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ISSUE NO 1/2021

SPINEWS

THE SPINE FOUNDATION NEWSLETTER

Good news from Gadchiroli

GADCHIROLI, IN SOME ways, can be called the spiritual home of the Spine Foundation. It was a partnership that was born in 2003 and has over the years gone from strength to strength. The Spine Foundation's work was interrupted by the pandemic that hit us in 2020. With travel restrictions and social distancing norms in place, it was nearly impossible to organize any camp, but if there's a will there's a way. On Christmas Day 2020, the Spine Foundation held its first online clinic. A team of doctors from the Spine Foundation saw patients red-flagged by the doctors at SEARCH in Gadchiroli. The success of this online consultation has now been regularized with doctors at SEARCH and the Spine Foundation holding online clinics every Friday between 2 pm - 4 pm.

The Spine Foundation team had to wait until 5th March 2021 to return to Gadchiroli. In the two-day camp, we operated on 19 patients simultaneously in three operating theatres. This included nine lumbar fixations, one tandem and two cervical fixations.

In more news from Gadchiroli, the Spine Foundation has acquired a new Siemens C-arm machine that is going to play a big role in our fixation cases as well as our pain clinics in Gadchiroli. This machine at SEARCH is the first in this area. Thanks to our donors and patrons who make it possible for us to bring quality spine care to the poorest of the poor.

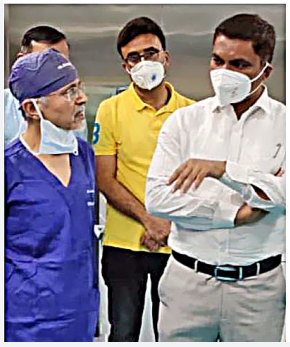
Spine surgery camp at Asia's first rural medical college in Ambajogai

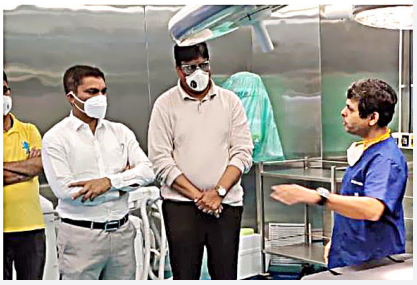
AMBAJOGAI, A CITY in the Marathwada region of Maharashtra is home to Swami Ramanand Teerth Rural Medical College. It holds the distinction of being the first rural medical college in Asia. This is was the venue for the Spine Foundation rural surgery camp on 20th March 2021 where six patients were operated.

Sumanbai

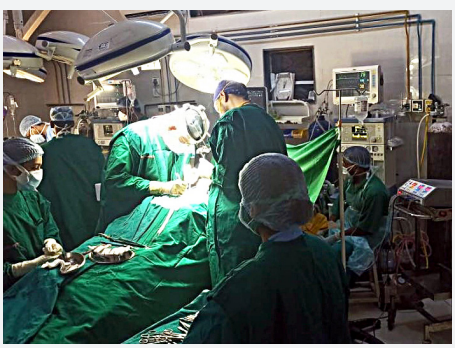
Sumanbai is a 64-year old farmer who was not able to stand or walk for more than five minutes. She had multilevel nerve compression at the lumbar spine and also abnormal vertebral movement at one level. The Spine Foundation surgeons did a successful multilevel nerve decompression and single-level fixation with rods and screws. She is now back on her feet and completely pain-free. Sumanbai is just one of the hundreds of poor patients who have got a new lease on life thanks to the doctors at the Spine Foundation.

Topline facility and a modular OT at Nandurbar





NANDURBAR IN NORTHWEST Maharashtra was the venue of the Spine Foundation's first rural surgery camp this year on 26th February 2021. Not only did we operate on two patients but also donated a state-of-the-art modular OT to the Civil Hospital in Nandurbar. This was inaugurated by the District Collector Dr Rajendra Bharud, who himself comes from a very poor tribal family. Through sheer hard work, he went on to do complete his MBBS and became an IAS officer in 2013.



Promoting spine care at Kolhapur

AFTER THE SUCCESS of online OPDs at Gadchiroli, the Spine Foundation has replicated this model to help patients in Kolhapur. The first online OPD with DY Patil Medical College was held on 18th February this year, this exercise is being held every Friday between 4 pm - 6 pm.

Until the time technology makes online surgeries possible, the Spine Foundation's rural surgery camps that bring free quality spine care to the poor will continue. On 27th March 2021, the foundation team travelled to Kolhapur where the DY Patil Medical College team had already red-flagged a couple of cases for surgery.

