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"Our Fascination: Life Beyond Ophthalmology"



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President Desk

Dear Reader,

Greetings of the day !

It gives me great pleasure to address you once again as we stand on the precipice of progress within the Rajasthan Ophthalmic Society. Our collective efforts and unwavering dedication have propelled us to new heights, and it is with great pride that I reflect upon the successes of our previous endeavors. My warm heartfelt congratulations to each one of you.



Dr. SANJIV DESAI

As we look ahead, I am excited to introduce the theme for the current issue: "Our Fascination: Life Beyond Ophthalmology." While our professional lives are deeply rooted in the science and art of ophthalmology, many of us have diverse interests and passions that extend beyond our medical practice. Whether it's painting, music, gardening, sports, travel, or any other hobby, these meaningful and gratifying pursuits play a vital role in enriching our lives, fostering creativity, and maintaining our welfare.

Indubitably, recreational activities and hobbies play a crucial role in the well-being of eye surgeons, who often face high-stress environments due to their demanding work schedules. Engaging in hobbies provides a much-needed respite, allowing surgeons to step away from the intense focus required in ophthalmology. The phrenic respite can rejuvenate their minds, reduce burnout, and enhance overall job satisfaction. At the same time working away at a hobby can improve hand-eye coordination, precision, and patience skills that are directly transferable to our surgical practice.

This theme is an invitation to celebrate the multifaceted lives we lead and to foster a sense of community and connection with others who share similar interests, providing social support from within and outside the workplace. It is an opportunity to share stories, experiences, and the joys of our hobbies. By exploring and showcasing the diverse talents within our society, we aim to create a platform that highlights the importance of a balanced life, where personal passions complement professional dedication.

Let us take this chance to know each other beyond our professional identities and find inspiration in the varied interests that make our society so unique. Let us take a moment to revel in the myriad facets of our life beyond Ophthalmology

With gratitude for your unwavering support and dedication.

Dr Sanjiv Desai
President

Rajasthan Ophthalmological Society

Secretary Desk



DR GULAM ALI KAMDAR

Dear esteemed members !!

Welcome to the latest issue of the Rajasthan Journal of Ophthalmology, where we explore diverse dimensions beyond ophthalmology. This edition aims to enrich our members' professional and personal lives with a variety of engaging topics.

We explore the details of managing an optical shop, providing strategies to improve efficiency and profitability. Our financial section offers valuable tips for investment strategies and retirement planning, aiding effective wealth management.

For those seeking adventure, we explore the world of scuba diving, covering the basics, safety protocols, and the beauty of underwater ecosystems. Bird-watching enthusiasts will find a guide to getting started, including the best locations and techniques to identify various species.

Discover the art of wildlife photography, with tips from seasoned photographers on capturing animals in their natural habitats. Our article on aircraft journeys explores how to make the most of your flights, from reducing jet lag to appreciating aviation technology.

Lastly, we offer insights into planning a fulfilling retirement, from financial strategies to finding new hobbies and volunteer opportunities.

We hope these articles inspire you to explore new horizons and enrich your professional and personal journeys.

Dr Gulam Ali Kamdar
Secretary
Rajasthan Ophthalmological Society

Editor Desk



Dr. ARVIND CHOUHAN

Dear Members,

This time, I choose not to say much, for the remarkable work done by our esteemed colleagues speaks volumes on its own.

This issue is particularly special, and I wish to express my sincere appreciation to the authors from various states across India. Your valuable research, insights, and dedication have enriched this edition, bringing diverse perspectives and advanced findings to our readership. Your willingness to share your expertise and collaborate with us has been pivotal in enhancing the quality and scope of our publication.

Looking ahead, I am filled with hope and optimism for a future where we will continue to advance our field, share our knowledge, and work together to overcome new challenges.

Once again, thank you for your exceptional contributions and steadfast support.

With best wishes for the future

Dr Arvind Chouhan
Chief Editor
Rajasthan Ophthalmological Society

Associate Editor Desk



Dr. RAJ SHRI HIRAWAT

Embracing Progress and Broadening Horizons

Dear Readers,

As the Associate Editor of the Rajasthan Journal of Ophthalmology, I am thrilled to address that the response from our readers and contributors has been immensely positive, reaffirming our commitment to advancing ophthalmic knowledge and practice.

We extend our heartfelt gratitude to our authors, reviewers, and readers for their unwavering support and dedication.

Looking ahead, we are excited to announce that, while maintaining our core focus on ophthalmology, we will be expanding our scope to include interdisciplinary topics that intersect with our field.

In the forthcoming issue, readers can anticipate articles that delve into the relationship between ocular health and systemic diseases, the impact of environmental factors on vision, and the role of technology in advancing ophthalmic care, best practice guidelines, and insights into public health initiatives.

This broadened perspective will allow us to explore new dimensions and foster a more holistic understanding of eye health in the context of overall well-being.

We invite researchers, practitioners, and scholars from diverse fields to submit their manuscripts and share their expertise with our vibrant community.

Warm regards

Dr Raj Shri Hirawat
Associate Editor
Rajasthan Ophthalmological Society

Flight of the Dragonfly



Dr Sanjiv Desai
Director,
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Once upon a time, in the bustling city of Jodhpur, a dream took flight. A dream not of grandeur or fame, but of a simple joy - the joy of flight. This is the story of the Dragonfly, a remote-controlled model plane, and its creator Sanjivino.

Before I continue the story let me tell you that I believe that everybody has a doppelganger. Mine is called Sanjivino. In the small workshop on the top floor of an eye hospital in Jodhpur, where the scent of solder flux mingles with the promise of adventure, dwell two unlikely duos: Sanjivino and an old wooden workbench.

After the hospital closes for the day one can see Sanjivino climb up to the workshop. In one corner sits the old black workbench on which he tinkers with his radio sets, mechanical toys, paint brushes and model rockets. Here, the master of this mancave also ponders on esoteric questions that have no clear answers like: What is the purpose of life? Or, where did the Man from Taured come from? ^[1] These hours spent tinkering, glueing, and dreaming are the happiest ones of the day.

As I said, everyone has an alter ego a metaphorical doppelganger that is vastly different from the public self yet complimentary to it. It represents the different aspects of a person's identity or interests and in the case of eye surgeons it contributes to their stress-busting life beyond ophthalmology." It's also the *raison de etre* for this special issue of the RJO!

The Icarus Fantasy

One day out of sheer boredom from the routine of making chuck gliders and repairing household gadgets Sanjivino thought it would be just great to soar in the sky like birds. He had always been captivated by the elegance of birds soaring through the sky. But, being a busy professional he just didn't have the time to indulge in

procuring a pilot's license, nor did he have the wherewithal to buy a Learjet, so the next best thing for him was to design his own remote-controlled model aircraft. The idea of creating something that could emulate the grace of birds in flight was both exciting and daunting.

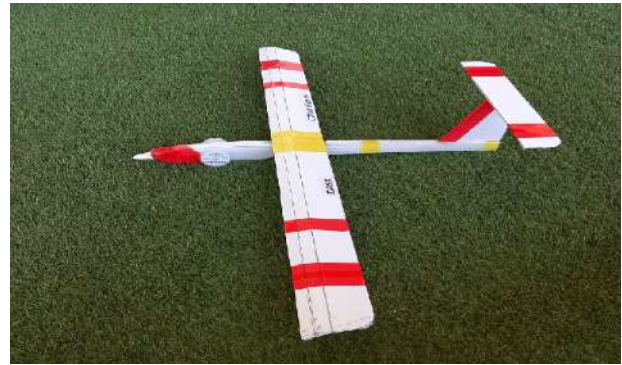


Figure 1 : This is a chuck glider made during the pandemic. A chuck glider, is a small, simple aircraft designed to be launched by simply throwing it into the air by hand. These gliders are typically made from lightweight materials like balsa wood or foam [as in this case] and do not contain any electronics. The focus while designing chuck glider is on basic aerodynamics. The centre of gravity and therefore, the flight path of the glider can be adjusted by moving a small weight (like a nut or a coin) backward and forward on the nose of the glider. Note the used vitrectomy cutter used to adjust the CG in this case.

The journey began with meticulous planning. Every detail was considered, from the aerodynamics of the wings to the weight of the body. The creator wanted the aeroplane to be light yet sturdy, agile yet stable. Hours turned into days, and days into weeks, as designs were drawn and redrawn, calculations made and remade, and materials gathered. Finally, the Dragonfly's sleek flying machine saw the light of day.

The construction was a labour of love. Each piece was crafted with precision, and each component was fitted with care. The wings, sleek and aerodynamic, were designed to catch the wind just right. The body, made from extruded foam was lightweight yet robust and housed the intricate electronics that would control the Dragonfly's flight



Figure 2 : The fuselage and the horizontal and vertical stabilizers of the Dragonfly were cut out from foam board which is light weight yet strong and durable. Carbon fiber rods are used to fortify the wing and fuselage. Traditionally Balsa wood is used to make model planes. But nowadays inexpensive and easily available foam sheets are the preferred building materials.



Figure 3 : Sanjivino stands proudly with the Dragonfly minutes before its maiden flight. The Dragonfly has a wing span of 1.4 meters and a total weight of 900 grams. The motor is a 1400KV rating brushless one and the transmitter and receiver are of Futaba make. The plane is a “high wing” type, meaning the wings sit on top of the cockpit. This wing placement and its under camber [hollow curve] give the plane stability and slow fly characteristics.

The Dragonfly wasn't just any model plane. It was a marvel of engineering a fusion of nostalgia and cutting-edge technology. Its brushless motor hummed with anticipation, waiting for the moment when it would propel the Dragonfly into the sky. Sanjivino fell head over heels in love with his creation just like Ovid's Pygmalion.

^{[2][1]} *Visitor from a Parallel Universe:* <https://www.youtube.com/watch?v=qppcCh5vuA0>

^[2] <https://www.britannica.com/topic/Pygmalion>

Maiden Flight

After weeks of hard work, the Dragonfly was ready for its maiden flight. On a crisp Sunday morning, Sanjivino stood in a barren field just outside the village of Uchiyarda.^[3] The Dragonfly rested on the sandy ground, ready to challenge the sky. Sanjivino adjusted the transmitter, fingers trembling with excitement.

The sun peeked over the horizon, casting a golden glow on the scene.

“Ready for liftoff,” Sanjivino whispered in anticipation and nervous anxiety, and the Dragonfly responded. The propeller whirred to life and spun faster and faster, as it shot over the ground and then - it was airborne. The Dragonfly rose, wings catching the breeze, and Sanjivino's heart soared alongside it. It was a sight to behold, the Dragonfly dancing in the sky, dipping and diving, soaring and swooping.^[4,5] A sense of accomplishment washed over the Sanjivino. He was now a bona fide pilot.

The Dragonfly circled, dipped, and climbed.^[6] My doppelganger guided it with precision, feeling the wind tugging at the controls. The village folk soon came around to investigate what the noise was all about and soon their eyes were following the graceful silhouette against the azure sky. Children pointed gleefully and jumped up and down as the plane made a low pass, their imaginations taking flight alongside the Dragonfly.

The fascination of flight, once a distant dream, was now a reality. The Dragonfly was more than just a model plane; it was a testament to its creator's passion, perseverance, and ingenuity.

Unexpected Challenges

But every flight has its challenges. A sudden gust of wind caught the Dragonfly off guard. It wobbled, its delicate frame protesting. Sanjivino's pulse quickened. The Dragonfly fought to regain stability, wings flapping like a determined insect. Sanjivino's hands moved instinctively, adjusting the ailerons and elevator.

The crowd held its breath. Would the Dragonfly survive this test? Sanjivino's mind raced, recalling late nights spent soldering wires, calibrating servos, and dreaming of this moment. The Dragonfly steadied itself, defying gravity and continued on a smooth flight path. It was more than a model now it was a symbol of resilience. “Well done my darling” Sanjivino whispered to no one but himself.

