areas. The integration of technology has played a crucial role in the transformation of primary health care in public sector. The Digital India initiative has facilitated the development and implementation of e-health initiatives, telemedicine services, electronic health records (EHRs), and mobile health applications. These advancements have improved healthcare delivery, information management, and accessibility to a great extent in recent times.

The private sector has also seen some transformational changes in recent times with General Practitioners focusing on improved service quality, accessibility, patient experience and comprehensive point of care - moving beyond the traditional model of individual clinics. The COVID-19 pandemic has accelerated the adoption of digital health technologies among the General Practitioners with online consultations and Electronic Medical Records (EMR) becoming integral to family practice. Tele consultations, Digital health records and remote monitoring have revolutionized the way patient information is stored and managed for better delivery of health care services. Technology has empowered even the patients to take an active role in managing their health leading to increased patient engagement and improved health outcomes in the community. We need to understand that the technology driven services will remain an integral part of primary care practice and GPs must continue to embrace/refine these services without compromising on the basic ethos of general practice.

Patient Centered Model: Primary health care delivery has gradually shifted from a disease-

oriented approach to a holistic and patient-centered model. GPs now focus not only on diagnosing and treating ailments but also on understanding the patient's overall well-being, lifestyle, and social determinants of health. GPs have become key educators and advocates for health promotion and disease prevention playing a crucial role in empowering patients with knowledge and tools to make informed decisions about their health.

Collaborative Care Model: GPs are increasingly engaging in collaborative care models, working closely with specialists, allied healthcare professionals, and hospitals. While this approach ensures seamless coordination, timely referrals, and better management of complex cases, it may open a window for over investigations, unnecessary referrals, and a possible scope for unethical.

Standards of care and accreditation: In the rapidly evolving landscape of primary care practice, general practitioners face the challenge of continuously updating their knowledge and skills to uphold high standards of care. To meet the demands of modern healthcare, GPs must actively engage in ongoing professional development and education. By embracing the latest research, technologies, and evidence-based practices, GPs can adapt to changing paradigms and deliver optimal patient care. Furthermore, seeking accreditation from recognized authorities ensures that GPs adhere to rigorous standards, fostering accountability and quality assurance. Through a commitment to self-improvement and accreditation, GPs can confidently navigate the evolving healthcare landscape and provide the best possible care to their patients.

Conclusion

practices. Family Medicine specialists are uniquely placed to lead these collaborative GP practice models who could significantly reduce the load on hospitals.

Mental Health Paradigm: The COVID-19 pandemic has highlighted the significance of mental health in overall well-being. The mental health toll of the pandemic has been substantial, with individuals experiencing increased stress, anxiety, and depression. GPs are uniquely positioned to provide holistic care by addressing both physical and mental health concerns and play a critical role in de stigmatizing mental health issues. GPs need to adapt their practices to address the growing mental health challenges by providing empathetic support, coordinating care with mental health specialists thereby contributing significantly to the overall well-being of the community.

Primary healthcare services in India have witnessed significant transformations in both the public and private sectors. The COVID-19 pandemic has further accelerated the transformation of primary health care reflecting a paradigm shift towards a technologically driven holistic, patient-centered care. The post-COVID era presents both challenges and opportunities for general practitioners. As community needs continue to evolve, GPs must adapt their practices to meet these changing demands effectively. General Practitioners need to develop themselves as Health acre leaders and as leaders it is their responsibility to adapt to these changing paradigms, leveraging the advancements in primary healthcare to ensure equitable, accessible, and resilient healthcare systems. Modern day GPs are expected to deliver highest standards of care and need to empower themselves with requisite knowledge/training to function effectively as comprehensive health care providers.

Col (Dr) Mohan Kubendra

mohankubendra@gmail.com

Updates on Diabetes

What is known?

Insulin, TZDs [Thiazolidinediones], Sus [Sulphonyl Urias] cause increase in weight

Metformin is weight neutral.

SGLT2 Inhibitors [Dapagliflozin {Forxiga},Canagliflozin{Invokana},Empagliflozin{Jardiance} , can support weight loss.

GLP-1 co agonists [Liraglutide, Exenatide, Dulaglutide, Semaglutide] cause high levels of weight loss.

What is not well known?

Metformin is no longer recommended as first line drug for glycemic control in persons with atherosclerotic vascular disease or in persons where there are indicators of high risk of heart failure or chronic kidney disease. SGLT2 inhibitors/GLP-1 co agonists appear to be the first choice in these persons.

New information on physical activity and prevention of heart disease and more effective management of diabetes

Just 500 steps a day reduces risk of cardiovascular morbidity by 2 to 9% and all-cause mortality.

5 to 6 minutes of brisk intensity walk equates to 4 years of greater life expectancy.

Physical activity significantly brings down HBA1c levels.

New drugs

Ruxolitinib

Is used to treat myelofibrosis (a cancer of the bone marrow in which the bone marrow is replaced by scar tissue and causes decreased blood cell production). It is also used to treat polycythemia vera (PV; a slow growing cancer of the blood in which the bone marrow makes too many red blood cells) in people who were not able to be treated successfully with hydroxyurea. Ruxolitinib is also used to treat acute graft versus host disease (avid; a complication of hematopoietic stem-cell transplant [HSCT; a procedure that replaces diseased bone marrow with healthy bone marrow] that usually develops within the first months after HSCT) in adults and children 12 years of age and older who were treated unsuccessfully with steroid medications. It is also used to treat chronic GVHD (cGVHD; a complication of HSCT that usually develops at least 3 months after HSCT) in adults and children 12 years of age and older who were treated unsuccessfully with 1 or 2 other treatments. Ruxolitinib is in a class of medications called kinase inhibitors. It works to treat myelofibrosis and PV by blocking the signals that cause cancer cells to multiply. This helps to stop the spread of cancer cells. It works to treat GVHD by blocking the signals of the cells that cause GVHD.