During this time, the doctors took the opportunity to reach out to the community through the education and sensitization of grassroots health workers. It held a talk for ASHA workers that were attended by over 100 of these frontline health providers. As these

times demand, strict COVID protocols were followed including social distancing and the use of masks.

Platinum certification for Spine Foundation

GUIDESTAR INDIA is the country's largest and most reliable online information repository with over 10000 NGOs. We have been awarded the prestigious GuideStar India Champion Level- Platinum certification for 2020 and have joined India's largest pool of credible NGOs after undergoing a rigorous due diligence process. GuideStar India's Platinum Certification is the Champion Level

certification indicating that a high level of accountability and good governance procedures are adopted by the organization. It shares in the public domain, its tax returns filed within due date, audited annual accounts and auditor's report submitted to tax authorities for two years and that there are no material qualifications in its audited accounts. View our profile at guidestarindia.org.

WELCOME

THIS IS THE FIRST of our newsletters where we will be covering news and events of the Spine Foundation with our well-wishers, partners and donors. We also wish it to be a platform for exchange of ideas and sharing of knowledge.

While this newsletter is coming out at a time when we are facing a major pandemic, we hope that the messages in these pages are about hope and the spirit of humanity that lights up even the darkest nights.

We wish to thank Dr Anand Bang and Dr C Balakrishnan for their contribution in this issue. Also in this inaugural issue, Dr Bhojraj, the founder of the Spine Foundation gives us a larger picture about this unique endeavour.

The Covid pandemic has also changed our entire world, and the Spine Foundation too had to find newer ways of meeting the old challenges. In this issue we report on how we met the challenge through our online OPDs and reached out to our patients virtually when physical travel became impossible.

Earlier in the year, when travel restrictions were lifted the Spine Foundation traveled to Gadchiroli, Kolhapur, Ambajogai and Nandurbar. This newsletter brings you the details.

We are planning three issues of this newsletter in a year. If you have any comments or suggestions to improve this newsletter we would love to hear from you. If you would like to contribute to The Spine Foundation, please write to us at spine_clinic@rediffmail.com or contact Anita on 9892101234.

The Spine Foundation is now also active on Facebook and Instagram. You can follow us @ *thespinefoundation*.

The ecology of an itch

An unprecedented medical issue in a tribal village led health workers to conduct a micro-study of the rural area, which taught them invaluable lessons on how to approach a community—its culture, ecology, and the problem itself.

By ANAND BANG

THIS IS THE story of an itch. It is set in the tribal villages of Gadchiroli—a remote, semi-tribal district located in central India.

The year was 2006. Like in every other year, the climate was hot and humid with heavy rainfall, and tribal people from several villages were repeatedly complaining of 'itching'. Though it is a common health complaint, the magnitude of itching, they told us, was unprecedented in 2006.

Usually in this community, itching was caused by scabies; therefore, trained Community Health Workers (CHW) of SEARCH (Society for Education, Action & Research in Community Health), the organisation I was working with, were treating people with standard scabies medications, but to no avail. The cause of this mysterious spurt in itching remained unknown.

What follows is an account of our investigation into this condition and what it taught me, a young medical graduate who had then just started working in these tribal villages, about how to approach a community—its culture, ecology, and the problem itself.

We were curious about why this sudden outbreak of itching, which one intuitively associates with poor hygiene, had occurred, because tribal communities are known to be scrupulously clean, personally and as a community. Hence our team, consisting of myself, several non-medical health supervisors and tribal village volunteers, decided to study a village— Gathanyeli—in-depth to try to 're-search' a community we had known so well, to identify the cause and how we might help it abate.

A CURIOUS CASE OF ITCHING

Gathanyeli is five kilometres from the main road, 15 from the nearest primary health center, and 50 kilometres from the District Hospital. Only a kaccha road provided some connectivity, a road which would invariably be under water during the monsoon. It had twelve houses with a total of 60 inhabitants. The main livelihood was paddy cultivation during the rainy season and selling minor forest produce such as Bamboo, Tendu leaves (Diospyros melanoxylon, the key ingredient in bidis), and Mahua (Madhuca longifolia)—flowers collected from the surrounding dense forest.

We examined all inhabitants present in the village, several of whom were children. Clinically, several morbidities such as Scabies (the most common), skin infection, fungal infection, head lice and dandruff, insect bites (especially mosquitoes), and allergies were present, all causing itching. In fact, most individuals had multiple conditions. So, we were faced with a wide-ranging diagnoses profile. Hence, we decided to conduct an environmental study of all 12 households in order to delve deeper.