Soaring Dreams

Then the Dragonfly glided back toward the ground with the grace of a ballet dancer. The wheels touched the arid earth, a gentle kiss between a man-made marvel and the raw, untamed wilderness.

The dust rose in a slow, mesmerizing haze, swirling around the Dragonfly, as if the very earth was reaching out, welcoming it home. The plane had touched down with a landing that was as soft as a sigh, a gentle caress that spoke of journeys ended and the promise of more adventures to come. It was home. Cheers erupted from the onlookers. Sanjivino grinned, wiping away tears that denoted a sense of profound peace, a moment frozen in time, as Dragonfly rested on the ground, a tiny sentinel under a vast cloudless sky. The Dragonfly had conquered the elements, bridging the gap between imagination and reality.

^[3] Uchiyada with a population of 1400 lies 15 kilometers east of Jodhpur. Since Jodhpur has a military Airfield, flying drones and model planes is not permitted within city limits.

^[4] Dragonfly - Maiden Flight 01: <https://www.youtube.com/watch?v=PVUIDNDVY28>

^[5] Dragonfly - Scratch built Plane : <https://www.youtube.com/watch?v=NIBpZMAc1F4>

^[6] Dragonfly-Maiden Flight 02 : <https://www.youtube.com/watch?v=fGAEzp4jqVQ>

From that day on, the Dragonfly became a regular sight in the village of Uchiyada. Sanjivino perfected loops, rolls, and touch-and-goes. The townspeople brought picnics, watching the tiny plane dance across the sky like it owned the heavens. And in the quiet moments, when the sun dipped below the horizon, Sanjivino whispered secrets to the Dragonfly about dreams, courage, and the magic of flight.

As seasons changed, so did the Dragonfly



Figure 4 : Flying the Dragonfly is good fun. In this picture she has just undergone pre-flight checkup and is ready to take to the sky. At the bottom of the picture is a small white micro-flyer model [christened Hornet] also built by Sanjivino and on its maiden flight this day. The hornet has a coreless 8 mm motor and weighs only 60 grams. The Dragonfly is a veteran of many flights by now. The yellow plane at the top of the frame is her companion built by a friend.

Sanjivino added LED lights for twilight flights and experimented with different wing designs. The old workbench bore witness to countless modifications, each one bringing the Dragonfly closer to perfection.

And so, the legend of the Dragonfly grew. Children drew pictures of it, and parents shared stories around campfires on chilly winter nights in Uchiyada. Sanjivino knew that this humble model plane had transcended its foam-built frame - it had become a beacon of possibility.

Every flight was a new adventure, a new opportunity to explore the boundless sky.

Beyond the Horizon

One autumn evening, as leaves rustled and the desert sands glowed in the fiery sunset, Sanjivino released the Dragonfly one last time. They say that if you love someone deeply, you must not be possessive. So on this final flight, he set her free from his clutches and let her go to seek her destiny.

Flight, in its essence, is about freedom and exploration. By allowing the Dragonfly to embark on a journey with no set destination, Sanjivino wished to honour this spirit of freedom. He realised that the true purpose of the Dragonfly was not to remain with him but to explore the vastness of the sky.

True love, after all, is about wanting the best for the loved one, even if it means parting ways. By setting the Dragonfly free, Sanjivino not only acknowledged his deep love for the model plane but also his wish for the Dragonfly to fulfil its destiny, to be what it was truly meant to be - a creature of the sky, free and unbound.

So on this final flight, the Dragonfly's wings caught the fading light, and it steadily climbed higher, and higher disappearing into the clouds. Sanjivino watched until it was a speck against the vastness of the sky. And then it was gone for good never to be seen or heard of again.

The village folk in Uchiyada still talk about that final flight the one where the Dragonfly vanished beyond the horizon. Some say it found a secret realm of dragonflies, where dreams took flight forever. Others believe it became a shooting star, granting wishes to those who dared to look up.

And Sanjivino? Well, he still visits the old workbench, tracing the faded outline of the Dragonfly. The sands of Uchiyarda whisper their secrets, and the wind carries echoes of that magical day the day when a remote-controlled model plane became a legend.

And if you listen closely, you might hear the Dragonfly's wings fluttering in your heart, urging you to chase your own soaring dreams.

Shooting into the light in wildlife photography



Dr. SOM DUTT PRASAD

Dr Prasad is a Kolkata-based practising eye surgeon, he has a keen interest in wildlife photography and travels around the world seeking interesting photo opportunities. He can be contacted at somprasad@gmail.com. His professional details are at www.somduttprasad.com

I have been photographing wildlife for over a decade. When out in the habitats wildlife photographers are generally looking for two things, firstly good sightings of animals preferably engaged in some activity and secondly good light. The general adage is to shoot with the sun behind you with the light falling onto the scene being photographed. This gives nice clear pictures Recently, I have been



(Goldlit Zebra)

This allows one to create rather artistic images from what would otherwise have been mundane scenes



(Bloody Bear Fight)

which are dramatic if you capture the action. But every photographer is constantly experimenting with techniques in an effort to create images that are different.

Recently, I have been looking out for images where I can shoot with the light behind the animal. This is best done when the sun is low, so one must be out at dawn or sunset. By underexposing one can get nice light rims around the wildlife and beautiful warm colour tones. The amount of underexposure needed is a matter of experimentation, mirrorless cameras allow one to see the effect in the electronic viewfinder as you shoot, but the same effect can be created in DSLRs by checking your image on the LCD and adjusting accordingly



(Backlit Polar Bears)

Often converting these images to monochrome gives a nice effect and it is always worth checking a monochrome version when processing these images



(Jackal Portrait)

Needless to say, always shoot RAW so you have more latitude when processing. When you start thinking of the light coming in from different directions, the next step is to use artificial light which is in your control. This means going out after sunset with the photographers in one vehicle and another vehicle where a person is carrying a strong searchlight. It is essential for the two vehicles to be in radio contact so that once you have spotted the animals, the vehicles can move into the right positions. For backlighting, the animal needs to be in between the two vehicles, so that the vehicle with the light can provide the illumination. Look not only for animals but for light catching the foliage which can provide interesting patterns to offset the animal silhouette. Work from a distance with a



(Resting Lion)

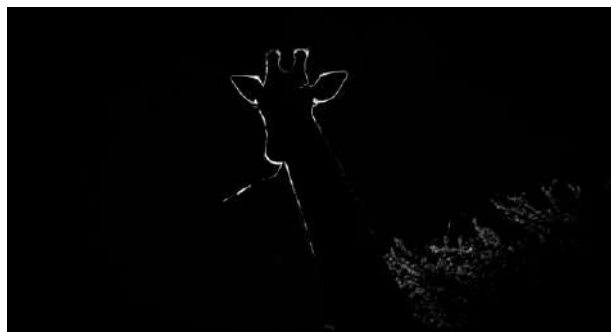
fast telephoto lens, so that animals do not feel threatened, always making sure that they have space to move and not feeling threatened or hemmed in. If the animals are running in a dry area, the dust raised adds to the beauty and will often give dramatic shadows. Always check



(Wildebeest shadows)

before you make your travel plans that you are going to a place where night drives are allowed and it is not a crowded area so that only 2 to 4 vehicles are out at night. This is usually not possible in the more popular destinations like Masai Mara. In small lodges in less visited areas, these things can be done whilst still respecting the animals' habitat and space.

We could do this in Kenya at Lantorre lodge, Olkiramatian Conservancy (<https://lantorre.com>) and the nearby Shompole Wilderness Camp (<https://shompolewilderness.com/>) in the Shom pole Conservancy. Both are deep in Kenya's Southern Great Rift Valley, in between Amboseli National Park and the famous Maasai Mara National Reserve, so it is possible to combine a couple of days of experimentation at these conservancies with a trip to Amboseli or Masai Mara. Using this kind of arrangement some dramatic images can be made



(Spitting Giraffe)

A variation of this arrangement is to use light from one side, so your two vehicles are at right angles to the animal. This gives images where one side of the animal is illuminated with the other side being in the darkness.



(King of the Night)

Again, Monochrome conversions will often give a nice effect when processing such shots



(Bright eyes)

When on safari, keep in mind that shooting against the light can give you some dramatic shots Then if you find yourself attracted to this



(Giraffe Trio)

kind of photography, you can make dedicated arrangements to further your interest.

**Thanks to Rahul Sachdev
(rahul.sachdev@gmail.com)**

**for making meticulous arrangements at
Lentorre and Shampole and for invaluable
guidance with backlighting and sidelighting
techniques.**

High Performance Optical Dispensing Word

Dr Bhaumik Shah

The Author, Bhaumik Shah, is the Founder of India's most innovative and Western India's fastest-growing hospital-based optical chain EYECURA. He is an industry veteran with over two decades of experience in the Indian optical industry and has significantly contributed towards promoting the best eyewear dispensing practices for hospital patients.

As an integral part of the hospital's service ecosystem, the optical store plays a crucial role in meeting patients' vision needs while contributing to the hospital's revenue stream. This article outlines proven strategies for running an optical store successfully in eye hospitals, focusing on customer service, product selection, staff training, marketing, and leveraging technology.

Running an optical store within an eye hospital presents unique challenges and opportunities. It is undoubtedly a highly specialised operation and if executed well, it opens up enormous possibilities to build a strong patient equity and generate high incremental revenues for the hospital.

To successfully operate an optical store within the eye hospital premises, it's essential to understand the specialized nature of the business, the needs of the patients, and the dynamics of products, pricing and conversion through effective engagements of patients.

In today's times, it is absolutely essential for any hospital to prioritise optical dispensing as a key aspect of its practice as poor and inaccurate dispensing of prescription eyewear is a burning issue in India even today.

Opticians' lack of skills coupled with their greed end up with 7 out of 10 patients either getting a faulty spectacle or lenses not conforming to their prescription or products that they do not need. This undermines the efforts put in by hospitals in determining the patients' vision correction.

Operating an optical store within an eye hospital requires a blend of dispensing expertise, retail acumen and integration of optical services as a

part of the patient's clinical journey.

The following points describe the proverbial holy grail to execute a successful optical dispensing setup within an eye hospital:

Patient Engagement :

In-house dispensing of eyewear to hospital patients can be successful ONLY if this function performs seamlessly and is in unison with other departments of the ophthalmic wing, towards the part of the patient's journey from registration to billing

The patient engagement process should effectively utilize the time patients and the individuals accompanying them spend in the OPD area prior to their checkup to build awareness of the wide range of eyewear product options, their vision and lifestyle-enhancing features, and benefits. These initiatives educate them on eyewear, and its benefits & pique their curiosity in eyewear and the necessity to use it, even before they get their prescription.

Perfect Dispensing :

Accurate dispensing is absolutely essential to not only justify the patients' faith in the clinical prowess of your eye hospital but to also help them achieve the vision you would want them to. Faulty dispensing not only undermines the efforts of your team towards determining the exact vision correction but can also affect your hospital's reputation for no fault of its own.

Efficient Service Delivery :

Selection of frames through faciology, selection of lenses through educative demonstration tools and using software-based tools to take frame and facial measurements prior to lens processing will optimize conversions and enhance patient satisfaction.

Product Selection & Quality Assurance

1. Inventory :

Product assortment at a hospital-based optical outlet must offer sustainable and affordable solutions for all the patients of the eye hospital to address their unique vision-related requirements in terms of styles, price points and brands. In today's times of customised preferences, it is

imperative to source products that are entirely relevant to the patient profile of your hospitals. This would require a thorough understanding of the socio-economic profiles of the patients that your hospital is catering to. Optical companies running chain stores in hospitals, often source inventory in bulk and then uniformly distribute it across their branches without realising that the same inventory cannot be sold everywhere and can create a wrong perception about quality, choice and prices amongst patients.

In a relatively compact space, the patients must get a sufficient choice of durable and functional frames in the latest styles, sizes and colour options. Your optical setup must also offer specialized products to patients with specific vision conditions such as squint, and ptosis along with a range of low vision aids products.

It is advisable to partner with reputable suppliers to ensure the availability of high-quality products.