Also being tried in ointment form with good results in nonsegmental Vitiligo [Recently approved for use in Europe]

Paxlovid

Latest anti covid 19 drugs developed by Pfizer is a combination of two antivirals [Nirmatrelvir + Ritonavir]. This drug works with Nirmatrelvir inhibiting a key enzyme required for viral replication and Ritonavir boosts the levels of Nirmatrelvir thus prolonging the antiviral action. An important feature of the drug is that it is effective against the Omicron variant. Especially useful in patients with high risk such as immune compromised, elderly, diabetics and obese. It is known to significantly reduce the morbidity and hospitalization in this group. The twice daily oral medication makes it an attractive option despite its high cost at present.

RSV VACCINE FOR ADULTS

The US Food and Drug Administration (FDA) has approved the first vaccine for respiratory syncytial virus (RSV) in the United States. Arexvy, manufactured by GSK, is the world's first RSV vaccine for adults aged 60 years and older, the company said in an announcement.

Every year, RSV is responsible for 60,000–120,000 hospitalizations and 6000–10,000 deaths among US adults older than age, according to the FDA. Older adults with underlying health conditions — such as diabetes, a weakened immune system, or lung or heart disease — are at high risk for severe disease. "Today's approval of the first RSV vaccine is an important public health achievement to prevent a disease which can be life-threatening and reflects the FDA's continued commitment to facilitating the development of safe and effective vaccines for use in the United States," said Peter Marks, MD, PhD, director of the FDA's Center for Biologics Evaluation and Research, in a statement.

The FDA approval of Arexvy was based on a clinical study of approximately 25,000 patients. Half of these patients received Arexvy, while the other half received a placebo. Researchers found that the RSV vaccine reduced RSV-associated lower respiratory tract disease (LRTD) by nearly 83% and reduced the risk of developing severe RSV-associated LRTD by 94%.

The most reported side effects were injection site pain, fatigue, muscle pain, headache, and joint stiffness/pain. Ten patients who received Arexvy and four patients who received placebo experienced atrial fibrillation within 30 days of vaccination. The company is planning to assess risk for atrial fibrillation in postmarking studies, the FDA said. The European Medicine Agency's Committee for Medicinal Products for Human Use recommended approval of Arexvy on April 25, 2023, based on data from the same clinical trial.
GSK said that the US launch of Arexvy will occur sometime in the fall before the 2023/2024 RSV season, but the company did not provide exact dates. "Today marks a turning point in our effort to reduce the significant burden of RSV," said GSK's chief scientific officer, Tony Wood, PhD, in a company statement. "Our focus now is to ensure eligible older adults in the US can access the vaccine as quickly as possible and to progress regulatory review in other countries."

Wegovy [Semaglutide] for weight Los

The Western world is obsessed with finding the next "miracle" weight loss solution. Is Semaglutide (Wegovy), the newest weight loss medication approved by the U.S. Food and Drug Administration (FDA), the answer?

Weight and how we feel about our bodies are incredibly complex issues. With models and advertising media constantly reminding us that "thin is in," it is no surprise that many men and women worldwide are searching for ways to slim down and lose excess fat.

Wanting to lose weight has become such a prolific desire worldwide that a recent study of people from 30 countries found that up to 45% of people report trying to lose weight at any given time. [1]

Despite a seemingly universal interest in losing and controlling weight, obesity rates are at an all-time high. According to the Centers for Disease Control and Prevention (CDC), almost 42% of American adults aged 20 and over are diagnosed with obesity, which means having a body mass index (BMI) of 30 or greater. [2]

Weight loss is a complicated and incredibly personal experience. As a health metric dramatically impacted by various factors, including genetics, place of living, lifestyle, and more, the idea of "simply losing weight" is often not so simple.

Because of this complexity, it is incredibly common for people to turn to quick-fix diets and "miracle" weight loss solutions to lose weight as fast as possible — even if these options are not the best fit for their needs.

But is Wegovy, the latest FDA-approved weight loss medication, a different story?

Wegovy (generic name: Semaglutide) is a newly FDA-approved prescription weight loss medication. As the first weight loss drug accepted by the FDA since 2014, Wegovy officially hit the markets as a treatment option for chronic weight management in 2021.[3]

Wegovy is an injectable medication given weekly for people with an elevated BMI. In most cases, patients begin on a lower dose and then gradually, over multiple months, work their way up to the correct dosage. This is done to avoid complications and reduce the risk of experiencing unpleasant symptoms.

As a Semaglutide medication, Wegovy is the first of a new generation of hormonal weight loss drugs. Capable of interacting with essential receptors within the gastrointestinal tract, Semaglutide medications help a person lose weight by causing the following responses throughout the body: [4]

- Decreasing appetite and food cravings
- Increasing the feeling of fullness after a meal
- Decreasing the gastric emptying time
- Increasing insulin production and secretion
- Decreasing glucose release from the liver
- Increasing glucose uptake into the muscles

Clinical trial results look promising.

To become FDA-approved, medications must undergo extensive testing and clinical trials to prove their safety and efficacy. And while this process can take multiple years to complete, a large amount of research during this time offers valuable insights into possible side effects, uses, and complications of a particular drug.

As part of its FDA approval process, Wegovy was involved in four clinical trials, each of which lasted for 68 weeks (15 months) to complete. Throughout these studies, over 2600 participants received regular Wegovy dosages (and over 1600 people received a placebo), resulting in the following findings. [5] [6]

Participants lost significant weight from baseline

On average, throughout the 68-week trials, the participants who received Wegovy lost an average of 14.9% of their baseline body weight, compared to only a 2.4% loss in the control group.

Additionally, over 86% of participants who took Wegovy lost 5% of their baseline body mass during this trial, while only 31.5% of the control group met this same metric.

Participants had improved health metrics.

Throughout the trial, participants who received weekly Wegovy experienced a reduction in cardiometabolic risk factors while also reporting improvements in their overall physical functioning and health. These findings were more significant in the Wegovy group compared to the placebo group, who, on average, lost less weight throughout the trial.