WHAT WE LEARNED

Individual behaviour: As expected, everyone was bathing daily, some in fact twice. Almost all were using soap. But because many didn't have private bathrooms, their private parts weren't well washed, especially in the case of women. Men were bathing in the nearby stream, along with cattle, which exposed them to insects. To scrub their bodies, they were using small sharp stones, which caused abrasions, increasing their likelihood of skin infections.

In most houses, the family was using the same hairbrush, transmitting hair lice easily. The linen was commonly exchanged, so scabies would spread rapidly too.

In tribal communities, menstruating women live in huts called 'Kurma', which lack proper shelter, making it difficult for the women to bathe properly. They sleep on a mud floor. Living together for four to five days in a small, unclean, humid hut further spreads scabies and fungal infections.

Households: Tribal houses were mini zoos, with dogs, cows, buffaloes, hens, cocks, goats, pigs, ducks, parrots, pigeons, and sometimes deer living inside. In some houses, we even found bats. Dogs, hens, and ducks slept on the same bed as the family members. This allowed for easy transmission of lice and ticks.

Paddy was also stored in the bedrooms, and the husk possibly causing allergic itching.

The mud flooring and walls allowed water to soak in, and so, especially during the monsoon season, houses remained wet and humid. Most of the rooms had no windows. This was not uncommon in tribal communities because windows provide open access to predators or snakes and were also impractical during the rainy season. The drawback of this though was that it was cutting off any ventilation or natural light.

In all the houses clothes were washed daily using detergent, but in most houses clothes were dried under the shade, shielded from the sunlight. Hence, even clean clothes remained sticky and wet. When asked why they were avoiding the sun, they explained to us that heavy winds would cause their clothes to fly away if left out in the open.

Environment : Further confounding the issue was the immediate environment of these tribal households. The courtyards had small, open water tanks full of algae and dirt, and were the ideal breeding ground for mosquitoes. Needless to say, people complained of constant mosquito bites, leading to vigorous scratching with dirty nails, causing infections. And why were the tanks not emptied daily? Because there was no water source nearby, creating a state of continuous water insecurity.

People also reported that three varieties of vegetables and grass— commonly found in the field and surrounding forest—were causing itching, as was working in the rice fields. But obviously, there was no escaping farming or the forest, given that it was their main source of livelihood.

Not only were there a large variety of causes for the itching, but once diagnosed, compliance with our medication regimen was also an issue. For instance, our CHWs had offered scabies medication— Gamma Benzene Hexachloride (GBHC), but its use was inappropriate. Some were not applying the lotion to their private parts while others stopped using it entirely

because it caused a stinging sensation.

The CHWs also advised people to bathe with hot water after applying GBHC, but because hot water exacerbated the itching, people stopped using it. It became a vicious cycle as GBHC is a cure for scabies, but because of partial compliance with the CHWs recommendations, results were limited. This decreased people's confidence in the CHWs and further impacted their inclination to comply, and increased their complaints.

WE WERE STILL LEFT WITH THE QUESTION: WHAT MADE THIS YEAR DIFFERENT?

First, the rainy season was longer than usual, with the rains being distributed over many months rather than concentrated in a shorter time window. This left no dry days and a constantly overcast atmosphere, which meant that wet clothes did not dry and ponds in cattle sheds remained stagnant with continued mosquito breeding.

Second, the veterinarian doctor serving these tribal villages had disappeared for reasons unknown, leaving most cattle untreated. So, zoonotic transmission of infections from animals to humans remained unchecked.

Third, most of the vegetables that were causing allergic itching had been distributed by the government as subsidised crop some time back, which was now harvested and caused allergic reactions.

Fourth, children were running away from their tribal residential schools and returning home more often that year, probably due to worse than usual administration in these schools. Because they had contracted scabies and lice in their schools, those conditions were now spreading in their villages. In fact, in many homes people themselves traced the start of itching to an index case—the returning child.

Finally, though Gadchiroli had been ravaged by the violent, ultra-leftist insurgency for many years, that year in particular, the Naxalites were organising repeated strikes against even farming. This meant that the communities had to shift their cultivation schedule. As a result, they were more exposed to rain and insects in the farms.