2. Customization Options :

The product assortment must provide sufficient customization services such as lens tinting, coatings, and prescription adjustments to meet specific patient needs and preferences.

3. Quality Assurance :

While the purchase decision will always be discretionary on the patient's part, the optician must educate patients on the importance of investing in high-quality products for optimal vision health and comfort. The optometrists can also advise on prescription, and the recommended lenses/tints based on the patient's need and vision condition. Implementing a quality control checklist to ensure the quality, authenticity, durability, and safety of spectacles prior to delivery will result in flawless products that would foster trust and delight amongst patients.

Staff Training & Development

1. Technical Proficiency :

With a constant introduction of new feature-rich eyewear products and their dispensing technologies, comprehensive training of staff on optical products and their dispensing techniques is an absolute must. This will enhance their expertise and confidence in assisting patients. Periodical training for staff can be arranged with the help of reputed brands of lenses and frames.

There are also several training modules available online that the staff can use to update themselves with the latest trends and technologies. You can manifest the importance of periodical training to your optical staff by citing your own example of how you keep yourself constantly updated in the field of ophthalmology.

2. Communication Skills :

Fostering effective communication skills among staff members facilitates courteous, clear and concise interactions with patients, including explaining complex optical concepts and addressing inquiries or concerns leading to eventual sales growth and patient loyalty.

3. Staff Productivity Analysis :

Optical staff that is unproductive or low productive, becomes a cost burden over time. The loss of sales and opportunities due to low productivity of staff can be significant and can erode your investment in the optical business. Hence, the optical staff must be allotted realistic monthly volume and value targets and the same needs to be tracked on a weekly basis. This would make the optical staff accountable, will keep them alert and their training needs can also be identified to improve their skills, knowledge and efficiency to improve productivity and sales.

Strategic Marketing Initiatives

1. Targeted Outreach :

The hospital's patient database can be effectively used for a targeted outreach to keep patients updated on eye care tips, and events at the optical store, share ongoing offers and promotions at the optical store and remind them about their annual eye check-ups. This database can also be very effectively used with messaging to raise awareness and generate referrals.

2. Promotional Offers :

In the present times, Indian consumers' expectations have strongly evolved around seeking maximum value in their purchases. In the case of eyewear dispensing at eye hospitals, the value that patients seek from the purchase of eyewear is often associated with the value perception of the hospital itself ! Hence, structuring a variety of exciting offers and promotions that run across the year will keep the excitement alive resulting in better engagement, footfalls and sales at the optical store. Promotions can also be tailored to mark key

calendar events related to ophthalmology such as World Sight Day, World Glaucoma Day, etc. This can also help raise the patients' awareness about these key events observed to mark their significance with regard to eye care.

3. Competition Bench Marking :

Keeping a close watch on the activities of local competition in the market is absolutely critical in today's times. Implementation of a planogram to highlight the latest styles, low-price items and items under offer, will give your optical setup a definite edge over the competition.

Integration of Technology

1. Digital Dispensing Tools :

Investment in advanced digital dispensing tools and software to accurately measure patients' facial features, pupillary distance, and frame dimensions for precise fitting and customization of eyewear will reduce human reliance, eliminate dispensing errors and generate a professional, positive image of your optical setup.

2. Billing Process :

Integrating optical store operations with the hospital's EHR system will facilitate seamless sharing of patient information, prescription data and billing processes while ensuring that every patient who is issued a glass prescription, walks into the optical store. *Issuing computer-generated purchase receipts to patients will promote transactional transparency leading to stronger trust.*

Business Analytics :

As they say, you can't sell anything if you can't tell anything! Analysis of data on top-selling, selling and non-selling items, sales of offer products, glazing factor (ratio to determine how many patients bought only lenses and not full spectacle) will help you make the right decisions to channelize your efforts to achieve higher inventory turns to free up your capital to re-invest and innovate with your optical business. In the information age, without data, we are just people with an opinion.

To conclude, running an optical store successfully in eye hospitals requires a strategic approach that prioritizes customer service excellence, product quality, staff training, marketing initiatives, and technological innovation. By implementing these strategies, optical store operators can enhance patient satisfaction, drive revenue growth, and contribute to the overall success of the hospital's vision care services.

Four waves of COVID: A budding ophthalmic surgeon's perspective



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To pen down my emotions as a provider of care and support for patients of novel coronavirus disease (COVID-19) is a task easier said than done. It all began when I was an academic junior resident at the All India Institute of Medical Sciences (AIIMS), Rishikesh in its first batch of MD Ophthalmology postgraduates (July 2017 to June 2020 session). Here I briefly run through my experience and the humble contributions I have made towards serving in this pandemic. In the immediate period before my MD examinations (March 2020), the onset of the COVID pandemic in India and the complete lockdown of patient care services raised several concerns among the students of my batch, and I was no exception. Being in AIIMS, it was a given that the Institute would be at the forefront of COVID care in the state of Uttarakhand, and some of the most infectious and critical cases would possibly be under my direct care.^[1]



Night stroll in the near-vacant campus of AIIMS Rishikesh on the day of lockdown Concentrating during studying for examinations was difficult, given that it was a time when little was known about the disease process. Viral reports of doctors being infected and succumbing to the disease were increasing day by day.^[2] In addition, incidents of COVID-19-related misbehaviour, and attacks on COVID screening teams and ward personnel made the situation akin to being a soldier guarding a border, but facing fire from both sides.^[3,4] Amid exam preparation, I participated in an online crowd funding campaign for junior doctors of state government medical college hospitals in Bihar.^[5] Together with juniors from Patna Medical College (my graduate medical school), we were successful in raising over 5 lakh rupees to distribute sanitizers and PPE to deal with the initial surge of cases. Our MD examinations were conducted on the scheduled dates (first week of May 2020) with all precautions, and virtual cases were taken up for practicals with examiners joining over video calls, which was an entirely new and unique experience. Immediately following the examination, I undertook mandatory online refresher sessions for airway management, ventilator training and PPE precautions.^[7] I already had been trained in Basic Life Support with American Heart Association certification, thanks to the holistic curriculum of the Institute. At about the same time, an intern had become COVID-positive with high-level exposure and was admitted in our own Institute.^[8] As the technical head of the Resident Doctors' Association there, I held online discussions to plan our interactions with the hospital management to reduce exposure risks to residents and interns. Awaiting posting in a COVID ward, I also started hydroxychloroquine prophylaxis as per the then-prescribed ICMR guidelines.^[9]



Online meeting of Resident Doctors' Association (RDA), AIIMS Rishikesh

On the day of ECG interpretation training, I received a call from the control room at 8 am that I was to report on duty at 2 pm to the first isolation ward being opened for receiving COVID suspects the same morning. After I attended the training online from 11 AM to 1 PM, I had lunch and entered the COVID zone for the first time.



Donning the PPE for the first time

The C4,5,6 ward was located on level 6 (top floor), and the afternoon sun shining on the rooftop made temperatures as high as 38 degrees (yes, the summer in Rishikesh can be really hot). There was no evidence regarding the role of air-conditioning in COVID transmission at the time, and as a precaution, the HVAC used to be switched off. After donning the PPE, I had to attend to many patients unheard of for an Ophthalmology resident, including those with terminal cancer, spinal trauma and chronic kidney disease. We had eight-hour shifts for the morning and afternoon and 12-hour night shifts, with some scope to grab a few hours of sleep on a nearby bed. Patients who tested positive were shifted to a separate wing and those who tested negative were sent to respective departmental wards for further care.



Resting area in Atrium C6



View from the resting area left: trauma building for COVID positive patients, right: helipad

The preparedness of the AIIMS in assigning a dedicated building for COVID-positive patients, with its own protocols and ventilation system has to be commended.^[10] Given the complexity of cases at the largest tertiary hospital of the region, the mobilization of resources in such a short duration of time was not an easy task. The patient count quickly rose to 50 within a few days, and it was becoming increasingly difficult for only two junior residents, one senior resident and supervising faculty to manage them. I then initiated a record-keeping system based on a spreadsheet with colour-coded fields for the status of patients as regards diagnosis, suspicion level, clinical severity, sample and report collection status, records of vitals, pending investigations and cross consultations and so on. I also installed the ICMR RTPCR app on the ward computer using BlueStacks (virtual Android software) and we started initiating RTPCR swab collection by the SRF ID generated through the computer instead of a tablet device previously shared between wards.^[11,12] The consultants, nursing officers and fellow residents were very cooperative and together we formed a trustworthy patient care team. Finishing off with the two-week COVID rotation at AIIMS Rishikesh, I spent the remainder of my tenure doing academic work and submitted a few articles. Concluding my tenure on 30th June, I signed off with the highest score in the MD Ophthalmology examination in my batch. July and early August 2020 were spent in private practice in my home city of Patna, Bihar. Towards the end of August 2020, I joined AIIMS Patna as a senior resident, knowing fully that this was designated as a dedicated COVID hospital by order of the state government, and only diagnosed COVID-positive patients were being admitted here.^[13] Starting from mid-

September, I worked in various wards and ICU step down units, handling patients on high-flow nasal cannulas, BiPAP machines and even ventilators in the latter.



The PPE look (again) at AIIMS Patna

The schedule of duty involved seven days of COVID rotation and 9 days of rest in which I had teaching and research responsibilities. Again, I dealt with complicated cases including those with multiple comorbidities, performed blood and plasma transfusions, and also went to other wards for Ophthalmology consultation calls during my duty.^[14] The consultants, nursing officers and junior residents were quite cooperative, and together we were successful in curing and discharging several COVID patients.



COVID Warrior Certificate from AIIMS Patna

With mutual arrangements with colleagues on duty, I attempted DNB theory papers in afternoon sessions and proceeded to night duty in COVID wards during the first wave. Immediately prior to the second wave, I attempted DNB practical examination, and then joined COVID duties the following week, again caring for upto 60 patients in two adjacent wards, providing medical treatments under the supervision of senior consultants, as well as monitoring their vitals, posture, meals and

psychological well-being. I was fully vaccinated against COVID, and also donated convalescent plasma for a colleague.^[15]



Plasma donor certificate, AIIMS Patna

The challenge of Rhino-orbital-cerebral Mucormycosis during the second wave was an addition to my COVID duties, for which I had to stay in the hospital for additional hours taking care of COVID and post-COVID patients with this disease.^[16] I did many orbital exenteration surgeries and transcutaneous amphotericin B injections, while also working in routine ophthalmic OPD and OT taking due precautions.^[17]



Delivering my own COVID sample to Regional Virus Research and Diagnostic Laboratory, AIIMS Patna

With the third and fourth waves of COVID ensuing, there was rapid transmission of the virus but, fortunately, brief illness which has been relatively inconsequential in the short and intermediate term. I was infected with COVID during the third wave but joined duties immediately after a quarantine of 10 days.

I would like to enumerate the injuries that I sustained during this period, which several caregivers might relate with. They include two cuts on the nasal bridge from oldermasks, one cut on the right cheek from a KN95, abrasions

behind both earlobes and painful rashes on the neck and arms. I also got quite used to the backache, which arose from wearing undersized and stiff PPE, and the earache and jawache due to tight masks that looped around the ears.^[18]

Like several other doctors and nurses around the world, I spent my festivals in PPE and served patients through long nights of duty. I am reminded not only of the Hippocratic Oath but also of the Charak Shapath, which I had pledged on the first day I joined MBBS at Patna Medical College. Named after Maharshi Charak, the father of Indian Medical Science, it resonates the ethos of service to humanity in the Indian context. COVID duty has given me a lot of faith in my abilities, confidence in managing systemic diseases and making me a better ophthalmologist who treats the patient as a whole. In addition, COVID duty gave me sweet memories of working with several colleagues and juniors in ways that we never imagined before.

