Newsletter of
The Bombay
Orthopaedic Society

Issue 6 (Vol 2)
August 15, 2022

CADENCE

CADENCE

Quarterly Newsletter of the Bombay Orthopaedic Society

Issue 6 (Vol 2)
August 15, 2022

The key to immortality is first living a life that is worth remembering - Bruce Lee

From the desk of the President

Dear Colleagues,

On behalf of the Executive Committee and the Science Committee, we would like to invite you to participate in the 57th WIROC Max 2022 to be held between 29th to 31st Dec 2022 to be held at the JIO World convention center, Mumbai.

JIO world convention center is the Ultra-modern, largest, and best convention center in India

The WIROC is the largest platform for Indian Orthopaedic Surgeons to exchange knowledge and experience within India and also with colleagues from other parts of the world.

This year our theme is **"Motivate, Innovate, Integrate - Redefining Orthopaedics"**

Wiroc is known for its academic excellence. Our wish is to develop an inspiring scientific program and to energize participants through presentations, debates, and discussions on the day-to-day burning issues.

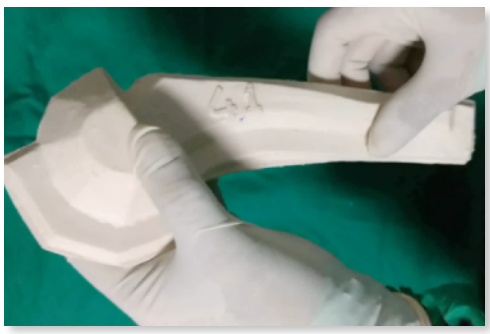
Topics such as 3D before surgery, 3D printing for patient-specific implants, robotics, biological implants, and technological advances in diagnostic equipment will be at the forefront of this WIROC Max 2022

Our efforts are to redefine Orthopaedic & Traumatology.

We are looking forward to meeting you all at WIROC Max 2022

Dr Rajesh Gandhi

Hon. President, BOS



THR infection

By Dr. S.S Mohanty

Innovative Silicone Spacer for THR infections

>> page 3

3D printing

By Dr. Vaibhav Bagaria

My innovation journey and lessons I learnt from it.

>> page 4

By Dr Swapnil Keny

Editorial - Motivate, Innovate, Integrate

>> page 5

INFECTION IN HIP ARTHROPLASTY

Necessity is the mother of invention!

Dr Subhranshu Mohanty

How Orthopaedic surgeons be different from this law of nature? Infection remains the most devastating problem for surgeons since the inception of surgical procedures, more so for Orthopods. The classic dictum says, once osteomyelitis, it is osteomyelitis, "it remains lifelong, only the red marrow gets replaced by black ingratitude. When a Total Joint Replacement gets infected, it remains a surgeon's nightmare as it is a high-cost surgery done to improve the lifestyle of a patient.

The infection makes a person and family economically and psychologically weaker too. Multiple antibiotics, sometimes multiple operations lead to a devastating state of mind and that needs to be taken care of, especially in a public hospital. There was a thought process that how to achieve the maximum outcome utilizing the least of resources.

> **... I came across a material called polysiloxan, a 100% medical-grade silicone material, which was autoclavable and reusable....**

Most of the infected joints require two-stage reconstruction. In the first stage, an antibiotic cement spacer is inserted for the local release of antibiotics and to maintain the soft tissue envelope after meticulous debridement to restore the function of the patient. The conventional method was crude and available imported templates were very expensive for a single use costing INR 25,000/- to 30,000/-. Moreover, it was not suitable for all sizes of the acetabulum, especially in short-height Indian females. The neck shaft angle was fixed and hence offset was not adjustable. Availability in every place in India was an issue as well.