The average participant lost 33.7 lbs. (13.7 kg)

While on Wegovy, the average person throughout this trial lost nearly 34 lbs. over the 68-week period. Comparatively, the placebo control group lost an average of 5 lbs. over the same period.

So, with these profound and seemingly mostly positive clinical findings, it can be easy to conclude that starting Wegovy is necessary for your health and weight loss journey. As it turns out, however, it isn't a safe choice for everyone.

Wegovy is not a miracle solution (and it is not for everyone)

Depending on your unique medical and family history, Wegovy may not be a safe or effective choice for your needs. Before starting Wegovy, ask your healthcare provider about the associated risks if you have any of the following health conditions: [7]

- A personal or family history of thyroid cancer (medullary thyroid carcinoma or multiple endocrine neoplasia syndrome type 2)
- Any history of allergic reactions to semaglutide medications or other injectable medications
- Past kidney, gallbladder, or pancreas infections, injuries, or issues
- A history of vision changes due to a diagnosis of type 2 diabetes.
- Planning to become or currently pregnant.
- Currently breastfeeding

Wegovy is unsafe to take while pregnant and should be stopped at least two months before becoming pregnant. This medication can also be passed from parent to baby via breast milk and is unsafe to take while breastfeeding.

Wegovy is not without side effects and complications.

Like any other medication, taking Wegovy is not without risks and potential side effects. Commonly impacted by a person's unique health status and genetics, some of the more common and mild symptoms of Wegovy include: [8]

- Nausea, diarrhea, and vomiting
- Abdominal pain and bloating
- Constipation
- Increased flatulence, burping, and gas production
- Heartburn
- Headaches
- Fatigue and dizziness
- The development of a rash
- Swelling of the eyes, mouth, tongue, or throat
- Increased resting heart rate.
- Fever

In most cases, the above-mentioned mild symptoms can be monitored and managed with changes in the dosage of medication given. However, some people's symptoms continue to worsen if they stay on Wegovy.

Examples of more severe (and less common) side effects of Wegovy include: [8]

- Vision changes (often in patients living with type II diabetes)
- Hypoglycemia (low blood sugar)
- Mood changes, including increased feelings of depression.

For a tiny subsection of patients on Wegovy, the medication can cause various severe health complications. Patients who experience symptoms of the following complications should immediately speak with their primary care provider for additional support about stopping Wegovy.

Examples of serious health complications from taking Wegovy include increased risks of developing the following: [8]

Thyroid cancer

Extensive research has proven that taking Wegovy increases a person's risk of developing thyroid cancer. Because of this, Wegovy comes with a boxed warning from the FDA — the most severe health warning the administration uses to label medications, designed to alert prescribers to the potential risks.

Early warning signs of pancreatitis include sudden and severe pain in the abdomen and back that does not go away.

Acute kidney injury and failure

the patient is already living with pre-diagnosed kidney issues, Wegovy-induced dehydration can result in short-term kidney injury and failure in severe cases.

The pros and cons of taking weight loss medications.

If all this information makes you think about looking into Wegovy, the next best step is to talk to your primary care physician about the benefits and risks of starting weight loss medication.

While all person's pros and cons will look a little different, here are a few examples of things to discuss with your doctor before starting Wegovy for weight loss:

The benefits of starting weight loss medication include:

Due to this potential risk factor, Wegovy is not recommended for patients with or who have a family history of thyroid cancer.

Gallstones

The gallbladder is responsible for storing and releasing bile from the liver into the intestines to break down food. While on Wegovy, some patients experienced a higher risk of developing gallstones (calcifications of bile in the gallbladder that can block the normal release of bile). In some cases, gallstones can require emergency surgery to remove.

Pancreatitis

As the organ primarily responsible for releasing digestive enzymes, the pancreas is heavily involved in losing weight. In some cases, patients on Wegovy can develop pancreatitis (inflammation and painful damage to the pancreas due to early activation of digestive enzymes within the pancreas) due to taking the medication.

In severe cases of nausea, vomiting, and diarrhea from taking Wegovy, it is possible for a person to become dehydrated. If

You may be able to lose more weight.

Research indicates that people who take weight loss medications are likely to lose 10% or more of their starting baseline weight as part of the treatment. Sustained weight loss can help reduce your risk of developing weight-related comorbidities. [9]

It can be added to your other healthy habits.

Weight loss medications can be safely paired with lifestyle changes for increased results. Eating a low-calorie diet and exercising regularly while taking these medications help improve your overall health.

It can help maintain weight loss over time

When taken for a prolonged period, weight loss medications can help you maintain weight loss. Observing long-term weight loss success can benefit not only your physical but also your mental and emotional health.

The potential risks of starting weight loss medication include:

Depending on your personal medical history, genetics, and a wide variety of other factors, you may be at an elevated risk of experiencing severe complications or side effects from taking weight loss medications.

It may not be a safe option for your overall health

Depending on your medical or family history, you may not be a candidate for weight loss medications in the first place. When deciding whether to start weight loss treatment, talk to a qualified healthcare professional to ensure that the option you choose is right for you.

You may regain weight after stopping the medication.

You may experience mild or severe side effects.

As we explored in this article, every weight loss medication has associated side effects.

No weight loss medication can be taken forever. After the duration of the treatment, weight loss medications must be stopped, an event that can cause people to regain the weight lost. Because of this, using weight loss medications in conjunction with healthier lifestyle habits is essential for long-term and sustainable results.

Other effective ways to lose weight.

It is important for you to remember that weight loss medication does NOT need to be a part of your weight loss journey. There are plenty of other less risky and more lifestyle-based approaches to take that can yield the results you are looking for.

If you are interested in losing weight, examples of sustainable lifestyle changes that you can add to your daily routine include:[10]

- Participating in low-impact daily exercises like walking, swimming, or gardening
- Adapting your diet to contain more fruits and vegetables and less processed, high calorie food.
- Prioritizing rest and recovery, ensuring that you are getting enough quality sleep every night.
- Practicing meditation and mindful eating to better connect your mind and body throughout our weight loss journey.