THIS WAS A UNIQUE SITUATION

Instead of only focusing on an individual as a clinical case, we found ourselves trying to fathom the reasons for a condition within the overlying ecology. We had to decipher the interaction between factors including environmental (climate, plants, farms, and houses), human (personal, occupational, societal, habits and traditions), and vector (mosquito and cattle), all of which ultimately converged and contributed to the health challenge. Hence the seemingly paradoxical observation: bathing daily and scrubbing the body, washing clothes regularly, sending children to school, and the distribution of plants by the government were all contributing to itching.

As treatment, we conducted clinics in many villages and demonstrating the ideal method of using GBHC, ensuring its mass application. We also administered antibiotics, anti-fungal, and anti-allergic medication, in addition to GBHC, to treat the several other causes of itching, and not just scabies. Focused health education was provided pertaining to several of the behaviours. The hygiene of the cattle shed was improved and water tanks nearby were emptied, eliminating the mosquito breeding sites.

Soon reports started reaching us that the problem had abated. The following year, the rains were regular, the ultra-leftist movement had stopped calling strikes against cultivation, scabies was aggressively identified and treated, and people in general were more aware of the different causes of itching, seeking treatment. There was no recurrence of the itching epidemic.

FOR ME, THIS WAS A JOURNEY OF DISCOVERY

Though I had joined our team at SEARCH recently, we as an organisation had been working with this community for more than a decade. We thought we knew them—their health, their challenges and their environment—so well. And yet, through this micro-study in a village, many new lessons emerged.

For me, it was also a great first hand insight into the difference between clinical medicine (inside the hospital) and public health (inside the community) as to just how many related and seemingly unrelated factors were contributing to causing something as innocuous as itching. Prima facie, the ideal solution seemed to involve a complete change of tribal lifestyle, ranging from building houses with proper ventilation and sunlight, and cement flooring in neighbouring cattle sheds, to administering an easier-to-use medicine than GBHC, improving governance, and bringing peace in an insurgency affected community.

Of course, solving the problem doesn't mean we must try every single solution mentioned above. I have learned that instead, we must identify solutions based on our abilities, and much like the Gandhian approach of change, focus on evolution and incremental steps rather than a complete revolution.

Looking back, I recollect the vivid memories of those tribal children, initially fearful, full of lesions and pain, but joyously coming to meet us just a few days later. In serving them, I received the answer to the question: Whose Am I?

ABOUT THE AUTHOR

ANAND BANG is a medical doctor and public health practitioner. He works with the Society for Education, Action & Research in Community Health (SEARCH), a non-profit working in the Gadchiroli district of Maharashtra.

A SHORT HISTORY OF THE SPINE FOUNDATION

Dr Shekhar Bhojraj, Founder President of the Spine Foundation shares with us the journey of the Spine Foundation and the way forward from here.

Trustees of the Spine Foundation. Standing (from left): Dr Premik Nagad, Dr Abhay Nene, Dr Raghuprasad Varma. Sitting (from left): Dr Priyank Patel, Founders Dr Shekhar and Dr Shilpa Bhojraj, Dr Sheetal Mohite.

THE SPINE FOUNDATION is not an organisation, a structure or a building. It's an idea, a dream, a vision; of delivering top-class, state-of-the-art, spine care to poor patients, both in urban and rural India.

When I started the super-speciality unit of Spine Surgery in 1988 at Mumbai's KEM hospital, spine surgery was a very specialised branch of orthopaedics that could be afforded only by a privileged few. It required a lot of specialised equipment and dedicated surgical training which was only available in the US and Europe in the 80s. I spent a lot of time abroad to acquire these skills and knowledge before I came back and started the first spine clinic in India. As I was serving at the KEM Hospital, a municipal general hospital that catered mostly to the poor I had to alter all the high-tech techniques I had learnt, to suit the very poor. I realised that while this was the super-speciality of the future, it could best serve our countrymen only if it reached the grassroots of our country. So while the concept of the foundation started germinating in the late 80s and gestated through the 90s, the Spine Foundation was finally born in 1998.

In the initial years, the Spine Foundation started off by just financing the investigation and treatment of poor urban patients. Over the years it has evolved into a huge campaign reaching out to the underserved and inaccessible population of rural and urban India.

REACHING WHERE NO SPINE CARE HAS REACHED BEFORE.