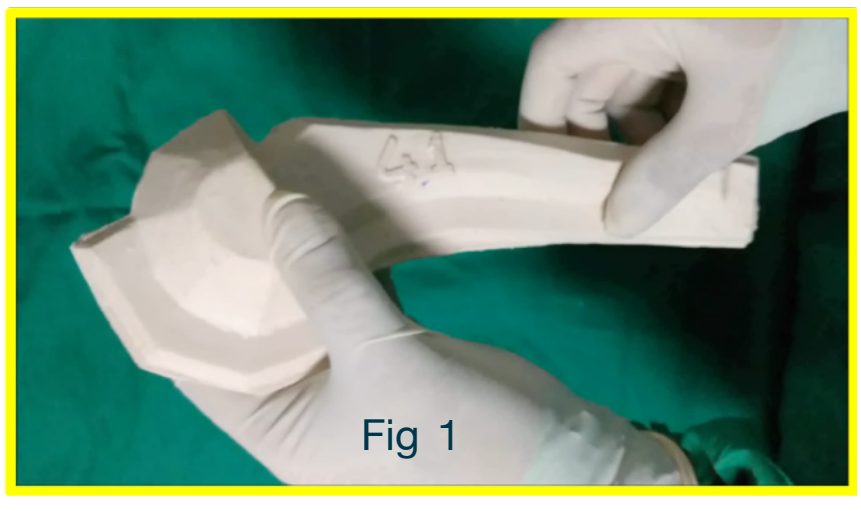


Fig 1

I came across a material called polysiloxan, a 100% medical-grade silicone material, which was autoclavable and reusable. Moreover, it was malleable, soft material, and completely mouldable (Fig.1). This was the advantage that we could use to prepare the templates of different sizes, that could fit all sizes of acetabulum and head of the femur. Five different sizes were prepared where, the diameter, length, offset and version could be adjusted and hence offered complete modularity. It provided rotational stability and could be removed easily during the second stage (Fig.2). It could incorporate locally manufactured Ilizarov rod, K-nail, or rush nail to be used as its endoskeleton (Fig.3). The biggest advantage was that it was autoclavable, reusable more than 100 times before its disintegration. Hence the cost could come down to INR 500/- to 600/- per spacer preparation. The infection control success rate was nearly 92% (Mohanty et al, Ind J of Orthopaedics, 2013). At present, it is available from local manufacturers and could be procured all over India.

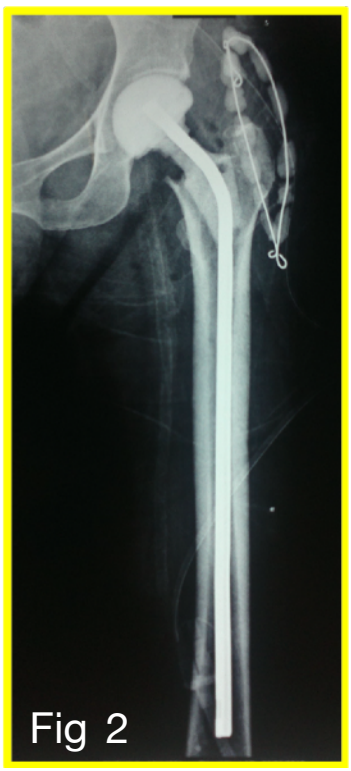


Fig 2

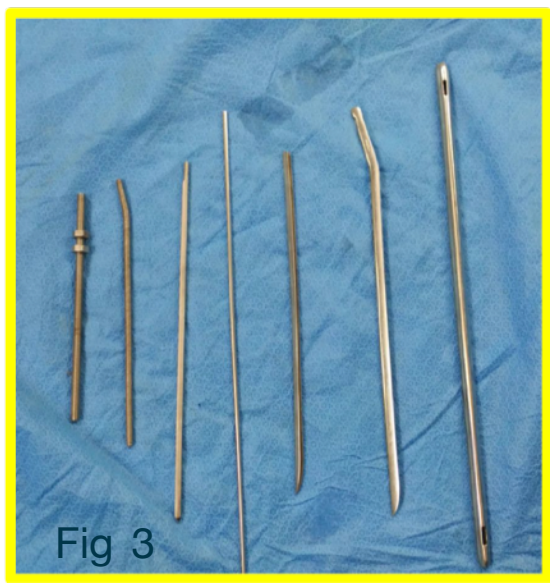


Fig 3

Now we are in the process of preparing similar templates for infected knees. But Knee joint is very complex and it involves a different manufacturing process as well. It is still at the trial stage and may see the success in near future.

