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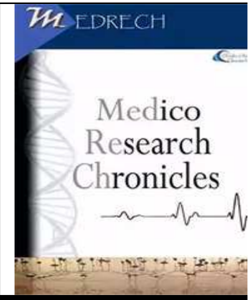

KEEPING THE KNIFE SHARP!

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Being a Surgeon, even a trainee, has been a painful experience in the ongoing pandemic days, versus the world of yesterday[1].

The pandemic has crippled & strangulated many surgical branches due to paucity of volumes e.g., Plastic - Cosmetic Surgery, Orthopedics, Joint Replacement, Ortho-Trauma, Transplant Surgery, Elective Abdominal Surgeries like Hernia – Abdominal Wall Reconstruction, Ophthalmology etc. are the worst affected. This article is about challenges faced by the surgeons involved in more of elective surgeries and how they can & should survive the current catch-22 situation.

Different surgical fields faced different patterns of work volume challenges. The discussion ensuing is more about situations in India, however similar patterns have been emerging worldwide.

The ENT & Maxillofacial Surgeons saw a sharp dip in elective surgical work due to the proximity with portals of infection & the initial apprehensions. This led to a rise in OPD and acceptance of Tele-consults. They are now seeing an exponential rise in surgery for Invasive Mucormycosis[2]. The *Vascular* surgeons could continue their work owing to the limb saving nature of their interventions and now thrombotic complications arising out of Covid-19 have added to their OT list. *Surgical Oncology* had a *tick-mark* kind of graph with a new plateau due to the semi-emergent nature of the pathology the branch deals with.

Joint replacement Surgery was one of the worst hits[3]. Travel restriction & lockdowns limited mobility and made people remain comfortable with the painful joints, leading to avoidance of surgeries. Decreased travel

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resulted in less trauma & road traffic accidents, leading to decreased emergency Ortho-trauma work as well[4].Majority of *Hernia – Abdominal Wall Reconstruction,* being performed electively, saw a sharp dip. Decreased mobility has resulted in decreased morbidity associated with Hernia & so has the patients wish for a repair. Along with bad joints people have decided to live & suffer with their hernias for a little longer. Although *Transplant Surgery* is critical in nature, majority of transplants in India are LDLT and thus semi-electives. Due to possible risk of Covid transmission & prolonged testing time cadaver donations almost completely stopped. The LDLT were ridden with issued of other elective surgeries.

We believe following factors have resulted in decreased elective surgeries across various setups

- Besides Covid-19, there has been another serious issue crippling the Surgical services, the economics of the country! India still has sparse penetration of private medical insurances. Large portion of the working population thrive on corporate/office insurances[5]. These challenges clubbed with a badly hit economy and lay-offs resulted in no funds available for any electives or semi-electives. People having personal insurance have opted for preserving the same for possible Covid related events. Many TPA have refused cashless claims, making patients opt for reimbursement for surgeries. This came as a further strain on the already financially drained families.
- The reasons for decreased numbers in Government/State hospitals were lack of manpower. There has been extensive shunting of the surgeons and surgical staff for Covid duties. In few centers, the postponement of elective surgeries has been indefinite!
- Conversion of smaller nursing hospitals to *Covid Hospitals* choked another path! In the pre-Covid times, surgeries would be prime events for revenue generation due to brief length of stay, hence a strong revenue generator. However, reduced surgical volumes forced these hospitals to opt for near full occupancy with a steady flow of Covid patients, helping these smaller hospitals remain afloat. These hospitals have been working in tandem with the local governing body for bed allotment too. Nearly all states have reserved a percentage of beds in nursing homes & smaller hospitals for Covid care or in few instances[6] have even completely taken over the hospitals.
- Private & Corporate Surgical units who opted to continue surgical work & had a patient flow too, also ran into issues. There always exists a possibility of peri-surgery Covid infection with increased morbidity & mortality and poor outcomes. The surgery staff and the floor team needed to be kept available, had to be repeatedly screened. Use of PPE kits and appropriate technology at various levels had to be ensured, increasing overhead costs[7]. Non availability of a floor Bed, an ICU bed, blood-blood products, difficulty in referring to the higher center in case of complications etc. were factors making surgeons postpone elective work. Second wave added to the woes & there are hardly any "*Covid Negative*" hospitals anymore.
- Issues were encountered from the patient side as well. Asymptomatic patients posted for elective procedures have been detected Covid-19 positive on RT PCR/HRCT Chest. This was a big issue, as they would have by then exposed the entire floor staff & the entire exercise of

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pre-operative preparation would go waste.

As a response to the pandemic, cessation of surgical work was the initial knee-jerk reaction, which was witnessed in mid of 2020. In spite of that, life & limb saving surgeries had to continue and they did, transplants were performed & trauma-acute care surgeries were done. However, the roads leading to elective surgeries became increasingly rocky and unfriendly[8].