Having worked in two AIIMS consecutively, I presume I had it easier than most government hospitals of the country. Unconditional administrative cooperation is required to make such non-routine duties easier especially for those belonging to specialities like ophthalmology, dermatology, psychiatry etc.^[19] Every institution should have provided written assurance for adequate cooperation in the event that a resident has COVID exposure or becomes COVID-positive, as was given to me during my time. Because postgraduate students were diverting a lot of their academic time to these duties, virtual learning platforms to help them prepare for their examinations had a crucial role to play.^[20] In summary, I believe that every doctor on COVID duty dedicated personal time, energy and resources to the service of humanity to the last drop, and the health framework had a moral and ethical responsibility to support them in this situation.

As of today when the pandemic has passed, institutions must realize the limitations of residents in training who have had to pursue their studies and research work together with these duties.^[20] It should be an ongoing process to provide refresher training for non-core specialities to bring them to a level of basic minimum confidence in the care of systemic illnesses.^[21] In addition, research undertaken during the pandemic regarding the mental state

of physicians and residents on COVID duty should be made into an ongoing process to preserve and promote psychological well-being among the doctor fraternity.^[22] Finally, I pay homage to the pious souls of doctors who have succumbed to COVID while serving the public, many of whom were ophthalmologists. To those who lost their loved ones during the pandemic, and often could not visit them because their patients came first, I wish them strength. I firmly believe the sacrifice of our fraternity will not be forgotten and would appeal to professional associations and the government to recognise and support the valiant community of doctors who considered working during the pandemic their international humanitarian duty.

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A whale of a time!



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The leopards were suddenly all around me. Large, dark brown menacing shapes with spotted coarse skin, swirling like dervishes in some ecstatic dance. Some looked at me in the eye and it sent shivers down my spine - I wanted them to fade away and yet I wished them to stay..... in a few seconds with a swish of their tails, they disappeared into the deep blue waters of the Indian Ocean.

Just a minute! I can hear you exclaim: leopards disappearing into the deep blue waters?! Since when have leopards become amphibious? Or are you talking about some surrealistic dream of yours? Neither, my friend. I meant leopard SHARKS!

This was my first encounter with them. I had been looking forward to it for two years and I was both scared and elated at this sub-aquatic rendezvous. I am a scubadiver and as you can see, I have learnt enough of the craft to live to tell the tale!

The story of my fascinating hobby began many years ago when I was a child studying in primary school. I fantasized about how wonderful it would be to live underwater like a fish. I remember painting pictures of steel-helmeted divers a la Jules Verne and of fantastic imaginary submersible crafts that would frisk me anywhere in the watery realm. I learnt to swim at the age of eight but didn't get to practice the skill unless you count the time when I nearly drowned in a pool in Happy Valley in good old Ajmer! And somewhere along the road from childhood through adulthood the aquatic dream was lost in a pile of tomes and the urge to do well in academics. I became an eye surgeon and went into practice. Life became one long boring routine.

Then one sultry summer day when I was in my

late 30's, while holidaying in Thailand with my wife and kids, we boarded a boat to sail from Phuket to some outlying islands. On the deck, I spied several air tanks and I felt the adrenaline rushing in my veins as I realized that there were scuba divers on board. I sought out the leader (or Divemaster to be precise) and discovered that it was a lady and she was taking a group of divers out to "Shark Point" for a dekko at the big fish. I was hooked there and then. But no matter how hard I tried to sign up with her the next day, my wife, Ranjana, prevented me from doing it. And what a film scene she created! She thought only people who had a death wish tried their hand (and feet!) at diving. It was dangerous, she pleaded. People died of the "bends" or were eaten by sharks she said (sad but true, she is one of the millions who have OD'ed on Peter Benchley's "Jaws"). Mainly because the small kids were wondering what the fight was about, I succumbed to her wish. But I made up my mind to run away from the family (!) to pursue my dream at the earliest opportune time. That's exactly what I did the following year.

Runaway Renegade

In the summer of '98, I was a volunteer eye surgeon in Cambodia. After a month's stint of hard professional work, I detoured to Thailand for a brief respite. Ostensibly it was to spend some time with my brother-in-law's family in Bangkok. But under the pressure of my family back home, the gent had made it crystal clear that he wouldn't permit me to indulge in any of my "hare-brained" schemes (yes! that's what he said), whether it was scuba diving or bungee jumping. Before he could throw a spanner in the *The word "Scuba" is an acronym for Self - Contained Underwater Breathing Apparatus and was designed by Jacques Cousteau in 1943.*

works, I dodged him by taking a direct flight from Cambodia to the island of Koh Samui in the South China Sea. The island has a hilly terrain with unusual and awe-inspiring huge granite rock formations and white coral sand beaches kissed by turquoise waters set against clear blue skies. Motorcycling on the island's broad tarmac roads is great fun, otherwise one can go to the shooting range, go-karting or pagoda hopping.

On full moon nights, there is a beach party at the “Grandfather Rock” which one shouldn't miss for the world. It was here that I enrolled in a PADI (Professional Association of Diving Instructors) open-water diving course and became a certified scuba diver. This means that I became qualified to dive in unconfined waters (read “open sea” and “lakes) anywhere in the world for recreational purposes. But it wasn't a piece of cake, as you shall soon see.

There were theory classes to attend and tests to take. A pool session and a swimming test followed this. My first open-water dive in the sea took place 70 kilometres offshore and I remember that plunge very well. I had on a frogman suit and a 10 kilos weight (lead) belt strapped around my beer belly and stood at the edge of the dive boat, mustering the courage to take a giant stride and leap into the ocean. Amidst cheers from other divers (as I was the only student) and vociferous threats from the Divemaster, I eventually took the plunge. Strangely enough at that time, I was remembering my old school chum and bosom pal Vijay, who in trying times like this would fervently recite the “Hanuman Chalisa.” How I wished I had learned it from him!

Pinching my nose and repeatedly performing the Valsalva (to equalize the pressure) I gently fell to the bottom of the sea. At 11 meters it was a shallow dive. The Dive Master, a gruff German, was a martinet and no sooner did we hit the bottom than he started the practice sessions. I mean one should be allowed at least a quarter of an hour to look around and become comfortable in the sea. But no sir, immediately he had me remove and then put on my mask and the air regulator a number of times. We exchanged masks several times. Then we tried buddy breathing two people using one person's air supply alternately, in case one diver ran out of air. It was necessary stuff to learn if one had to stay alive, but it scared the hell out of me. There I was at the bottom of the sea, intermittently without an air supply or clear vision, and wondering why a devoted family man like me was trying to commit hara kiri. I rued the day I met those divers in Phuket. I thought if I met my maker on this trip, these foreign guys wouldn't even know how to contact my folks back home! At the bottom of the sea, I made a vow that if I surfaced in one piece I would catch the first boat ashore &

diving be damned! Sadly, I had signed up for five days and the pick-up boat wasn't due so soon. Fortunately, the next dive was a “fun dive”. The dive master would just let me cruise around in the sea no practicing dangerous maneuvers (phew !) and that indeed was exhilarating. I got to touch, tease and caress the tentacles of orange colored sea anemones, hold a sea slug in my hands and spent time with the profusion of sea stars and giant clams scattered on the sea bed



Figure 1: A brown Sergeantfish forms the focal point of an underwater tableau. In this picture, one can see a brain coral on the ocean floor and several blue-striped Surgeon fish too.

I fell in love with the sea. I even tried a yoga posture over a table coral and believed that I was levitating. We surfaced after 55 minutes when the air pressure gauge was in the red (less than 50 bars in the air tank) and those were the most blissful 55 minutes of my life. And sure enough in a couple of days, I found my gills and the liveaboard diveboat became the closest thing to heaven for me. (The wife told me later that it was the “igyara upwaas” she kept and the incessant prayers she offered to the lord that kept me safe ! I meekly thanked her for all the trouble).

Diving the World Over

²*For cave diving, night diving, wreck diving, deep diving and rescue diving etc. there are other specialized courses.*

³*For recreational scuba, depth limits are 18 meters for the novice diver, 30 meters for experienced divers and, divers with deep diver experience shouldn't exceed the maximum depth limitation of 40 meters.*

Since then I have dived many times, and the pages of my logbook have several interesting entries (when I am really old and cannot dive anymore, reading these logbooks will surely become my favourite pastime and give me the

vicarious thrill of going under once again). The anxiety level of my family has also diminished considerably over the years. Indubitably, diving is good fun. The sea offers splendid vistas that are unknown to landlubbers. ⁴ I have dived a wreck 30 meters down and I have some experience in underwater photography too. I follow all the safety rules in the book and am always careful to choose an experienced diver as my diving buddy (one always dives in pairs, so you get to meet new people and make new friends too) so that both of us can watch over each other and the dive is safe, comfortable and enjoyable for both of us



Figure 2 : The author photographed by his dive buddy. The scuba gear consists of a buoyancy control device [BCD] worn like a jacket, a face mask and a valved air regulator connected to the air tank carried on one's back. The dangling yellow disc is an extra airway [fondly called an octopus] and the orange cable attaches to the pressure gauge and shows the quantum of air in the tank.

As the months rolled on, I regaled my children with scuba stories some true and some fabricated (come now, how many scuba divers do you know ? I have earned the right to brag !). Soon enough my children started to find my diving stories very fascinating and wanted to share the thrill too. So when I was working in Seychelles in 2001, I would take the family snorkelling to my favourite spots.

My little one, Urvashi, was 6 years old at that time and it was a pleasure seeing her puffing away on the snorkel and looking goggle-eyed at the trumpet fish and myriad of sea urchins on the sea floor. Soon she was pointing at marine life even I had missed. Together we marveled at ⁴*A fun dive in the Aegean Sea, Turkey* : <https://www.youtube.com/watch?v=fb6HXMv05v4> the sea cucumbers, octopi and colourful fishes we saw in our sub-aquatic forays. Our highpoint that summer was an encounter with a school of squids. There they were suspended motionlessly in front of us in battle formation. Fins undulating ever so gently, the brave creatures seemed to be

guarding their territory like the X-wing fighters from the movie "Star Wars." The moment we swam closer to them, they smoothly, almost instantaneously, glided two meters away. This awesome sight was poetry in motion and the encounter will remain firmly entrenched in my mind for as long as I live. Ranjana, who is a better swimmer than me also tried her hand at snorkeling but found it frightening and soon gave up. But both my daughters, Devanshi [now an ophthalmologist], and Urvashi, emboldened by the snorkelling experience, took a "bubble maker" scuba course for kids back then and now as adults dive off and on. Meanwhile, the missus has given up hope that she will ever see the three of us abandon our love for the sea. She still prays for this incorrigible trio.

I have now dived all over the world with a myriad of unique experiences and many new friendships. Meeting Natasha in Mexico was one of them. She is a silky smooth mermaid living 40 kilometres south of Cozumel in the azure waters of the Caribbean Sea. She is a great friend of the Divemaster who accompanied me. Jealous & possessive girlfriends certainly bite, but not Natasha. She is a ten-foot-long Moray Eel



Figure 3 : A Yellow-Edged Morayeel [Gymnothorax Flavimarginatus]. But this one is not Natasha the Mexican mermaid. A Moray is a slimy serpent-like creature with a sharp row of teeth in a jutting jaw, beady eyes, and a miserable temperament. There are about 200 species of Moray found around the world.

that lives in a crevice at the bottom of the sea. Moray's are dangerous critters ⁵This one was so docile [perhaps suffering from raptures of the deep] that she allowed me to caress her and what could be more awesome than that! At this divesite, we also found two nurse sharks dozing under a ledge in the reef so we rested on the ocean floor barely twelve feet away from them and watched them snooze.

Diving the wreck of the USS Liberty in Bali was another exhilarating experience. The huge 130-meter-long cargo ship, with guns fore and aft, was torpedoed by a Japanese submarine during WW II and lies on a slope off the coast of Tulamben, a small fishing village on the northeastern coast of Bali. At its shallowest, it is 4 meters from the surface and its deep end is 30 meters down. It offers exquisite swim-through vistas encrusted with colourful hard and soft corals and abundant fish life. 6,7 Turtles and black-tipped sharks are not an uncommon sight at this wreck.