Prof. Shubhranshu S Mohanty
MBBS, MS(Orth), FRCS(Edin)
FICS, FASIF(Swiss), FACS (USA)
Professor & Unit Head,
Seth GS Medical College & KEM Hospital, Mumbai.
Past President, BOS

3D PRINTING IN ORTHOPAEDICS

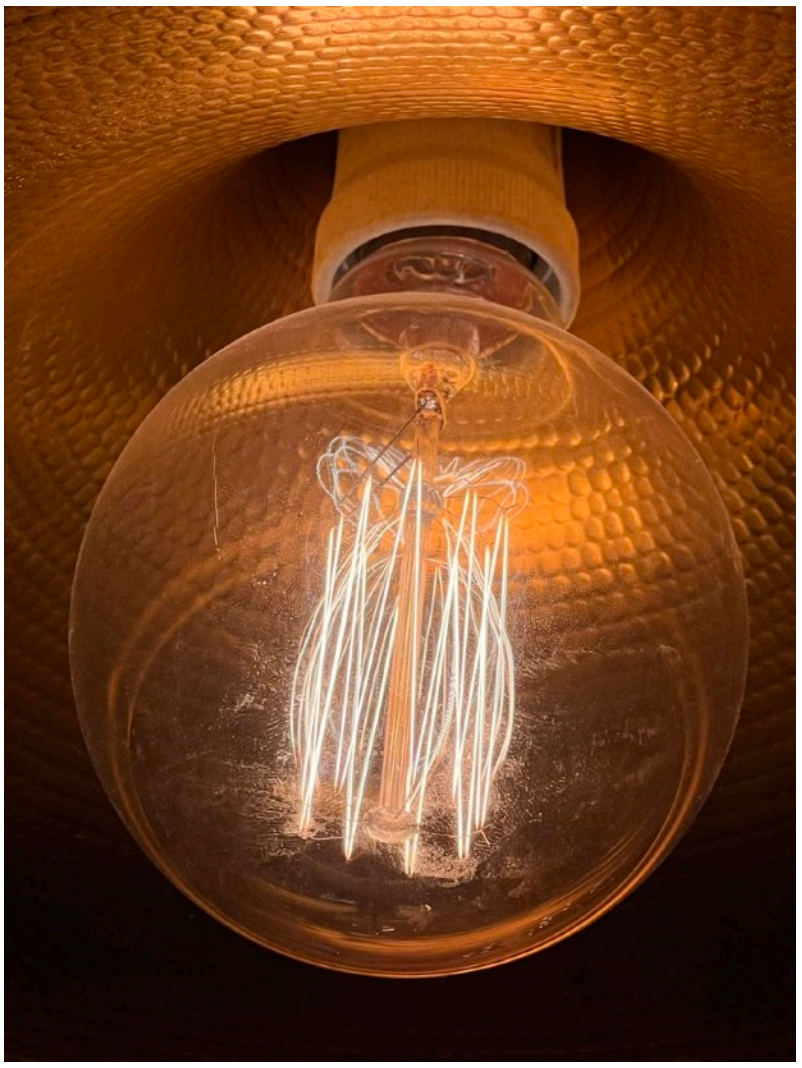
The essence of Innovation

Dr Vaibhav Bagaria

The essence of innovation is often not whether you are proud of what you have created. It's whether you are proud of what you have become in the process. Success highlights our efforts, our patience, and our talent but our relationship with the process reveals our values. This relationship is not just with the work we do, and the people we collaborate with, but also with ourselves. Unlike, what many people believe - innovation is not a single event but rather a culmination of an arduous process of discovery, engineering, and transformation.