- Focusing on the adventure rather than the destination

Remember, no weight loss journey is linear. How quickly you can get back on track after a minor slip in your routine will help you move toward your goals faster.

The lowdown

So, as it turns out, Wegovy is not a miracle weight loss drug after all — and that is okay!

Just like any other medication, Wegovy offers plenty of benefits (mixed in with some side effects and risks). Determining if this medication is right for you will be done based on various factors, from your medical history and personal risk tolerance to the advice and support of your doctor.

Do your research, and don't be afraid to ask questions before starting any new weight loss medication. Your safety should always be a top priority.

The information provided is designed to support, not replace, the relationship between a patient/site visitor and their existing healthcare professional(s).

1. 45% of people globally are currently trying to lose weight | Ipsos.com
2. Adult obesity facts | Centers for Disease Control and Prevention
3. FDA approves new drug treatment for chronic weight management, first since 2014 | U.S, Food and Drug Association
4. How does Wegovy work for weight loss? | Drugs.com
5. Highlights of prescribing information | Access data
6. Once-weekly Semaglutide in adults with overweight or obesity (2021)
7. Lose weight and keep it off | Wagovy
8. Common side effects of Wegovy® | Wagovy
9. The best drug supplement for obesity treatment: A systematic review and network meta-analysis (2021)
10. Interested in losing weight? | U.S Department of Agriculture

Claire Bonneau is a medical writer and certified trauma operating room nurse.

Adopted from Medscape

More on body fat - BMI VS WHR

New evidence continues to show that alternative measures of adiposity than body mass index, such as waist-to-hip ratio, work better for predicting the risk a person with overweight or obesity faces from their excess weight.

A direct comparison of waist-to-hip ratio (WHR), body mass index (BMI), and fat mass index (FMI) in a total of more than 380,000 United Kingdom residents included in the UK Biobank showed that WHR had the strongest and most consistent relationship to all-cause death, compared with the other two measures, indicating that clinicians should pay more attention to adiposity distribution than they do to BMI when prioritizing obesity interventions, Irfan Khan said at the annual meeting of the European Association for the Study of Diabetes.

Although it's likely "way too early" to fully replace BMI as a measure of adiposity because it is so established in guidelines and in practice, it is now time to "use WHR as an adjunct to BMI" suggested Khan in an interview.

"A lot of work still needs to be done to translate WHR into practice, but I think it's getting closer," said Khan, a medical student at McMaster University, Hamilton, Ont., who performed his analyses in collaboration with a research team based primarily at McMaster.

Moving Away From BMI-Centric Obesity

"This is a timely topic, because guidelines for treating people with obesity have depended so much on BMI. We want to go from a BMI-centric view to a view of obesity that depends more on disease burden," commented Matthias Blüher, MD, professor of molecular endocrinology and head of the Obesity Outpatient Clinic for Adults at the University of Leipzig (Germany).

For example, the 2016 obesity management guidelines from the American Association of Clinical Endocrinologists and the American College of Endocrinology called for a "complications-centric" approach to assessing and intervening in people with obesity rather than a "BMI-centric" approach. But Blüher went a step further in an interview, adding that "waist-to-hip ratio is now outdated," with adjusted measures of WHR such as waist-to-height ratio "considered a better proxy for all-cause death." He also gave high marks to the Edmonton Obesity Staging System, which independently added to BMI as well as to a diagnosis of metabolic syndrome for predicting mortality in a sample from the U.S. National Health and Nutrition Examination Survey (NHANES). The Edmonton System also surpassed BMI for disease-severity staging using data from more than 23,000 Canadians with a BMI that denoted obesity.

1 Standard Deviation Increase in WHR Linked With a 41% Increased Mortality

The study reported by Khan used both epidemiologic and Mendelian randomization analyses on data collected from more than 380,000 U.K. residents included in the UK Biobank database to examine the statistical associations between BMI,

FMI, and WHR and all-cause death. This showed that while BMI and FMI both had significant, independent associations with all-cause mortality, with hazard ratios of 1.14 for each 1 standard deviation increase in BMI and of 1.17 for each standard deviation increase in FMI, the link was a stronger 1.41 per standard deviation increase in WHR, he said.

Another analysis that divided the entire UK Biobank study cohort into 20 roughly similar subgroups by their BMI showed that WHR had the most consistent association across the BMI spectrum.

Further analyses showed that WHR also strongly and significantly linked with cardiovascular disease death and with other causes of death that were not cardiovascular, cancer-related, or associated with respiratory diseases. And the WHR link to all-cause mortality was strongest in men, and much less robust in women, likely because visceral adiposity is much more common among men, even compared with the postmenopausal women who predominate in the UK Biobank cohort.

One more feature of WHR that makes it an attractive metric is its relative ease of measurement, about as easy as BMI, Khan said.

The study received no commercial funding, and Khan had no disclosures. Blüher has been a consultant to or speaker on behalf of Amgen, AstraZeneca, Bayer, Boehringer Ingelheim, Lilly, Novartis, Novo Nordisk, and Sanofi.

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STOPPING DENGUE AT THE SOURCE

Dengue fever has had a free ride for too long. There is no effective vaccine or therapeutic against the mosquito borne disease, which infects 50 million people per year—and in a warming planet, the dengue-carrying Aedes aegypti mosquitoes' range is spreading to include regions that typically had a low incidence of the disease. But a study led by the World Mosquito Program in the Indonesian city of Yogyakarta and released in August 2020 may point to a solution: Infect the insects with another pathogen—the Wolbachia bacterium—which prevents Aedes aegypti from spreading dengue when they bite humans. In the 27-month trial, Wolbachia-infected mosquitoes were released across Yogyakarta, and the result was a 77% reduction in dengue incidence. Investigators believe the strategy may also be effective in preventing other mosquito-borne viral diseases, including Zika, chikungunya and yellow fever. —Updated excerpt from TIME, June 10, 2021