Figure 4: Coming in through a gap in the wreck to swim through and explore its innards. Exploring a wreck is a surreal experience and leaves one with a sense of wonderment and awe. On the deck of the USS Liberty, one can also see the coral-encrusted gun.

One can see colourful nudibranchs here as well as Lionfish, parrotfish, angel fish, groupers and huge barracudas and many other species of tropical fish. The next interesting dive site here is the Coral Garden where one can feast one's eyes on beautifully colourful corals and orange and white clownfish darting in and out of their hiding place within sea anemones. Here one also encounters sunken shrines that make good photo-ops



Figure 5 : The Coral garden apart from its colourful coral, has numerous statues and shrines on the bottom. In this picture, a sea anemone grows majestically over the head of a devi statute. If you watch carefully, you will notice a clownfish hiding in its midst.

In India, the closest dive site from Jodhpur is Goa.

Here, one can visit Suzi's wreck. The waters are murky and visibility is poor but who cares as long as one is blissfully submerged. No one knows why this cargo ship wreck is called Suzi's - some say it was a woman called Suzi who

⁵*A Moray Eel* : https://www.youtube.com/watch?v=PL5_pf1Eaas

⁶*Wreck of USS Liberty* : https://www.youtube.com/watch?v=Oi4RVeYd7_A

⁷*My dive at the shipwreck* : <https://www.youtube.com/watch?v=pXp42sSolLA>

discovered it. One can see its cargo, mainly railroad tracks, strewn on the sea bed and encounter huge groupers and other abundant fish life in the bleak aquatic milieu.

The otherworldly experience of Shark feeding can be enjoyed at select locations around the world. I regret missing it in South Africa because I contracted Dengue fever. Two years ago I had signed up for it in Florida. But thanks to Hurricane Ian the dive was cancelled. It's superfluous to say it, but this thrill is on my bucket list.

Pleasure & Pain

Why do I dive? That's a question that my friends always ask. There is no straightforward and simple explanation. There are several reasons I can think of why I or any other enthusiast would take up this sport. I have come to believe that land really has no splendour such as the sea.

While diving in a coral reef, one cannot escape the kaleidoscopic detonation of a thousand colourful fishes and corals. The enchanting beauty of sub-aquatic life draws me and my children to the waters the colourful coral gardens are a joy to behold, being engulfed by a school of huge multicoloured fishes is exhilarating, swimming with a giant turtle is the epitome of ecstasy and caressing a Manta ray (they are usually the size of a large dining table) is as divine an experience as one can get on earth (for those of you whose life is made meaningful by adrenalin highs, the thrill of shark feeding is a viable option).

On the land we take sound for granted people chatting, children shouting, loud honking of automobile horns and the whine of jet aircraft. We can cover our ears and shut them out. But in the water, there is no escape, for sound is not only

amplified by water but it is propagated four times faster than in air such that you cannot determine its source - it is everywhere. Underwater speech is impossible and communication with your diving buddy is by hand signals. In the oceans, sound and sensations inundate you; the motion of the sea, the hiss of the air regulator, the chatter of boat engines passing in the distance, the clicks and grunts of the fish and other sea life and the song of the Humpback whale. One cannot run away from these sensations, they permeate the entire being and you become a part of the surrealistic underwater world. What more can one ask for?

The experience of solitude and weightlessness in the ocean is overwhelming. (Astronauts are actually trained in large scuba tanks to experience weightlessness before they are ready for spacewalks). It's when I am diving that my agnostic self, appreciates that God exists that he has made this world and there is a purpose for us being here on earth. Apart from this spiritual experience, it is also a big challenge to take up this adventure sport especially so when you are not a college-going youth. To go to places where far too many people fear to visit (to use a cliché well suited for the Indian milieu "to go where no man has gone before"), you are stepping beyond your status quo, taking a certain amount of risk and in the process becoming something more than what you were before. That's why I made a tryst with diving and that's also the reason why I encourage my children to admire and appreciate the marine world.

Diving offers an important lesson in physics, chemistry and medicine. From the minute you wear the BCD (Buoyancy control device) jacket and strap the airtank, complex physical and chemical changes start taking place in the body. The four gas laws immediately start working their charms on the diver as soon as he plunges into the waters [if you scratch your head enough, you may remember one important one from schooldays - Boyle's law]. For every meter you go below the surface of the sea the pressure increases by one atmosphere and alters the pressure-volume relationship of the body's air spaces (lungs, sinuses and ears), affects the way you breathe and alters the physiology of the human system. The lung volume decreases and nitrogen dissolves in the bloodstream.

This physio-chemical interaction that occurs in

the body, its impact on the human system and treatment of its deleterious effects (barotrauma in the form of burst eardrums, ruptured lungs, and Nitrogen toxicity in the form of decompression disease, nitrogen narcosis, to name a few) has taught me important medical lessons and helped me become a better diver and a better doctor.

Diving also broadens your outlook because you travel and meet a variety of people and encounter different cultures. I have made several friends across the world, who have been my diving buddies. All of us keep in touch via e-mail or Facebook and the buddy list keeps growing. Furthermore, while diving on a coral reef you not only appreciate the splendours of nature, but you also learn how essential the reefs are to the existence of both marine and human life, you learn how fragile the ecosystem is and you become conscious of the fact that indiscriminate human handling is destroying it. This knowledge makes you gravitate towards conserving not only the marine but also the extra-marine ecosystem and biodiversity. It makes you a responsible human being. On one dive we came across dozens of Cola cans and plastic bottles resting on the sea bed. My buddy and I picked them all up from the ocean floor and sent them scooting up in airbags to be picked up by the dive boat up above.

I admit that scubadiving carries a certain amount of risk. Accidental deaths occur, divers fail to surface and even succumb to shark attacks (there are only a few species of shark that are dangerous like the "Great White." Sharks are poor-sighted and they sometimes mistake humans for sea cows [manatees] or seals and try to gobble them up. There are very few reports of sharks attacking divers.,

8 Nevertheless, to prevent becoming shark food it is recommended to wear a brightly coloured wet suit and stay motionless when you sense a shark attack). 8 The Dubai Mall is an exciting place to dive with the sharks. The mall has a gargantuan aquarium with more than 300 species of marine life including 140 sharks [Sand Tiger Sharks, Reef Sharks, Leopard Sharks, Tawny Nurse Sharks] and Sting and Manta rays. The dive guide is armed with a soft plastic stick. In case a shark mistakes you for food, it receives a whack on its nose with it. The shark's nose is very sensitive and a hit on it makes it forget its

inquisitiveness and run for cover. Dangers arise from not knowing the environment and wildlife or how to dive safely. But in the present technologically advanced times it is not so dangerous as it was during the early days when Jacques Cousteau first introduced the aqualung. With technological advancements in ⁸*Much of the hullabaloo about all sharks being man-eaters is due to the Peter Benchley novel "Jaws." In recent years he has acknowledged his mistake and is now taking great interest in removing the misconception.*

the scuba gear, increasing experience with its use, advancement in diving medicine, and understanding of local diving environs and marine life, the risks of recreational scuba diving have decreased manifold and the sport has become safer and very popular all over the world. It is estimated that currently there are about 6 million scuba divers all over the globe and the tribe is expanding every day.

Yellow Submarine

One of my favourite Beatles songs is titled "Yellow Submarine". With its quick-paced lilting beat, this catchy song describes a fantastic voyage of a group of merry men under a sea of green.⁹ I had often wondered why the Fab Four sang about a Yellow submarine and not a Red or Black one [the usual military colours of camouflage] and it turns out that the principles of optics tell us that perception of light and colour changes underwater with increasing depth because different wavelengths of light are selectively absorbed as visible light passes through water. The deeper one goes the transmission of light decreases beginning with the longer wavelengths. Therefore, red colours disappear quickly as depth increases.¹⁰ Yellow light is not absorbed so much. It penetrates deeper into the water so many submarines are painted yellow to increase their visibility.

The refractive state of the eye also changes dramatically underwater because the air-cornea interface is now replaced with the water-cornea interface and this induces a hyperopia of 5 dioptres.¹¹ That's the reason divers and snorkelers need to wear a face mask to see clearly. Indeed, it would be a sin if we don't discuss the implications of diving on ophthalmology and while we are on the subject of refraction it would be wise to know that while soft lenses are permitted to be worn with caution

while diving, Hard and RGP lenses are forbidden because of nitrogen bubble formation under the lenses which are difficult to get rid of and obscure vision.^{11,12} Barotrauma is an undesirable consequence of rapid ascent or descent from a dive when pressure is not equalized and ruptured lungs are not an uncommon consequence. While I have not seen it happen, I have certainly witnessed sinus bleeds amongst fellow divers. In the eyes, mask squeeze due to the pressure differential causes subcutaneous facial haemorrhage and sub-conjunctival haemorrhage which is the most common ocular barotrauma.¹³⁻¹⁵

⁹*Check out the song here : https://www.youtube.com/watch?v=m2uTFF_3MaA*

¹⁰*Somers LH: Diving physics, in Bove AA, Davis JC (eds): Diving Medicine. Philadelphia, WB Saunders, 1990, ed2, pp 15-16*

¹¹*Ehmonds C, Lowry C, Pennefather J: Diving and Subaquatic Medicine. Oxford, Butterworth-Heinemann, 1992 ed, pg 21.*

¹²*Simon DR, Bradley ME: Adverse effects of contact lens wear during decompression. JAMA 244: 1213-1214, 1980*

¹³*Rudge FW: Ocular barotrauma caused by mask squeeze during a scuba dive. South Med J. 1994 Jul;87(7):749-50*

¹⁴*Senn P, Helfenstein U, Senn ML. Ocular barostress and barotrauma. A study of 15 scuba divers. Klin Monbl Augenheilkd. 2001 Apr; 218(4):232-6* ¹⁵*Hadad V Jr, Barreiros JP : Description of Eye barotrauma in scuba diving with clinical discussion. 2017,. J Coastal life Med.,pg 126-28.*

When I was a consultant working in the Seychelles which is a hotspot for scuba diving, the commonest question I was asked after cataract surgery was how soon could the patient resume recreational diving. The answer is not straight forward but the logical answer to that is 4 weeks in MSICS and 8 weeks in a clear cornea phaco incision based on clinical judgement. This length of time is required for healing and the incision to gain reasonable strength.¹⁶ But a recent AAO recommendation of 2 weeks has been offered and most overseas colleagues I spoke to verbally agree with it.¹⁷ Lasik surgery is now commonplace and diving is known to create complications if it's resumed too soon after surgery.

The complications include globe rupture from face mask barotrauma, Interface keratitis, flap displacement from interface bubbles and glare and halos while night diving; all of which may jeopardize the eye and life of a diver. Diving after corneal surgery has been recommended after 6 months¹⁶ but in recent years, clearance to dive is given soon after re-epithelialization of the cornea is complete and acute post-operative symptoms subside.

But in my considered opinion it would be best to err on the side of caution and recommend a dive-free period of 4 weeks after Lasik surgery. In a rare situation, a scuba diver may require an enucleation, then it would be wise to avoid a hollow implant and choose a solid acrylic [PMMA] or hydroxyapatite one.¹⁶ The reason for avoiding hollow silicon or glass implants is that they are known to collapse even at depths as shallow as 10 feet.¹⁶

We know that patients who have undergone pars plana vitrectomy with SF6 or C3F8 gas injection are not allowed to fly for several weeks because the bubble expands at high altitudes, increasing the IOP tremendously to produce profound visual loss.¹⁸ But have you, gentle reader, ever wondered what happens to a gas bubble when a diver with a recent vitrectomy descends into the depths of the ocean? Well, the bubble spells trouble in the deep too. During descent, the hyperbaric milieu causes the bubble to shrink [Boyle's law] causing hypotony and partial globe collapse. During ascent to the surface, the gas expands greatly causing tremendously high intra-ocular pressures and even choroidal hemorrhage.