I vividly recall how 18 years back, a 15-minute coffee interaction with one of my acquaintances on the lush beautiful campus of VNIT engineering college at Nagpur on a rainy day led to the integration of 3D printing in our practice and led to many papers and patents in the process. It was the early days of 3D printing – in fact, it was not even called 3D printing (the more glamourous name now) but was called Rapid Prototyping. During the course of the discussion, the engineer acquaintance of mine bared his frustration for not being able to understand the design of a part despite repeated attempts, and half-Jokingly I offered to do a CT scan of that part. That casual mention led to the discovery of the fact that industrial CT Scans for such purposes are indeed available and widely used in Germany by automotive companies like Mercedes and BMW. We then proceeded with performing the CT of the part and 3D printing his design. And lo and behold, that sparked in us an idea to 3D print all our complex pelvic acetabular and periarticular fractures from the CT Scan. There was no looking back as the technology helped faster smoother execution and proved to be a game changer for educating the fellows and residents. Today the technology has improved dramatically and we have been able to contribute to scientific research with over 500 citations and a couple of patents in the field. All this could happen as we were open to ideas, and open to collaboration and Lady Luck chose to shower her blessings on us ;-)

Anytime we sincerely want to make a change, make a true difference, we must raise our standards! The way to get started is to quit talking and start doing. **Enthusiasm is common but endurance is rare says, Angela Duckworth.** Here is my checklist of traits of what it takes to be a good innovator.



Traits of a good innovator:

- Seeing the unseen
- Foresight – Anticipate the Next steps
- Focus
- Belief
- Persistence
- Optimism
- Calmness
- Hard work
- Grit
- Seeing the Finish Lines
- Being Present

The best time to start was yesterday and the next best is today, so let's start our journey of innovation today with renewed vigor. Remember – Not all the stars belong to the Sky, some are needed here on Earth! Collaborate, Innovate, Excel…

Dr. Vaibhav Bagaria is the director of Orthopedics at Sir HN Reliance Foundation Hospital & the president – SICOT India. Views are his personal

MOTIVATE, INNOVATE, INTEGRATE

Redefining Orthopaedics

Dr Swapnil M. Keny

As India completes its 75th year of Independence, we the Indian Orthopedic fraternity lie on the cusp of a neo-renaissance. While the country is evolving into a force to reckon with on many international forums, it is now time for Indian Orthopedic Surgeons to prevail and prosper in the world of academic Orthopedics. Though a few Indian surgeons are well respected internationally, most, despite their accomplishments and academic contributions remain far from the recognition they deserve. It is hence, not incorrect to assume, that there are certain lacunae in the system which need to be looked into and mended and certain creases need to be ironed out.

It is my belief, just like many others from my generation, that we need an extensive overhaul of the existing academic system to bring forth this renaissance. There are more than one ways to skin a cat, but that which seems most appropriate in contemporary times involves 5 virtues that I believe will lead to this change. They are:

1) Self Reliance
2) Self Sustenance
3) Transparency in leadership
4) A Policy of zero tolerance for corruption and one-upmanship
5) Encouraging Innovation

Self-Reliance: To date, many post-graduates pursue fellowship training abroad. The Foreign Fellowship Certificate is still considered a ‘mark of approval’ for pursuing a professional career in orthopedics, both in the public and private sector, in India. The Nation’s call for an Atmanirbhar Bharat needs to also percolate down to orthopedic training centers and teaching institutes. With a plethora of patients suffering from innumerable orthopedic conditions, India can certainly provide comprehensive training opportunities to its young trainees. Institutions, Associations, and Individuals who are at the helm of administrative academics need to sit back, think, and get to the drawing board to chalk out a concrete plan to prevent this brain drain of the pool of skill and talent, so that the next generation of orthopedic surgeons, don’t need to relinquish their resources on seeking training abroad just for the sake of approval

Self Sustenance: We often seek validation for our methods and techniques, from peers and colleagues by presenting our work at meetings and conferences. However, in the larger scheme of academics, the value of anecdotal evidence is negligible. The order of the new world is the ‘ Power of Peer-Reviewed Publications ’ and it's easier to achieve than it's believed to be. Determination, discipline, and diligence are the hallmarks of a successful all-around orthopedic surgeon in today's era who is proficient in clinical care as well as academic acumen. Self Sustenance by peer validation and peer recognition is certainly the road ahead

Transparency in Leadership: We the people, need to invest in our leadership. A fraternity can only rise if we choose our leaders, in an unbiased manner. A leader who has a solid academic record, whose work has received peer approval, who is non-discriminatory and not a self-seeker, and who has an unblemished administrative record in the previous offices held, has to be a natural choice. Discrimination based on race, region, and religion is an intangible option when choosing leaders for the office of academics.