Fine tuning messages

Approved by the Food and Drug Administration for treating chronic pain. Electroceuticals "are the next wave of new treatments we will have to treat disease," says Kris Famm, PhD, president of Galvani Bioelectronics, a biotech collaboration between GSK and Google's Verily that is focused on developing electricity-based therapies. It turns out that many cellular functions are regulated by electrical signals that pass-through nerves between the brain and the organs where the cells are located. The frequency of those currents determines how active the cells are in performing their assigned function. Medicine's attempts to exploit this system have grown more refined with time. In recent decades, more effective bioelectronic devices focused on refined modulation of electrical signals—including pacemakers for the heart, cochlear implants, as well as devices to control urinary incontinence and strategies for helping paralyzed muscles to move—have made it to market. Research is fueling a surge in more sophisticated bioelectronic devices that is delving deeper into complicated neural networks. Innovations in engineering that are packing chips and other components into tinier and tinier kits to implant in the body, with more power to communicate, charge, stimulate and record, are also expanding the range of diseases that might be treated with a bioelectronic therapy. In the not-too-distant future, scientists anticipate that patients with high blood pressure could get an electrical device that would control how well the kidneys filter fluids, alleviating the need for medication. Or someone with diabetes could avoid the constant cycle of blood checks and pills or insulin shots with an electroceutical device at the pancreas that protects their insulin-producing cells. At Massachusetts General Hospital in Boston, researchers are working on ways to activate nerves in the eye to restore vision in people with retinal disease, while scientists at Johns Hopkins in Baltimore are convinced that manipulating electrical signals in the brain could address conditions from depression to dementia. Earlier this year, two patients with rheumatoid arthritis had splenic neuromodulation systems, made by Galvani, implanted. The device stimulates the splenic nerve in order reprogram pro-inflammatory immune cells in the spleen to anti-inflammatory cells. Those cells can then migrate to joints, for example. The study will be ongoing for many years, says Famm, so there's no word yet on any changes. "We expect that this therapy can help patients suffering from a wide range of immune-mediated inflammatory disorders, offering a new approach to get more patients to gain treatment benefits and get closer to disease remission, but we need to conduct additional clinical trials to understand whether and to what degree this will be," says Famm. "The nervous system really uses electricity as its language," says Robert Kirsch, PhD, chair of biomedical engineering at Case Western Reserve University and executive director of the Cleveland FES (Functional electrical stimulation) Center. "So, 22 [IN THE LAB] electrical stimulation can be used theoretically just about anywhere in the nervous system. We need to learn how to speak that language."

Evans Syndrome - A Case Report

Mr. P, a 94-year-old, presented to his family physician with history of passing black stools for the past three days with bruises on his upper arms on 23/9/06. A diagnosis of GI bleed was made, and he was referred to a tertiary care hospital. His Bleeding time was 3mins and clotting time was 7 mins. His Hb% was 8.5, TC was 7500, DC was normal. His platelet count was 15,000. The cause of bleeding was from jejunal diverticulum, resection and anastomosis was done with uneventful recovery. The hematologist started him on 60 mgs of prednisolone with a diagnosis of Immune Thrombocytopenia (ITP). He also stopped the ongoing medications to exclude the possibility of drug induced purpura [amlodipine, atenolol, atorvastatin, and 75mgs of aspirin]. On 30/10/06, he was stable, no bleeding recurrence and steroids were slowly being tapered on reduced dose of prednisolone [20mgs]. His platelets were more than 100,000 at this stage.

He was on losartan 25mgs with good control of blood pressure.

On 2/4/07, he presented with acute onset of swelling and pain on his right big toe. His uric acid levels were 7.8mgs with normal hemogram with platelets of 1,38000 [on 10mg/5mg of prednisolone] He was adequately treated with Colchicine.

On 18/5/07, he presented with painful rashes on the chest 8/9th intercostal space. A diagnosis of herpes zoster was made, and he was started on a course of Acyclovir 800mgs 5 times a day with good recovery.

On 11/7/07 as the platelet counts were normal and as the count remained normal over a year, it was decided to stop the maintenance dose of prednisolone.

Things remained quiet except for another episode of acute gout which was treated with a short course of colchicine. On 6/3/10, his platelet count was 50000 and on 28/3 it fell to 26000. He was now started on Dapsone 100mgs once a day along with a short course steroid (5-day course of 20 mgs of prednisolone twice a day). There was good response to dapsone, and platelet count remained with in normal limits. it fell to 38,000 on 27/12/2010, when it was decided to stop dapsone and begin prednisolone once again. on 4/1/11 the count was still 38,000 which was considered inadequate, and it was decided to begin Danazol 100 mgs three times a day. On 25/2/11 his platelets were more than a lakh and his prednisolone dose were reduced to 10mgs on alternate days

On 15/7/11 on routine testing he was found to have CKD with creatinine of 2.4 and e GFR of 22. This was thought to be due to age and/or drug related. His platelets began dropping again and it was decided to begin Rituximab. There was very good response with normal hemogram and his renal function too improved with creatinine coming down to 1.64 and eGFR going up to 33 [as on20/3/13]. Routine test also showed in addition to normal hemogram a TSH value 17.78 with an LDL of 158 and uric acid level of 8.6.

Though asymptomatic it was decided to begin a small dose of eltroxin [25mcgs] and 5mgs of Rosuvastatin.

On 31/1/14, the hemogram was normal, TSH was 11, creatinine was 1.6 and his e GFR was 38.7. At this point he was on 50mcg of eltroxin,50 mgs of losartan and 5mgs of Rosuvas.

On 27/9/14 it was found that his platelet count had dropped to less than 50.000 and it was decided to begin another course of Rituximab as there was very good response to earlier course. This time too there was good response, and the remission was maintained till 18/1/17.

On 17/12/15 he came with stiffness, pain, swelling of finger joints and wrists of both hands with restricted movements. His ESR was 85, CRP was 32 and he was ANA and RA positive. A diagnosis of rheumatoid arthritis was made, and he was started on HCQS with very good response and when seen on 14/4/16 he was much better and on 6/7/16 was near normal and his platelets were 1.54000, eGFR was 41 and creatinine was 1.5.