One of our first efforts was established in Gadchiroli, in interior Maharashtra with a mixed tribal and non-tribal population. It started with setting up spine diagnostic clinics in remote villages here. These clinics were conducted once in 2-3 months for many years and eventually, a big patient population was examined and evaluated for possible spinal ailments. We realised that 80% of these problems were not very serious and they could be easily managed by good advice, counselling, simple medication and a bit of rehabilitation advice. Only 20% of the cases required further investigations in the form of X-rays or MRI scans. Systems were set up in Gadchiroli where these 20% patients were not only examined but also investigated and eventually identified for possible surgery. We set up surgical camps in these interior areas where we offered simplistic, effective surgical procedures.

Over the past 10-15 years a large number of such patients have not only been examined and treated with rehabilitation and medications

but a large number have also been investigated and operated on. At present we perform close to 20 spine surgeries every 3-4 months in Gadchiroli completely funded by the Spine Foundation.

This model proved so successful that the Government of Maharashtra approached us to replicate the Gadchiroli model throughout the state. We adopted four medical colleges in interior Maharashtra to set up similar Rural Spine Care Centres (RSCC). This was done a Ambajoagai, Akola, Aurangabad and Dhule medical colleges. We started spine surgery and evaluation camps at these medical colleges. We reached out to nearby rural hamlets and villages so that these patients could be drained into these four medical colleges. Soon a large number of patients started getting the benefit of this service of not only evaluation and treatment with medicines and rehab but also identifying cases that needed surgery. Most of these centres were never exposed to advanced and effective spine surgery. Being medical colleges it became easy to train young orthopaedic surgeons in these colleges to become enthusiastic members of the foundation and continue the good work under the doctors of the foundation.

In areas where there are no medical colleges, we turned for help to the Civil and district hospitals. We started this program in two centres, one in Ratnagiri Civil Hospital and the second one in Nandurbar Civil Hospital. Though these government-run municipal hospitals lacked a proper orthopaedic department, their enthusiastic orthopaedic surgeons who joined hands with the foundation to replicate the Gadchiroli model in their centres made it up. After Maharashtra, we branched out and started going out to remote areas of other states such as Gujarat, Tamil Nadu, Jharkhand and Uttaranchal.

CARING FOR THE URBAN POOR.

We soon realised that much as the poor rural population with spine problems there was also the need to serve the urban poor. In 2009 the Spine Foundation joined hands with the Municipal Corporation of Greater Mumbai and started its centre for the urban poor at VN Desai Municipal Hospital where we offer free spine care as well as advanced spine surgery. The Spine Foundation is working to start similar satellite activities and spine care centres all across the country.

One important lesson that we learnt is that we can't wait for the patients to come to us, we have to go to them. Poor patients may not seek early advice as they do not have access to good doctors or the money to pay for them. So they carry on with their disabilities and pain till they reach a state where they can no longer function. So it's important to reach out to these patients and offer help at no cost so that these ailments are picked up in an early stage. If you wait for these patients to reach us, they will soon develop complications that would then, unfortunately, will need surgery and other complex procedures which are not only difficult but expensive.

Illustration by Dr Shekhar Bhojraj.

THE ENGINES OF THE SPINE FOUNDATION.

The Spine Foundation is not a one-man show but a dream shared by the seven trustees of the foundation, all of whom run their private practice in Mumbai from multiple prestigious hospitals such as Lilavati, Hinduja, Breach Candy, Global, Apollo, Reliance and many more.

We also mentor the Spine Foundation Fellowship Group. This is a fellowship program where we select three spine fellows, who are qualified orthopaedic surgeons who wish to pursue spine surgery in future. In this 24-month program they are trained in all the latest techniques in spine surgery. By the time they finish the two-year fellowship they are also independently in charge of the spine patients at the VN Desai Municipal Hospital. All along these two years, they are sensitised to the philosophy of social spine care and they come for all the rural spine surgery camps. So when they are finished with the Spine Foundation training at the end of two years they are not only ready to have their own spine surgery private practice as their professional source of income but are also committed to Spine Foundation activities. So in the last 20 years or more we have 3 new fellows coming in every two years and hence we have by now 40-50 such trained spine surgeons and this number is increasing each year.

Finally, I would like to mention the role of the Rehabilitation Team of India and its chief Dr Gaurish Kenkre who is a senior rehabilitation and physiotherapist consultant in Mumbai. He is now an integral part of the Spine Foundation. He is invaluable to the foundation since 80% of spine practice needs rehabilitation, counselling and physiotherapy. This is entirely taken care of by the Rehabilitation Team of India without whom this great work is impossible.

How do we fund all this activity of investigations, treatment and surgeries? These are all major expenses. So a lot of the funds of TSF come from donations from philanthropists and people who are impressed with the Spine Foundation's work. A lot of the funding comes from the CSR funds of the corporates. It also comes from the doctors we treat because we do not charge for the treatment and surgery of the medical fraternity. Instead, we encourage them to donate to this cause.