Zero Tolerance to Corruption and one-upmanship: Societies, associations, and organizations need to fortify their constitutions so those who use the loopholes in the system can be categorically contained from using indiscriminate power and brute force. Such acts of shameful autocracy need, not only to be condemned but also vetoed so that the principles of democracy are upheld. The infrastructure of corruption, both ethical and financial needs to be cleansed by nipping it in the bud and the seed of nepotism needs to be tactically disposed of appropriately before its ever planted.

Encouraging Innovation: Though most societies and associations now encourage innovation in orthopedics, as a part of their scientific commitment to excellence, the grants and funds to conduct such research remain limited, marginalized, and abysmally meager. Hence research needs to be incentivized. Incentives like research credit points, research-based appraisals, and recognition of basic, as well as advanced research, maybe the key steps towards the integration of the art and the science of the specialty, which will truly redefine orthopedics in the times to come.

We, as a fraternity hold both, the power and the responsibility to transform orthopedics for the future generation by parametric redefinition.

Dr. Swapnil Keny is a Pediatric Orthopaedic Surgeon at Sir HN Reliance Foundation Hospital and Apollo Hospital, Mumbai.

Follow him on twitter: @SwapnilKeny

Email: peadortho@gmail.com

WIROC MAX 2022

Save the Date - 29th to 31st Dec 2022

MOTIVATE, INNOVATE, INTEGRATE - REDEFINING ORTHOPAEDICS is the PRESIDENTIAL THEME this year. Mastering new challenges in Orthopaedic and Trauma care for the Indian population will require a new set of skills and solutions. Keeping this in Mind our scientific committee has drafted a programme that delivers what is needed and more.

Highlights of the WIROC MAX 2022 includes, Complex Case discussion with an immersive experience , Tailor made sessions for the delegates , Debates about Controversies we thought were dead, Deliberations about Gold Standards or not, Eponymous Lectures, Impact of Newer Medicolegal and Financial norms, Practising in the era of the NMC and GIPSA, Career and Financial Planning for the Early career, Mid career and the late Career Orthopod, Newer diagnostics, Machine learning, Robotics, 3D printing, Virtual Reality Training, Artificial intelligence and Machine learning. Handling Social Media and Life beyond orthopaedics including a sessions on good living , treating yourself to the occasional Luxury and adding value to your time and your personality. All this by the Orthropods for the Orthopods

Click Here
TO REGISTER!