Things remained quiet till 18/1/17 when his platelets began dropping and it was decided to start another course of Rituximab. At this time when he was on the third dose of this drug, he developed LRTI and Xray chest revealed basal pneumonitis. The 4th dose of Rituximab was not given due to this infection. He was treated with antibiotics with good recovery.

He remained in remission till May 2018 when there was progressive drop once again. Rituximab was restarted in January2019 with good response which remained till June 2020 and in July the count was 39000. Now it was decided to begin Eltrombopag. Though the response was partial, he was able to maintain platelet level of around 50,000.

In dec 2021 he was hospitalized for LRTI but with no fever. The acute onset of symptoms prompted thinking of pulmonary embolism. This could not be established because of nephrologist was not in favor of doing CTPA given his renal status. He was put on prophylactic anticoagulation over next three months. It was noticed there was a drop in his HB [7.2mgs%]. He was given transfusion of packed red cells along with Iron infusion on 11/3/22. There was no evidence of blood loss to explain the onset of anemia. It was now thought that it was due to chronic renal disease, and he was started on weekly injections of erythropoietin. His HB remained more than 11gm for 8 weeks and on 30/5/22 his hb was 10.8 and platelets was 1.32 million. DAT test [direct Combs] was positive with a significant increase in LDH. This finding and some drop in HB made the hematologist think of possible onset of Evans syndrome over and above anemia due to chronic kidney disease.

In view of this Rituximab was started once again [this time not for platelet drop alone but to counter the autoantibodies against red blood cells] and he completed four weeks of this and was stable. His hemogram was being closely [weekly] monitored. And at that time, the opinion was that the anemia is due to coexisting chronic kidney disease and advent of Auto immune hemolytic anemia.

At that time these two could not be segregated. It was decided to wait for three months from the last erythropoietin [30/5/22] dose and two months from the last transfusion [11/3/22]

1/8/22 The hemogram shows steady improvement despite not taking erythropoietin or transfusions. Now one can safely say that the improvement is due to Rituximab in preventing auto immune hemolysis which confirms the diagnosis of Evan's Syndrome.

At the time of reporting [15/4/23] patient is stable with normal red cell and platelet counts.

Discussion

In Evans syndrome, patients have both thrombocytopenia and hemolytic anemia, which may be severe and life-threatening. The exact prevalence of Evans syndrome in adult ITP patients is not known, but it is estimated to occur in less than 5% of cases. However, the risk of developing Evans syndrome increases with the duration of ITP and the severity of thrombocytopenia. A study by Neunert et al. found that the risk of developing Evans syndrome was 1.3% per year of ITP duration, and patients with platelet counts below 20,000/μL were at a significantly higher risk compared to those with higher platelet counts.

Etiology

Evans syndrome is an autoimmune disorder in which non-cross-reacting autoantibodies are targeted towards different antigenic determinants on red cells, platelets, sometimes neutrophils; however, the exact pathophysiologic mechanism is unknown. Because of the observation of a decrease in T-helper and an increase in T-suppressor lymphocyte population, it is suggested that the cytopenia may be related to T-cell abnormalities. Evans syndrome is frequently associated with other diseases, such as systemic lupus erythematosus, antiphospholipid syndrome, autoimmune lymphoproliferative syndrome, and common variable immunodeficiency (see these terms), which could point to a common cellular and humoral abnormality.

Diagnostic methods

Diagnosis is based on a complete blood count showing anemia (hemoglobin level <12g/dL) and thrombocytopenia (platelet count <100,000/microL), associated or not with neutropenia (neutrophil count <1500/microL). A raised lactate dehydrogenase (LDH) and/or direct bilirubin level, and a decreased haptoglobin level indicate hemolysis. A positive direct antiglobulin test (Coombs test) confirms the presence of antibodies targeting red blood cells (RBCs) antigens. The presence of autoantibodies targeting both platelets and neutrophils cans also be observed.

Treatment

Treatment of Evans syndrome may involve the use of corticosteroids, immunosuppressive agents, and intravenous immunoglobulin (IVIG). Treatment with rituximab, a monoclonal antibody that targets B cells, was effective in treating Evans syndrome in patients with a history of ITP. Usual complete response is seen in 52% of patients and a partial response in 23%, with no significant differences between patients with and without a history of ITP.

In conclusion, while most cases of ITP resolve spontaneously or respond well to treatment, a small percentage of patients may develop chronic ITP or progress to other autoimmune disorders such as Evans syndrome. The risk of developing Evans syndrome increases with the duration of ITP and the severity of thrombocytopenia. The pathogenesis of Evans syndrome is not well understood, but it is thought to involve the production of autoantibodies against RBCs and platelets by B cells. Treatment of Evans syndrome may involve the use of corticosteroids, immunosuppressive agents, IVIG or splenectomy. Rituximab has shown promise in treating Evans syndrome in patients with a history of ITP.

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This case report illustrates the importance of close cooperation between hospital-based specialists and community-based physicians.

Dr B C Rao. Family physician

Badakere.rao@gmail.com

Dr Ashish Dixit. Hematologist

Ashish.dixit@manipalhospitals.com

CORONARY ARTERY CALCIUM SCORE

Coronary artery disease is the leading cause of mortality worldwide. Over one-fourth of patients with sudden death or non-fatal acute myocardial infarction have reported no previous symptoms. Identification of asymptomatic persons at greater risk of future cardiovascular events is critical for the implementation of preventive strategies. Coronary artery calcium (CAC) scoring has emerged as a widely available, consistent, reproducible and efficient tool for stratifying cardiovascular risk, predicting outcomes and guiding preventive therapy in asymptomatic individuals [(1)].

CAC is obtained from Multidetector Computed Tomography and acquisition is based on axial slices, with a thickness of 3 mm, limited to the cardiac region in synchrony with ECG, timed at mid/late diastole. Agatston method is the most extensively used method to calculate CAC score. This method uses the weighted sum of lesions with density above 130 Hounsfield units (HU), multiplying the area of calcium by a factor related to maximum plaque attenuation [(2)].