Acute monocular vision loss is not unknown in divers who ascend to the surface rapidly. It is caused by pulmonary barotrauma as the diver ascends, with bubbles getting into the pulmonary venous system and arterial circulation from ruptured alveoli. Ocular symptoms generally arise from cerebral defects posterior to the optic chiasm, leading to hemianopia and cortical blindness. The gas emboli can also occlude the ophthalmic or central retinal artery resulting in blindness [CRAO]. Urgent Hyperbaric Oxygen Therapy [HBOT] sometimes helps restore vision but delayed treatment almost always results in severe, permanent visual loss.¹⁹⁻²¹¹⁶ Butler FK Jr :*Diving and Hyperbaric Ophthalmology*. 1995. *Surv Ophthalmol.*, 39(5), pg 347-66.

¹⁷: <https://www.aao.org/eye-health/ask-ophthalmologist-q/can-i-go-scuba-diving-after-cataract-surgery>. Accessed 20-5-24.

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When a dive buddy starts behaving irrationally [removes his mask or airway, heads off in another direction] be sure that he suffers from raptures of the deep, in other words, Nitrogen narcosis. The deeper one goes [usually 30 meters and more], the more the diffusion of nitrogen in bodily tissues [Dalton's law and Henry's law playing out as they should]. This leads to central nervous system depression. The euphoria and confusion that occur are similar to that of alcohol or marijuana intoxication [a feeling of tranquility and mastery of the environment, impaired judgment, the tendency to laugh, impaired motor coordination and the loss of decision-making ability and focus, later leading to paralysis, coma and death]. The interesting ocular effects of nitrogen narcosis include tunnel vision which adds to the confusion of the diver. This brings us to intra-ocular pressure alterations while diving. As one descends, the IOP drops and after a depth of 20 meters it drops 2 to 3 mmHg.²² The question that ophthalmologists face is whether a person with controlled glaucoma can dive. Is the hyperbaric environment detrimental to pressure control? Of course, it is safe, as the pressure will only drop while diving. There is a caveat though, that the diver and the ophthalmologist must know: Timolol and Acetazolamide to treat glaucoma must be avoided in scuba divers. The former is because it may cause unconsciousness and the latter is because it produces paresthesia which may be mistaken for a symptom of neurological Decompression sickness.¹⁶

Let us wrap up the academic discussion with Hyperbaric oxygen therapy [HBOT]. The island of Mahe in the Seychelles has a Hyperbaric treatment chamber at the hospital for treating treat decompression sickness. Back in 2001 we were routinely using it to treat vascular eye diseases, the commonest being diabetic retinopathy. In recent years there has been a renewed interest in HBOT. The current indications for HBOT are enumerated 23,24 in Table 1. In Rajasthan, a hyperbaric chamber is not available yet, but it would be good to keep in mind that there are retinal diseases that can be ameliorated with sessions in the HBOT chamber. Who knows, sometime in the future it may become available given the irrefutable evidence that it helps.

The Last Word

On my first open water dive, there was a German diver on the live aboard with us. He wore a tee shirt with this message boldly printed on it “Remember the time when Diving was Dangerous and Sex was Safe” I guess in the world we live in today, it aptly winds up any argument against diving.

²² Kalthoff H, John S, Scholz V. Problems of intraocular pressure in scuba diving. *Klin Monbl Augenheilkd.* 1975 Apr;166(4):488-93

²³ Butler FK Jr, Hagan C, Murphy-Lavoie : *Hyperbaric Oxygen Therapy and the Eye Undersea and Hyperbaric Med.*, 2008 Sep-Oct;35(5):333-87.

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So dear ophthalmologists - young, not so young and old - take my advice, there is nothing to fear, go diving before your bones become brittle.

Test and see if you can beat the “bends” before you bend up with age.

Take the plunge into the deep blue. You will not regret it. In fact you will have a whale of a time!

Table 1 : Indications for Hyperbatic Oxygen Therapy [HBOT]

- Diabetic Retinopathy.
- CRAO, ischemic CRVO, BRVO.
- ME with Retinal Vein Occlusion, Cat Surgery, or Uveitis.
- Ocular & Peri-ocular Gas Gangrene.
- NA-ION, Radiation Optic Neuropathy.
- Cerebro-Rhino-Orbital Mucormycosis
- CO Poisoning with visual sequelae.
- Peri-ocular Necrotising Fasciitis.
- Radiation or MMC induced Scleral Necrosis.
- Purtscher's Retinopathy.
- Ant Segment Ischemia.

EYES IN THE SKY

An Unforgettable Journey: Delhi to New York



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It was a bright and bustling morning in Delhi when my friend, Manisha and I embarked on a journey that we'd dreamed of for years. The excitement of travelling to New York City had our hearts racing with anticipation. As we made our way through Indira Gandhi International Airport the familiar sounds of the city buzzed in the background but our minds were already soaring across the Atlantic.

Our flight was scheduled for 10:30 am and we arrived at the airport with ample time to spare. After checking in our luggage, we found a cosy spot near the window to watch planes take off and land. There's something incredibly thrilling about airports the gateway to adventures and situations unknown.

As we boarded the aircraft, we were pleasantly surprised to find that we'd been upgraded to business class. The plus seats, the extra legroom and the attentive service felt like a luxurious treat, but all these luxuries are not without challenges.

Flying often brings discomfort due to factors like *cabin pressure changes, cramped seating, noise, turbulence, and temperature fluctuations.* **Passengers may experience ear pain, dehydration, stiffness, motion sickness, and jet lag. Anxiety about flying, limited mobility, and poor sleep can exacerbate the discomfort.**

To *mitigate these issues, staying hydrated, moving around, using ear protection, bringing comfort items, dressing in layers, adjusting sleep*

schedules for time zones, choosing seats wisely, and practising relaxation techniques can help make the flight more bearable.

Settling into our seats, we gazed out of the window with excitement bubbling as the plane taxis down the runway taking in the last glimpses of Delhi. As the plane ascended into the sky our eyes were becoming dry. A common sensation felt because of cabin air pressure changes and as an ophthalmology resident we were a bit more concerned about the same compared to common problems Eustachian tube blockage and ear pain] people faced. It was remedied with a few drops of lubricating eye drops which we stashed in our carry-on. It was all because the cabin air lacked moisture.

As the flight progresses we reach at certain heights witnessing the vast expanse of clouds below. Here we found bright sunlight streaming through the window, which triggered sensitivity in our eyes. Luckily, we remembered to pack our favourite pair of sunglasses, shielding our eyes from the intense glare and allowing us to enjoy the view in comfort.

As we soared into the sky, I pressed my forehead against the cool window, my breath fogging the glass as I watched the world below shrink into tiny dots. Once again, amidst the awe-inspiring view, a familiar sensation tugged at my eyelids dryness. It was a reminder of the unforgiving cabin air, but I was prepared.

The flight attendants were incredibly attentive, ensuring that every aspect of the journey was comfortable and enjoyable.

We were about to descend into New York and felt a flutter of excitement and a hint of nervousness. The sprawling cityscape came into view, a mesmerizing blend of towering skyscrapers, expansive parks, and the winding Hudson River.

During descent, we felt a slight pressure building behind our eyes, a sensation caused by changes in air pressure. It's a fleeting discomfort, quickly alleviated as the plane touches down. It was also encountered during ascent by some because of atmospheric pressure differences between land and at heights.

John F. Kennedy International Airport was as busy as we'd imagined, a melting pot of travellers from all corners of the globe. Pacing out into the arrivals hall, we were greeted by the crisp, cool air of New York. It was a stark contrast to the warmth of Delhi, and we revealed in the freshness of it. We hailed a yellow cab, and the driver, a friendly man with a thick New York accent, welcomed us to the city that never sleeps.

The drive into Manhattan was surreal. As we crossed the Queensboro Bridge, the iconic skyline unfolded before us. We saw the Empire State Building, the Chrysler Building, and the shimmering lights of Times Square. The city was alive, buzzing with energy and possibilities.

Our adventures weren't just about sightseeing. We explored the eclectic neighbourhoods of New York, from the artistic vibe of Greenwich Village to the high-end boutiques of Fifth Avenue.



(Queensboro Bridge captures the essence of New York city's architectural grandeur and its dynamic urban life)

We tasted a myriad of cuisines, from authentic Italian in Little Italy to mouth-watering dim sum

in Chinatown. Every corner of the city had a story to tell, and we were eager listeners.



(Empire State Building is the spirit and energy of New York city)



As our time in New York came to an end, we knew that the memories we'd made would stay with us forever. The city's energy, its diversity, and its undeniable charm had left an indelible mark on our hearts.

As we boarded our flight back to Delhi, we felt a mix of contentment and longing, already looking forward to the day we would return to the city that had welcomed us with open arms.

Travelling together made the experience even more special. We laughed together, got lost together, and marvelled at the wonders of New York together. This trip wasn't just about seeing a new city; it was about strengthening our friendship and creating memories that would last a lifetime.

Reflecting on our journey, we're grateful for the breathtaking sights we witnessed from the sky and though our eyes may have faced a few challenges along the way, they emerged unscathed, ready to take on whatever adventures lie ahead.

**Thank you, Dear Eyes, for the gift of sight,
Revealing life's wonders, from dawn to night.**

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'In the Pursuit of Life'



Dr. Bakul Trivedi

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I always have taken a holistic approach to my life, not getting bogged down by anything, including my profession, so as not to miss the very essence of our existence.

The two of my hobbies I would like to take note of are bird watching and painting.

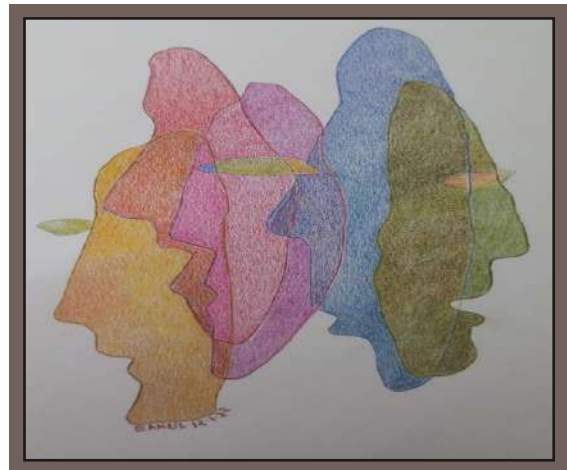
I was really fortunate to have a strong bond with nature from the beginning. When I came to know about bird watching as an established hobby in the late eighties, I readily took to it. It needed only two things as an investment, a good pair of binoculars and a field guide to identify bird species.



I was so absorbed in it that my all holidays would be spent after going to some wilderness place to see birds.

In 1998 I decided to start a newsletter for the birdwatchers of Gujarat in a vernacular language, Gujarati. It was a quarterly publication in which I would publish birding notes from all over the state. I would invite notes from birdwatcher friends across the state, compile them, and edit them, before publishing.

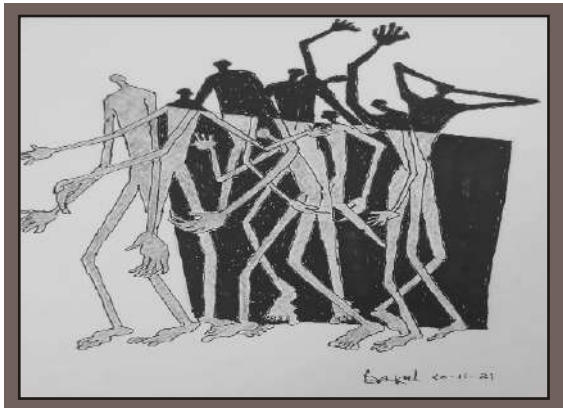
It was 'Vihang', which I continued for 14 years from 1998 to 2012. I would express my views on environment-related issues in the editorials. The newsletter would also carry articles specially written for 'Vihang' by well-known naturalists from the state. I was very passionate about 'Vihang' and had taken it formate from 8 pages to a voluminous 64-page magazine in the later years!



Those were not the days of social media. My newsletter served to the Science by generating handsome data on Gujarat Ornithology. References from Vihang were regular in many Ornithology journals across the country.