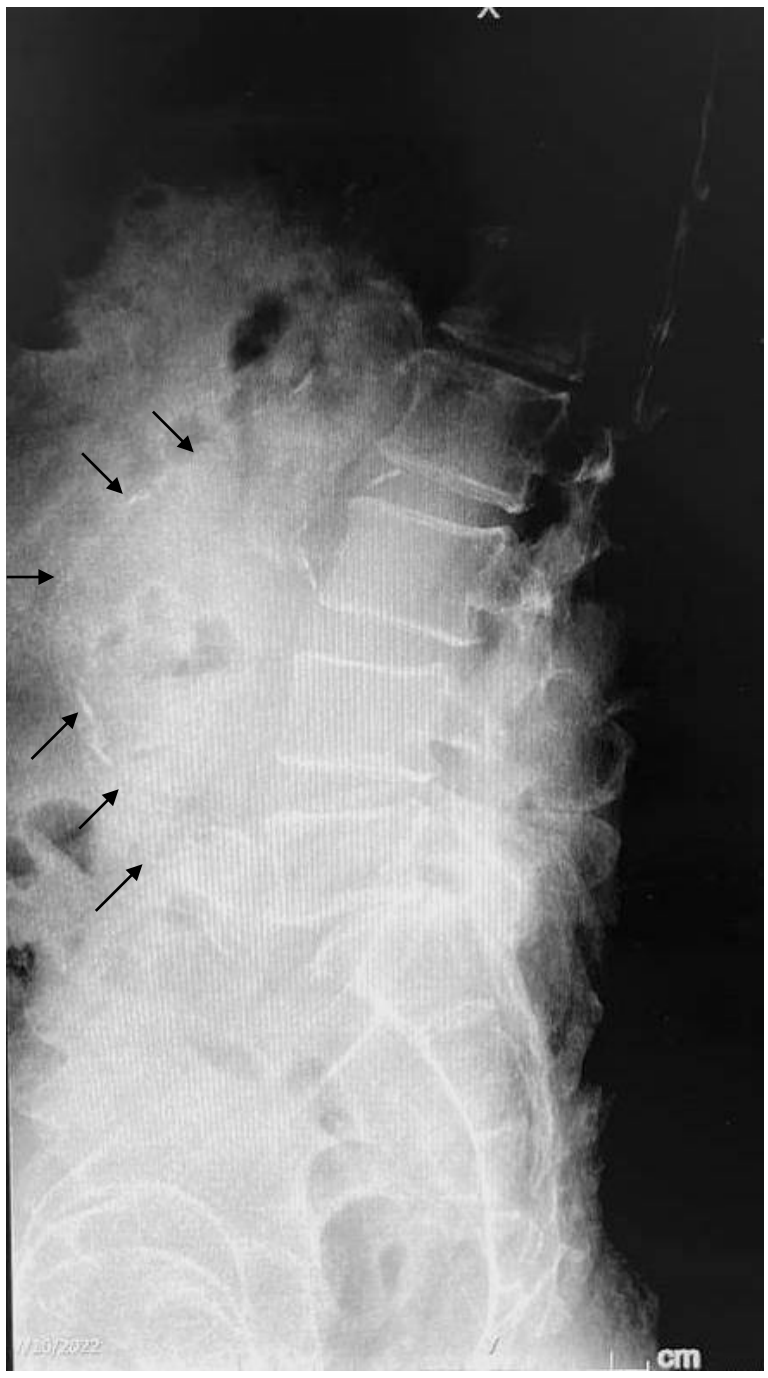
We the Organising Team of WIROC MAX 2022, invite you for the WIROC MAX 2022 to be conducted on 29,30, 31 December 2022 at Jio World Convention Centre BKC Mumbai.

INTERESTING CASE

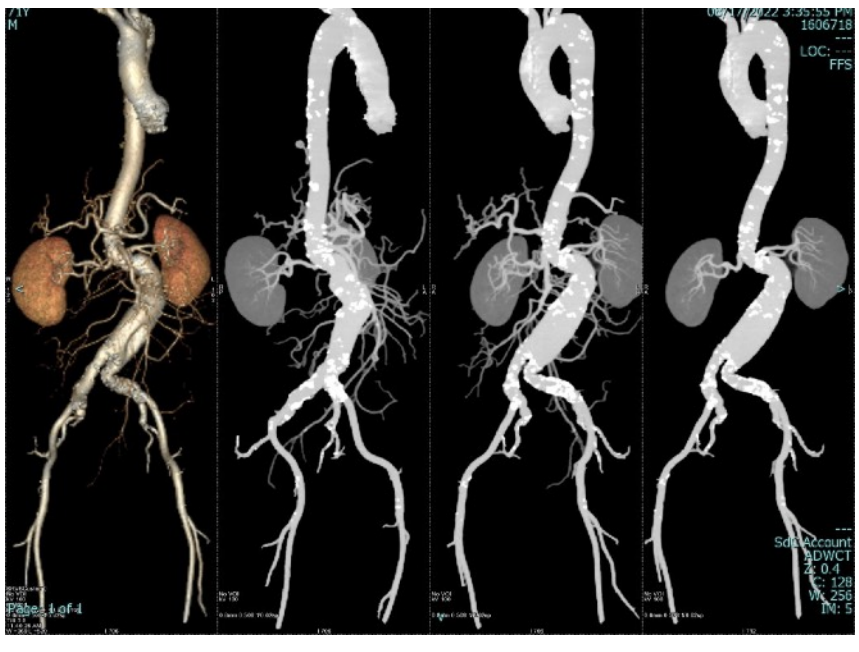
NOT ALL BACK PAIN IS SPINAL !