The well-established indications for the use of the CAC score include stratification of global cardiovascular risk for asymptomatic patients: intermediate risk based on the Framingham risk score (class I); low risk based on a family history of early CAD (class IIa); and low-risk patients with diabetes (class IIa). The use of CAC is not indicated in high-risk patients, because aggressive preventive measures would already be indicated in such patients. The most widely used classification systems for categorization of calcium scores and its clinical interpretation is shown in Table 1[(2)].

Table 1 - Degree of coronary artery calcification by absolute CAC scores and CAC scores adjusted for gender, age, and ethnicity, with clinical interpretations.

Degree of coronary artery calcification	Absolute CAC score (Agatston method)	CAC score adjusted for gender, age and ethnicity - percentile	Clinical interpretation
Absent	0	0	Very low risk of future coronary events
Discrete	1-100	≤ 75	Low risk of future coronary events; low probability of myocardial ischemia
Moderate	101-400	76-90	Increased risk of future coronary events (aggravating factor); consider reclassifying the individual as high risk
Accentuated	> 400	> 90	Increased probability of myocardial ischemia

The 2018 ACC/AHA Cholesterol Guideline suggests that CAC testing may be considered in adults 40-75 years of age without diabetes mellitus and with LDL-C levels ≥70 mg/dl-189 mg/dl at a 10-year atherosclerotic cardiovascular disease (ASCVD) risk of ≥7.5% to <20% (i.e., intermediate risk group) if a decision about statin therapy is uncertain.(3) In such patients, if CAC is zero, treatment with statin therapy may be withheld or delayed, except in cigarette smokers, those with diabetes mellitus, and those with a strong family history of premature ASCVD. According to the guideline, a CAC score of 1 to 99 favors statin therapy, especially in those ≥55 years of age. For any patient, if the CAC score is ≥100 Agatston units or ≥75th percentile, statin therapy is indicated unless otherwise deferred by the outcome of clinician-patient risk discussion.

The ACCF/AHA consensus suggested that the CAC score can be used as a filter before the indication for coronary angiography or for hospitalization of patients with chest pain, especially those with atypical symptoms, i.e., in patients with chest pain who are classified as being at low to intermediate risk. If the CAC score is zero, no other examination would be indicated; if the score is between 1 and 400, the consensus recommends coronary angiography; and if the score is > 400, coronary angiography would be indicated[4].

Thus, the CAC score is an independent marker of risk for cardiac events, cardiac mortality, and all-cause mortality. In addition, it is cost effective and provides additional prognostic information to other cardiovascular risk markers [5].

Summary

People at increased risk
Have a family history of heart disease.
Users of tobacco products now or in the past
History of high cholesterol, diabetes, blood pressure
Are overweight BMI more than 25 or obesity BMI more than 30.
Sedentary lifestyle
Younger than 40 but has history of familial hypercholesterolemia.
Recommended that it is done once in 3 to 5 years but helpful only in those who have had normal scores and want to know if there is any change.

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-Dr Padma Kumar

Practice experience

A 60-year-old lady presented with age onset Rheumatoid arthritis which presents atypically that of rheumatoid arthritis in the young. The symptoms occur over a period unlike acute onset in the young. In this case it affected her left thumb with swelling and tenderness which was first thought of due to gout with no response to treatment. After nearly a month later she developed shoulder pain and then in her knees. Bearable disability made her seek help late. Other small joints were spared. Rheumatoid factor was negative again a feature of age onset disease. Her tests including a CBC, ESR CRP were near normal. Needless to say, because of this unusual presentation the diagnosis was further delayed.

She was begun Hydroxy Chloroquine 200mgs twice a day and at two weeks follow up was much better with hardly any pain in the large joints but with some pain and swelling in the Thumb joint.

Serendipity

Is defined as the occurrence and development of events by chance in a happy or beneficial way. The above patient has been having burning sensations in her tongue for over six months because of which she was not able to eat hot food [both heat hot and chilly hot]. This complaint preceded the onset of joint pains and the usual treatment with B vitamins was of no use.

A week into the start of Hydroxy quinoline sulphate, she called to say that her burning has gone, and she was able to eat normal food after a long time and said she was very happy. She also accused me of not giving her this medicine earlier!

Miscellany

A patient who weighed 95 kgs went on a diet and went down to 70 kgs in a matter of 12 months. He felt over all much fitter after this loss with all his blood parameters returning to normal. The only catch was that he had bought 4 pairs of trousers just before he began his diet and exercise program, and these newly bought trousers were of no use now. His son suggested a tailor who specializes in altering the size and shape of the ready-made garments, so, this gentleman took his trousers to this specialist tailor and requested his to do the alterations to fit his now 70 kg weight and 32-inch waist. After some deliberations the specialist agreed to do this rather difficult job [some kind of Bariatric surgery!]

On the given date my patient went to the tailor and was overjoyed to see that the alterations were perfectly done. After settling the specialist's fee, and when he was about to leave, the tailor asked him. Sir, 'please let me know which second had place you bought these pants/ I too would like to visit that place, you do not normally get these in secondhand shops these days.

My patient telling him that these are not second buy but the result of weight loss of 25 kgs did not cut ice with tailor.

Dr B C Rao

What's new in longer acting insulins?

Current therapeutic guidelines recommend a stepwise approach with incretin-based therapies used as first-line injectable treatments for type 2 diabetes.[1,2.]

A 78-week randomized, open-label, treat-to-target phase 3a trial (including a 52-week main phase and a 26-week extension phase, plus a 5-week follow-up period) involving adults with type 2 diabetes (glycated hemoglobin level, 7 to 11%) who had not previously received insulin.