A positive consequence of the newsletter was the emergence of a community of birdwatchers. And believe me, it was a huge lot of people who were concerned about birds and bird conservation. I decided to give it a formal identity. Along with my ornithologist friend late Dr. Bhavbhuti Parasharya, I formed 'The Bird Conservation Society, Gujarat' (BCSG) in 2002. It's still running strong and I am serving as an Hon. President of the Society.

This Society is dedicated to organizing field programmes, and academic programmes and holding workshops on different aspects of Ornithology. It also runs a newsletter in English, 'FLAMINGO Gujarat', a quarterly. This is probably the only Ornithology newsletter exclusively dedicated to a particular state.



I was also appointed to the Gujarat Government's wetland committee for two terms.

Last year we brought out a 'field guide to the Birds of Gujarat', the first of its kind for a state. It contains distribution maps for each bird species, created for the first time.

My association with painting has been patchy but more of a personal and meditation kind.

From my school days, my aptitude for sketching and painting was evident and I was expected to pursue fine arts or Architecture. But that was not to be.

I am fascinated by lines and forms. A blank canvas is always inviting to me.

When I get an urge to express myself on a canvas, 'subject' takes a backseat, it's more of aesthetically appealing renderings and shapes. I always keep sketchbooks and stationery ready!

It's so refreshing and soothing when you spend time with your creative instinct. My painting was selected for the National Lalit Kala Academy annual exhibition in 1994. But inspite of having potential, never applied myself enough to generate a good volume for a solo. That wish is still alive and waiting.

I had met Dr Sanjiv Desai at the '91 All India Ophthalmic Conference held in Banglore. I was deeply involved in Oculoplasty then, an evolving sub-speciality at that time. I was quite bubbling with enthusiasm as my three papers

were to be presented, one in the iconic Rangachari session. All the three were about some innovative devices.

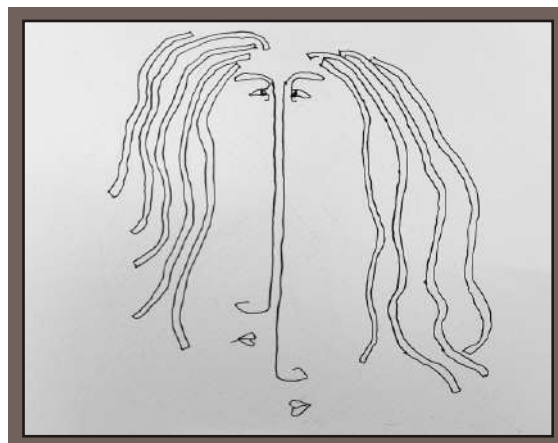
I had gone with my family, my son was hardly 4 years.



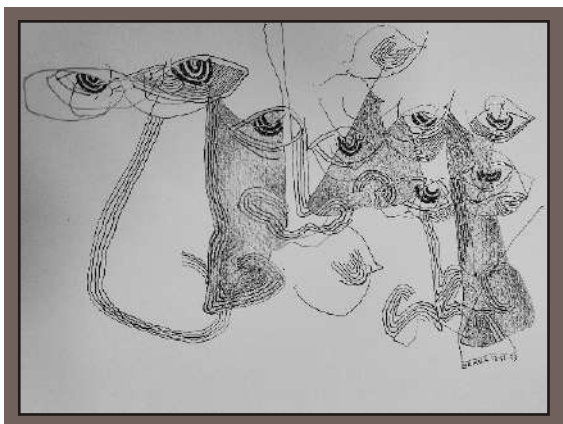
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While nobody must have registered it, I was so delighted to listen to the calls of Brown-headed Barbet being situated in the conference hall! I used to carry binoculars whenever I attended All India Conferences. Brahminy kite was a life-bird for me in Bangalore, a city of lakes! Having cleared MS in 1981, I worked with the coveted M. J. Institution of Ophthalmology, Ahmedabad, for 11 years. Had a small stint with the Gujarat Ophthalmology Society, becoming a treasure for one term, but realised, it's not my cup of tea. Resigned from the Institute also. Started private practice. Learning the incoming phaco surgery, gradually in private was quite an engaging and thrilling experience. Having procured my own phaco machine in 1996 I started doing phaco.



am still practising as a phaco surgeon. Throughout my journey as an ophthalmologist, I also remained busy with my extracurricular activities. No 'ifs' and 'buts' now. While many in my time didn't get on with the latest weapon then, phacoemulsification, and called trained juniors for surgery, I feel proud to have been doing it for almost 28 years.

I once again thank My friend Dr Sanjiv Desai for having remembered me after a long spell and inviting me to share my work and thoughts with you!

My only message to my colleagues is, there s no perfect time to start pursuing your hobbies. Do it now! Start obliging inner wishes and desires. Bring out your creativity on the platform. Live your dreams along with your professional obligations. It will make you a complete human being.

Let me thank Dr. Sanjiv Desai for inviting me to write about my hobbies, for the Rajasthan Ophthalmology Journal.

Retirement

A Personal Perspective



Dr Joseph Mary Keenan
FRCSEd FRCOphth / Consultant
Ophthalmic Surgeon /
Visiting Ophthalmic Consultant,
Tarabai Desai Eye Hospital and
Research Centre, Jodhpur,

The following is a personal perspective. I am aware that as we live in different cultures and countries what works for one group may not work for another. I also believe that the principles of retirement are not very different in the different countries and it is these principles that I will try to explore in this submission.

Time

Time is a relentless force in all our lives and is immortalized by Shakespeare in his Sonnet Number 60:

**“Like as the waves make towards the pebbled shore,
So do our minutes hasten to their end;
Each changing place with that which goes before,
In sequent toil all forwards do contend.”**

This leaves us with mainly two choices as we head towards retirement. The first is to make no firm decisions but to continue in our work as long as possible and as we get older this becomes less and less practical. The second is to make an active retirement decision which I call transitioning.

This is different for everyone as we all have different circumstances and considerations.

Transitioning

Transitioning is the process of making an active decision regarding retirement. It includes setting and planning for a retirement age. The challenge after retirement is what I term the “Blank Page” challenge. One wakes up in the morning and instead of having ophthalmology filling the day there is a blank sheet which is up to us to fill as we see best. This area also includes the concept of loss of identity. Are we less of a person as we are no longer the “doctor” or can we be sufficiently self-sufficient in our new lives that this is not an issue. My contention is that we may retire from work but we are definitely not retiring from life.

Physical and Mental Fitness

It is important for us to stay fit both physically and mentally. Physical fitness may include spending more time at a sport that we simply did not have sufficient time for pre-retirement, taking up a new sport, or simply engaging in a daily activity such as walking. Mental fitness may include reading, crosswords, board games, or dealing with any issues that arise in any of the new groups that we might become involved in after retirement.

Health Issues

Retirement is linked with an advancing age and this will bring with it the challenges of knee, hip, and cataract surgeries, or other more serious and less predictable illnesses. These are all part of the challenges and we are no more protected and we will find them no easier had we continued to work. The strain on our bodies is immensely less after retiring, both physically and mentally, and this decreased pace is I believe a protector of our general wellbeing.

Transferrable Skills

We have a wealth of skills that we develop during our training and working lives of which we are in reality not fully aware. These include organization, good discipline, an ability to communicate both verbally and on paper, an ability to understand situations, and to get on with people. One of our main skills which I consider is really important in retirement is our ability to teach. This means that we can take a

class in whatever is our subject of choice or our main hobby and we can include new students of any age in our teaching group. The converse of this is that we have to be able to take instruction and learn. We are used to being masters of our craft and discussing and learning from our peers. Learning new skills may however, particularly in teamwork, necessitate listening to and learning from those more experienced than we are even if the message is delivered in a sharper manner to that to which we are used.

Ophthalmology

This is a subject that we have all loved all our lives and it is hard to give up. We also miss the productivity of our working time. We may not be able to keep completely up to date with all the latest developments as one needs to be in full time work to achieve this. However all our diagnostic and operating skills stay with us and we can readily work to assist a hard pressed clinic or operating service, or to do some work for a voluntary organization that we were unable to do previously due to time commitments, and this work could also include a training aspect for our younger or newly qualified colleagues.

Family

I am sure that we all feel that we commit such a large amount of time to our work that we do not spend as much as we would like with our younger families. Retirement allows us to readdress this a little. It gives us some more free time that we can use to see and look after our own children. We can also spend time with our grandchildren and we have the flexibility to fit in with their family plans. It in addition and very interestingly allows us to spend time in teaching and mentoring other people's children in our preferred hobby or skill.

Life Skills and Social Interaction

It is very easy to close down after retirement as everything appears to shrink. We lose our interaction with our work colleagues and patients. We give up, partially or completely, a subject that we dearly love. We do then have to keep our horizons from closing down and this may be best done by meeting and engaging with people in our friendship, community, skill, and recreational groups.

Location and Residency

Our place of residency in our early years is determined mainly by access to work and nearness to schools for our children's education. Our home is a family home but also our base for whole family activity and in reality we spend little of our day time living there. Retirement brings a myriad of possibilities including whether we wish to run a larger home for returning family or downsize, whether we wish to move to a different area or even country to be near children, or move to an area more conducive to engaging in any new pursuits we wish to undertake. There is the opportunity, circumstances allowing, to have two homes but please be aware that one needs to spend time in any community to both build and retain relationships. Moving to live near children and grandchildren may also be an option and it is worthwhile being aware in this modern world that children may also be mobile.

Summary

In summary, time is going to get us all in the end: "And Time that gave doth now his gift con found" (Shakespeare Sonnet 60) There is however a gap at the end of work called retirement. We need to approach this positively and in doing so we may discover a new life that will keep us occupied, fruitful, and productive for many years.

Thank you for inviting me to write an article for the Rajasthan Ophthalmological Society on retirement.

Investment Insight

Allocation: The Real Formula for Wealth Creation



Romil Kapoor
Ex-Swiss Banker and
AMFI Registered Mutual Fund distributor.
Financial Advisor to MotoGP Bharat

As a financial advisor, I often encounter investors who compare their net worth to their peers or the market. The simplest metric for comparison is usually the percentage return on investment (ROI). However, this focus on ROI often overlooks the fundamental drivers of wealth creation: principal (P) and time (T). In the compounding formula, $P \cdot (1 + R/100)^t$, the variables P and T play crucial roles in wealth accumulation. While R (ROI) is a popular topic of discussion, it rarely generates significant wealth on its own.

The True Drivers of Wealth

Wealth management should focus on generating 10% returns on 100% of your net worth rather than seeking 100% returns on just 10% of your net worth. This principle applies to various professions, including medicine. For instance, a doctor's success relies on their patient base (P) and years of practice (T), not merely on their immediate ROI.

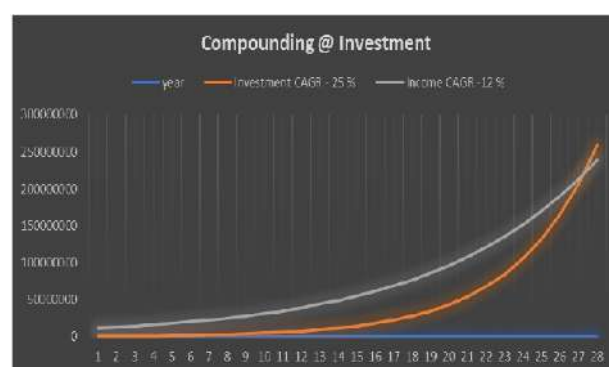
The Pitfall of Early Comparisons

Young doctors often throw in the towel early when they compare themselves to more experienced peers. Similarly, investors chasing the "best return" often miss out on the benefits of consistent, long-term investing.

A Simple Wealth Creation Question

Consider this scenario: what generates more wealth in 20 years, ₹5 lakhs invested at 25% CAGR or ₹1 crore invested at 12% CAGR? Counterintuitively, the ₹1 crore investment typically generates more wealth consistently over 20 years than the ₹5 lakhs investment, as achieving a 25% CAGR is quite outlandish.