FUTURE PLANS AND DREAMS.

However, now the aim is to link donors to projects. For example, one donor will take up the Gadchiroli project, while another will take up VN Desai. The donor will donate to the one time expenses like equipment but also pledge to cover the running cost of that project.

The Spine Foundation is trying to link up the various effective central and state government schemes, which are in plenty. A case in point is the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana of the Government of India or the Maharashtra government's Rajiv Gandhi Jeevandayee Arogya Yojana that has been renamed as Mahatma Jyotiba Phule Jan Arogya Yojana. Other states have their own government health insurance funding policies and arrangements. The Spine Foundation encourages the poor patients to avail of these schemes. We are trying to get away from collecting money and spending by directly linking funding to patient care. So slowly the Spine Foundation will become a planning body to organise such services and provide expertise rather than collect funds and spend them. And fill in the gaps in places where government schemes are not available or where we need equipment and some projects that do not have a pledged donor. So funding is important but slowly we are trying to get into planning and linking of funds directly to projects rather than collecting and spending ourselves.

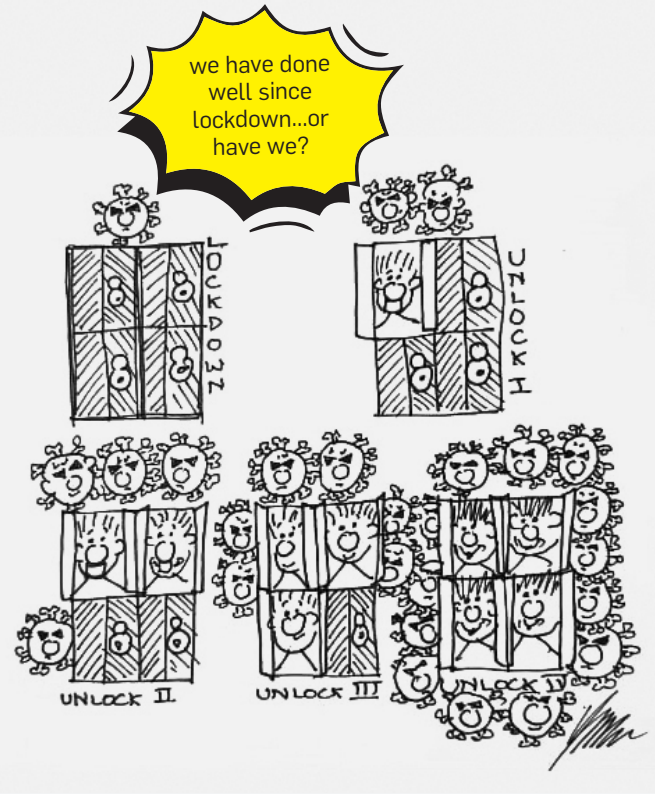
The final aim of TSF is to start projects and make them self sustainable not only from the point of view of the money by linking schemes and donors but also empowering the local physicians and orthopaedic surgeons by teaching them to deal with these problems themselves. So we try and identify orthopaedic surgeons and physicians who are interested in running the show. We get them involved in our system. We get them to Mumbai and put them in our training program and empower them and send them back.

Finally, a word about the dream project called the Centre for Musculoskeletal and Spine Care of Rural India. This is a centre we are setting up in Gadchiroli at SEARCH that's led by Padma Shri Dr Abhay and Dr Rani Bang, assisted by their sons Dr Anand Bang and Dr Amrut Bang. We not only have advanced surgical care available here, but we also have a huge network of community health workers who go to the villages and are trained to treat minor spine ailments. Moreover, they can identify patients who need further evaluation or surgery. For patients needing rehabilitation, we are trying set up mobile physiotherapy units and training the health workers to deliver this service at the doorstep in these rural villages. So there's a lot of work to be done and our hands are strengthened by all the well wishes, the donors, the doctors the fellows, the rehabilitation units, and the good wishes of everyone.

DR C BALAKRISHNAN

Dr C Balakrishnan is a practicing rheumatologist of repute, with a keen interest in music and an avid cricketer too. He has worked with The Spine Foundation at Gadchirolli (research project) in the past and committed to be with us in the future. He has been doing a cartoon a day to lighten the dark mood this pandemic has spread. Here he shares with us a few of his creations.

On day at Unlock IV...



One day at the neurologist...