ONWARDS 1, the longest trial in the ONWARDS development program for insulin icodec, showed that this weekly insulin regimen facilitated the initiation of basal insulin treatment and improved glycemic control and potentially treatment adherence through reducing the insulin injection bur- den for persons with type 2 diabetes who had not previously received insulin. The noninferiority and statistical superiority of once-weekly icodec to once-daily glargine U100 with respect to the change in the glycated hemoglobin level from baseline to week 52

insulin therapy, or in addition to insulin in some patients. The number of patients requiring insulin is expected to rise more steeply. Insulin may be the desired therapy in individuals with T2DM with critical beta-cell failure and intolerance to or failure of OADs or due to patient preference. In T1DM, basal insulin in combination with rapid-acting mealtime insulin provides an adequate but imperfect replacement for endogenous physiologic insulin production.

Glar-300 was developed to address the duration concerns of the early basal analogues. Like Glar-100, Glar-300 contains insulin Glar, a 21A-Gly modified mimic of the final intermediate of natural human insulin. Glar-300 has one-third the injection volume of Glar-100 and offers a more even and prolonged PK/PD profile that lasts beyond 24 h. To increase the concentration from 100 to 300 U/mL (following subcutaneous administration) under usual conditions at physiological pH, insulin Glar normally precipitates and aggregates, leading to the formation of a subcutaneous depot from which insulin is subsequently released. The size of the depot precipitate is dependent upon the concentration of the injection solution, while the unit amount remains the same, so that Glar-300 forms a smaller precipitate than Glar-100 [4,5]

(primary end point) was confirmed.[3]

ORIGINAL ARTICLE FREE PREVIEW

Weekly Icodec versus Daily Glargine U100 in Type 2 Diabetes without Previous Insulin

Among persons with long-standing diabetes taking noninsulin glucose-lowering agents including GLP-1 receptor agonists and SGLT-2 inhibitors, those who received icodec were more likely to reach a glycated hemoglobin level below 7% than those who received glargine U100, and they spent more time in the target glycemic range and were more likely to reach a glycated hemoglobin level below 7% without clinically significant or severe hypoglycemia. In this phase 3a trial, insulin icodec offered better glycemic control than once-daily insulin glargine U100 in persons with type 2 diabetes who had not previously received insulin.

Other injectable therapeutic agents, such as the glucagon-like peptide-1 (GLP-1) receptor agonists, may be an option before

What is Soliqua 100/33?

Soliqua 100/33 contains two drugs: Insulin glargine which is a long-acting insulin and lixisenatide, which belongs to a class of drugs called glucagon-like peptide 1 (GLP-1) receptor agonists.

The clinical study (LixiLan-O) showed that in patients treated with metformin, SOLIQUA 100/33 improved blood sugar control compared to its individual components, a long-acting insulin (Lantus), and a non-insulin, diabetes medicine (lixisenatide). The study included 1,479 patients with type 2 diabetes who were on metformin alone or a second oral diabetes medication which was subsequently discontinued and whose A1c was not at goal. After 4 weeks of taking metformin alone, during which time the metformin dose was optimized, 1,170 patients who had still not achieved their A1c goal with A1c 7-10%, had a fasting blood sugar ≤250 mg/dL, and were on ≥1500 mg/dL metformin continued in the study. For the next 30 weeks patients continued taking metformin and were also treated with either SOLIQUA 100/33 (469 patients), Lantus (467 patients), or lixisenatide (234 patients). In the patients receiving insulin glargine 100 units/mL in the form of Lantus or SOLIQUA 100/33, the

insulin glargine dose was adjusted in accordance with fasting self-monitored blood glucose measures aiming for a target of (80-100 mg/dL) with a dose cap of 60 units in both the Lantus and SOLIQUA 100/33 groups. The study showed that combining lixisenatide with Lantus in SOLIQUA 100/33 can help lower blood sugar even further than its individual components in patients taking metformin. SOLIQUA 100/33 was also able to improve glycemic control with no increases in either hypoglycemia or weight as compared to Lantus.[6]

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Dr Ramya S (Senior Resident, Department of family medicine)

St John’s Medical College, Bangalore.

COPD – Beyond the medical management for FPs

67-year-old male chronic smoker (20 pack years) with COPD was brought to the emergency with acute onset shortness of breath, fevers, and mild respiratory distress. He was not compliant on his treatment with MDI and the abstinence of smoking. After careful examination and investigations, a diagnosis of infective exacerbation of COPD was made and he was started on treatment with antibiotics, nebulization, and oxygen. He was closely monitored for two days but later and developed type 1 respiratory failure with tachypnea. He was initiated with BIPAP, but he had difficulty tolerating it. The next day his tachypnea worsened and had developed tachycardia. He needed ICU care for the next following week, counselled the need for machine. He then cooperated got better and went home.

There was an obese female patient in her 50's who came to emergency with three days history of breathlessness, her saturation was 78 at room air and was severely tachypneic. Her blood gas was showing type 2 respiratory failure with severe carbon dioxide retention of 64. She was advised ICU care owing to the severity of illness and was immediately started with a trial of BIPAP for 1 hour, before intubating. After one hour, the repeat blood gas showed carbon dioxide of 32. I was shocked to see how magically the values changed with just one hour of effective BIPAP. Because of this we have opted not to intubate the patient. She was eventually discharged and is doing well at present.

In the initial few months of my first year of residency, I knew the existence of BIPAP but did not know much about the indications and contraindications. But these experiences made me very much aware of it, I learned in my successive postings that early initiation of the BIPAP could have been beneficial for the patient which might have assisted him to reduce the work of breathing and might not have needed the ICU stay. I then did a literature search on management of COPD that revealed several studies indicating high flow nasal oxygen is almost equally effective as non-invasive ventilation [1,2] HFNC also had better tolerance and comfort than NIV and the use of HFNC after extubation did not result in increased rates of treatment failure compared with NIV.[3,4]. At present it is difficult to define the exact indication for either. The decision needs to be individualized based on the patient's condition and needs.

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Dr Udata Pranavi, (2nd year resident – Department of family medicine) **Dr Ramya S** (Senior Resident, Department of family medicine)

St John's Medical College, Bangalore.

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