In fact it takes 28 years for ₹5 lakhs to beat ₹1 crore. Now ask yourself this "Which business in Real World grows at 25% for 28 years?"



The Mutual Fund Advantage

This principle also applies when comparing direct stock investments to mutual funds. Investors with substantial funds, say ₹2 crore, are more likely to diversify across 4 mutual funds rather than in 4 stocks to mitigate downside risk. This high conviction in Mutual Funds investments often results in accumulating wealth which they would have otherwise missed while investing limited amount in limited stocks directly.

Conclusion

The journey to wealth creation begins with understanding and managing comparisons effectively. Instead of chasing high returns, focus on steady, long-term growth with substantial principal investments.

“Vision's Symphony: Ophthalmic Ode”



Dr Manisha Parmar DO-DNB ⁽¹⁾

Dr Kamdar Eye Hospital

In the world of vision,
where precision reigns,
Lies the story of eyes,
In medical domains.

A symphony of structure,
delicate and fine,
Each part in harmony,
in ophthalmic design.

The cornea, is clear,
like a polished gem,
First to greet light,
like a diadem.

Refracting rays with calculated grace,
Guiding them inward to their destined place.

The aqueous humour, a fluid so clear,
Maintains pressure and balance, held dear.
Flowing between the cornea and the lens,
Balancing forces, as nature intends.

The iris, a marvel,
coloured and bright,
Adjust the pupil,
the aperture of light.
Expanding in darkness, contracting in
Regulating light in a perfect ballet.

Behind this dance,
the lens does reside,
Focusing visions with
a meticulous guide.
A crystalline marvel,
flexing with ease,
To bring clarity to sights,
near and at sea.

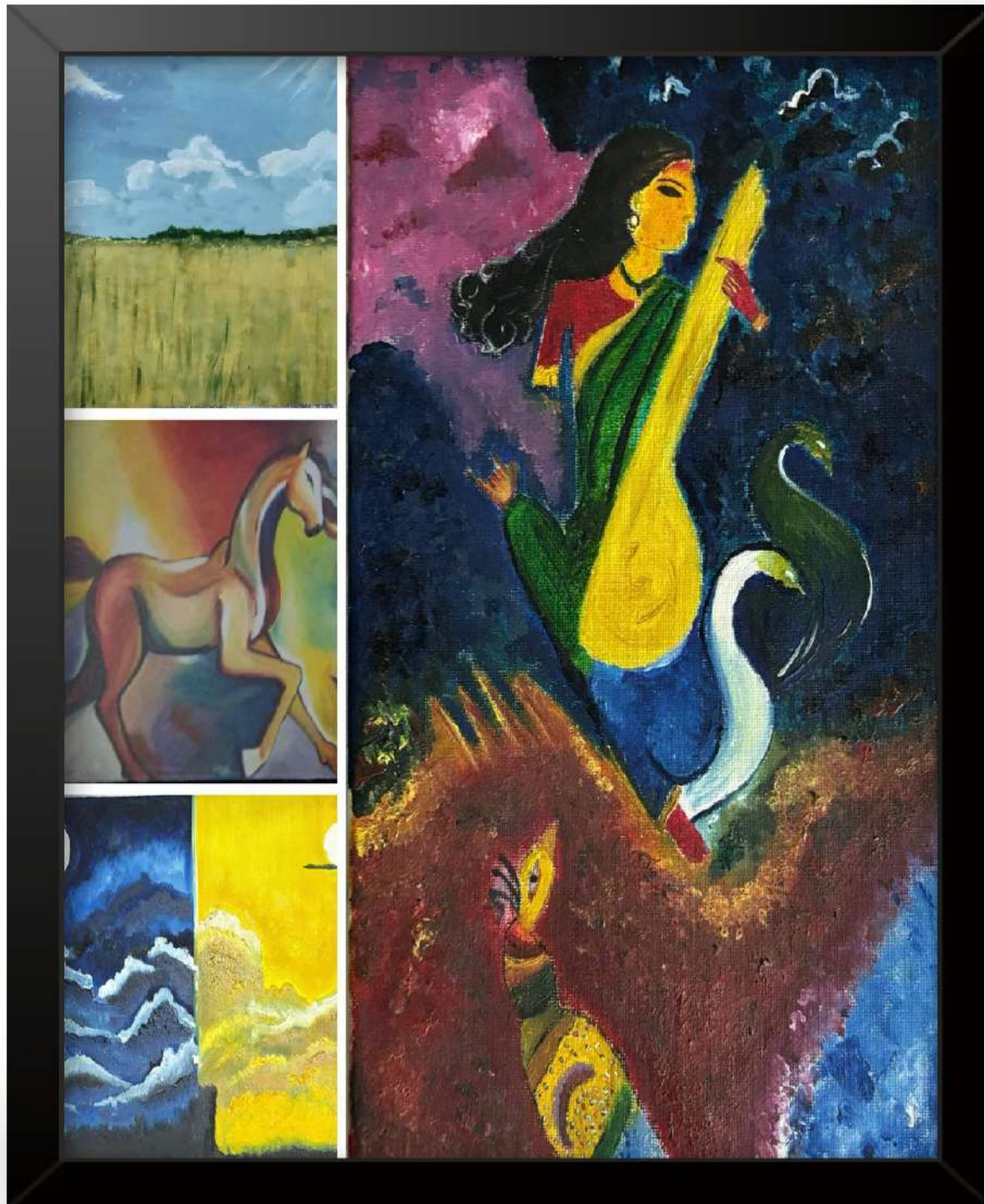
The vitreous humour,
gel-like and clear,
Fills the eye's depth,
a support so dear.
Maintaining shape,
a cushion profound,
Within the eye,
where wonders are found.

The retina, a canvas,
sensitive and vast,
Capturing light in moments that pass.
Photoreceptors,
rods and cones in array,
Transforming light into neural relay.

The macula, Central,
sharp in its sight,
Provides clarity,
in the day and night.
Fovea at its core,
the point of acute gaze,
In this tiny spot,
the finest details blaze.

The optic nerve,
a conduit so fine,
Carries visual data along its line.
From the retina to the brain,
the signals it sends,
Crafting the images where vision transcends.

In the realm of ophthalmology,
where science meets art,
The eye's complex structure plays a vital part.
A testament to nature's intricate plan,
The eye is a window to the soul of a man.

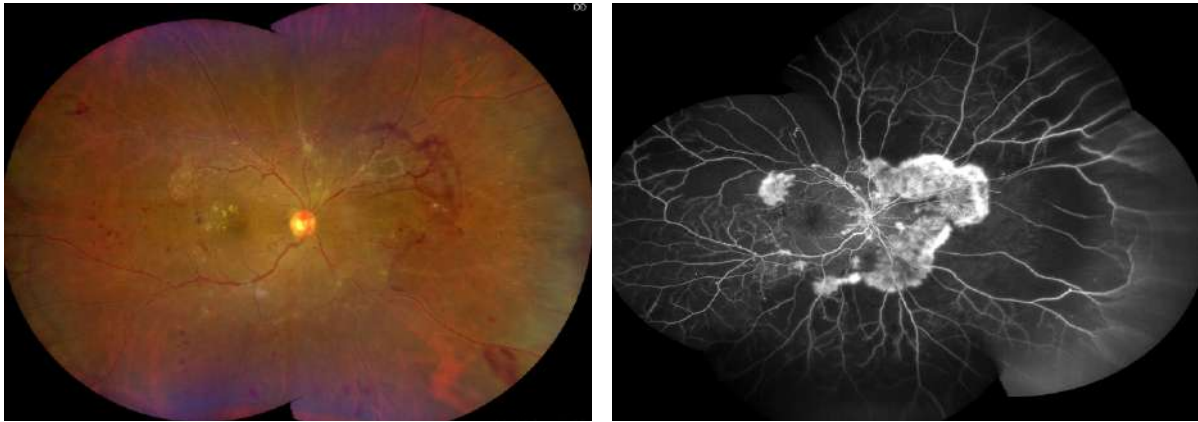


"My artwork celebrates the Timeless Elegance of the Goddess Saraswati creating a serene escape into the heart of nature's unspoken elegance and unrestrained spirit of the horse coming together in a harmonious blend."

Dr Purvi Gandhi
Dr Kamdar Eye Hospital

Winner Of Ophthalmic Image

Issue-5



Ultra-wide field colour fundus photograph and montage of Fluorescein Angiography of a 54-year-old diabetic male showing florid neovascularisation of the disc and elsewhere and extensive 360 Capillary Non-Perfusion areas.



Dr. AYUSHI GUPTA MS
Agrawal Hospital, Jaipur

Arotear

Carboxy Methyl Cellulose Sodium 0.5% **EYE DROPS**
Other Ingredients : Magnesium Chloride + Calcium Chloride +
Potassium Chloride + Sodium Chloride + Sodium Citrate + Vitamin B12

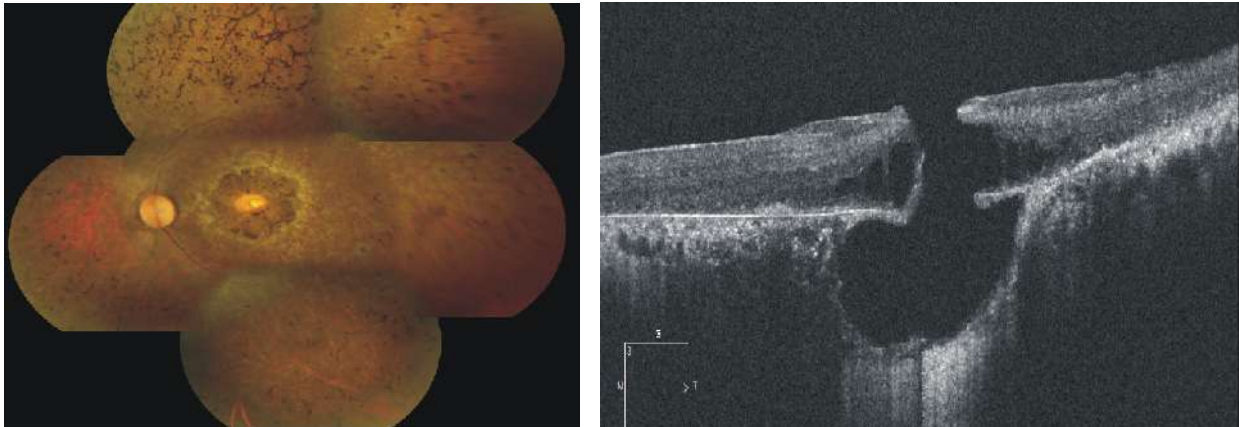
LUBRICANT EYE DROPS



E-mail : aromedpharma1@yahoo.com | website : www.aromedpharma.com

Cover Page Image Issue-5

Focal choroidal excavation with macular hole in a case of advanced retinitis pigmentosa



Fundus photograph showing disc pallor, arteriolar attenuation and bone spicule pigmentation throughout, suggestive of retinitis pigmentosa. A yellowish-white punched-out lesion at the macula with an overlying macular hole.

Optical coherence tomography (OCT) scan through the macula showing focal choroidal excavation (FCE) of nonconforming type with full-thickness macular hole.

Chronic intraocular inflammation has been observed in RP. This inflammation could have disrupted the choroidal stroma leading to atrophy and excavation. This entity should be differentiated from intrachoroidal cavitations seen in myopia in which there is posterior bowing of the sclera with retino-choroidal coning, and macular coloboma where the defect is layered by undifferentiated retinal tissue.



Dr Raj Shri Hirawat
Associate Editor
Rajasthan Ophthalmological Society



"The breathtaking splendour of nature's duality, where a symphony of vibrant oil pastel colors captures the soul of the mountains and the gentle embrace of the river shore, with towering peaks standing guard over tranquil waters, creating a harmonious blend of power and peace, and portraying life's serene yet awe-inspiring moments, a testament to the beauty and depth of our world."



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