Elective surgeries are performed in a controlled environment and thus the acceptance of unfavorable events is minimal, if any. The surgical feat of minimizing complications and maximizing outcomes is an end result of operating in volumes. Most of the surgical training too happens in elective surgeries. There is a growing worry in the surgical fraternity about is the prolonged lack of surgical exposure, jeopardizing the immediate & late outcomes of such surgeries when things would resume. Thus, Covid volumes have affected surgeons at all strata of career, from residents to consultants in various ways. There is a strong concern regarding these surgically-poorly-trained residents and a near permanent void in their surgical training due to Covid-19.

With such uncertainty & stress what should be the way ahead for Surgeons? And what can Surgeons do to tide over the crisis? Mindful answers to these complex situations lie all around us, right from the way nature has functioned to the way non-surgical professionals & processes function.

Below are some examples as to what can be done and replicated.

- We have lessons from animal ***hibernation*** in the wild. They survive by decreasing their metabolism and energy requirements, by reducing their activities. Equally important is finding a corner to stay safe. Surgeons in hibernation need to ensure that their units are afloat by reducing the cost factor & at the same time to ensure their staff remains safe. It would morally be responsibility of the chief to ensure all possible help to her/his team.
- There are remarkable companies that have managed to remain afloat in the past year against all odds. Of note are ***UBER[9] & AIRBNB[10]***, both are primarily *data companies,* without any physical holdings as such. This is similar to Surgeons who free-lance or practice in smaller setups without owning a hospital. The companies have *diversified* into multiple smaller units & whichever unit worked, was encouraged to flourish. Uber focused on Uber Eats & Airbnb focused on hyperlocal-long-rentals etc. Surgical teams can diversify into performance of very basic surgeries, participation in managing Covid patients, Community reach programs, teaching-mentoring modules & practicing tele-medicine etc.

A word of caution regarding tele-communication for Surgeons, it has shown a limited success owing to multiple shortcomings. Surgical patients need physical examination & almost always a radiological imaging too. Besides the inherent general issues like lack of direct contact, reducing a medical interaction to a less-serious consumeristic experience & reducing doctors to service-providers has made this option less desirable[11]. One place where it has shown good comfort and success is follow-up of operated patients or ones seen in OPD.

- Another example to learn from is the way ***fire equipment*** is built & functions. These are rarely, if ever, used. However, the day they are needed, their function is lifesaving & damage limiting. The lesson here is to *build things that last*, ensure frequent system checks & dry runs to ensure smooth functioning.

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Importance of strong surgical foundation by training during residency & frequent upgradations of skills & knowledge with certifications help here.

- Some lessons to be learnt from the ***aviation*** industry. After the global lockdown last year thousands of airplanes were grounded. Before flying again, each plane received its fitness clearance, involves an in-depth audit of all functions, irrespective of the magnitude of the task. The initial flights are usually of short duration and frequency. A surgery is like orchestrating a complex machinery including innumerable variables, just like flying a plane. Fitness checks would gain importance when the surgeries re-start after a significant pause. Each system would need an audit and a health check prior to putting it in the field, be it equipment, processes & the manpower. Resumption should essentially be slow with simplest & shortest cases.
- An insight into prolonged survivals in the ***Japanese population*** highlights the concept of ***Ikigai*** which many of us either don't know or have forgotten. The concept covers various aspects of life, when in sync, can help us achieve a happy and fulfilling life. Ikigai is about achieving an appropriate combination of personal milestones, professional accomplishments and fulfilling familial-social responsibilities. A book by the same name is highly recommended for a read. The current freedom from hectic surgical schedules and the patient-free time, can very well be "invested" in self and the family. The goal should be nurturing better self, better relationships and better surroundings. These factors would help in a stable and calm mind. A mind that is ready to take on stress and the challenges during a surgery or otherwise.

A quick one-word mantra for survival would be ***Adaptation***. Defined by Darwin's apt words "*the adjustment of organisms to their environment in order to improve their chances at survival in that environment*." The theory for natural selection is always at play at its best & also at its worst in these adverse situations. Adapters would have an evolutionary edge with them.

When the Covid tsunami recedes and one day it surely would, the world would be a different place. *New normal* would set in. Conservation of many "surgical" cases would give new insights into and possibly rewrite the natural history of diseases. The way patients are assessed, treated & operated has already seen changes. Fields like Dentistry is facing an overhaul. Acceptance of Day-Care surgery is increasing. Insurance awareness is on rise. There is a whole new world waiting in near future. As the life gets back to normal, the pending elective cases are likely to go in millions.

Expect a wave of elective surgeries. That day mandates us to remain mentally healthy, physically prepared & to ***keep our knives sharp***![12]

Declaration: The views mentioned here are strictly non-medical and as a part of general discussion on the topic. No views to be taken as standalone opinions in isolation.

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