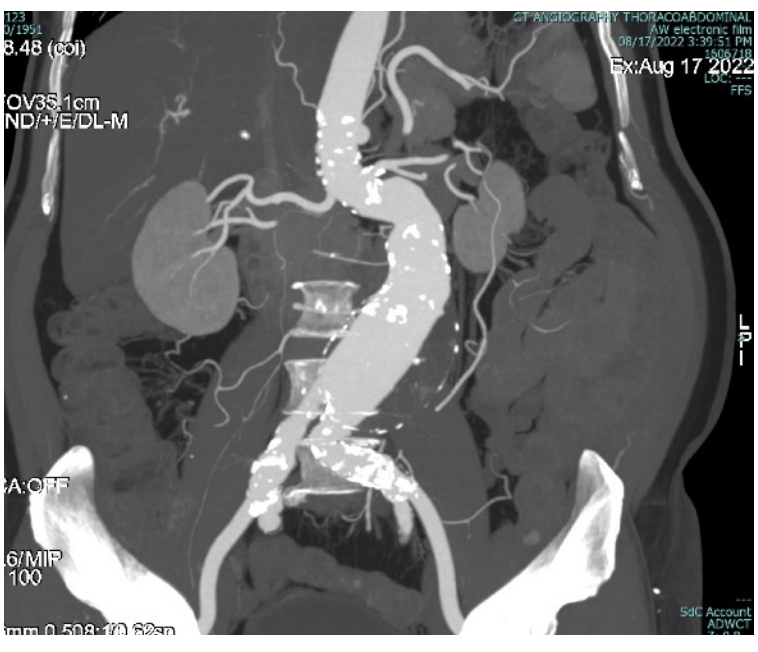
Dr Shaswat Shetty and Dr Rajveer Chinoy (PD Hinduja Hospital, Mumbai)

History: Patient is a 65/M k/c/o **hypertension** came to clinic with **lower back ache since one week**. Pain is localized, **continuous** and dull aching, **un-related to posture**. No H/O any trauma, lifting weights or any untoward movement in spine. He has no contributing factors other than the fact that **pain is persistent and subsides with over the counter medications**. He also states he never had any issues in his lower back and is fairly active in his lifestyle. On inspection, he shows normal gait, central head position, shoulders levelled, no abnormal swelling, fullness, spasm or bedsores. On examination, absent local tenderness, no warmth, distal palpation of dorsalis pedis and post tibial artery were felt well. **Movement wise, Flexion-Extension was good with decent lateral flexion as well**. Neurologically, conscious, oriented, No wasting of muscles in any group, normal tone, decent power of bilateral lower limbs. SLR's were 90 degrees free with normal reflexes. He was advised X-rays of lumbar spine AP and lateral views. Lateral view showed a **calcific mass anterior to lumbar spine**, indicating a possible abdominal aortic aneurysm which required further investigation.



CT angiography of thoracoabdominal aorta was done **s/o fusiform dilation of the descending thoracic aorta with marked dilation** and wall thickening seen in the suprarenal and juxtarenal abdominal aorta. Calcific plaque is also seen near the origin of celiac artery causing mild to moderate narrowing. A large partially thormbosed aneurysm is seen arising from the infrarenal abdominal aorta, 2 cms distal to the origin of the left renal artery. **Dissecting flap is seen** distal to left renal artery extending upto the origin of aneurysm. The maximum circulating component of aneurysm measures 3.8 x 3.4 cms. The patient was planned for urgent surgery by the vascular team.





Lessons learnt:

1. Not all back pain is spinal in origin
2. Serious non spinal pathologies can present to orthopaedics
3. Abdominal aneurysm, kidney stones, pylonephritis, pancreatitis, duodenal ulcers can present as back pain.
4. Missing these pathologies can have serious consequences

Subscribe!

EDITORS

Swapnil Keny

Kshitij Chaudhary

Arjun Dhawale

BOS Secretary

Neeraj Bijlani

COVER and BACK PHOTOGRAPHY

Mahesh Kharde

BOMBAY ORTHOPAEDIC SOCIETY

C/o Vama Events Pvt. Ltd.

Office No. 4, Gr. Floor, Anmol C.H.S.,

Sakharam Keer Road, Parallel to L. J. Road,

Shivaji Park, Mumbai – 400 016

91 22 2438 3498

91 22 2438 3499

conferences@vamaevents.com