

Newsletter of Indian Arthroplasty Association

Welcome to the Silver Jubilee Year of the Association !



IAA SUMMER 2020

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From the Desk of our President

Dear Friends,

"Our enemies define and shape us.

Who we choose to fight defines our interests and our values...

The way we choose to fight shapes us, physically, mentally and organizationally."

This year our invisible enemy has shaped us in many ways, in our vision and activities. We thought of some plans when our new Executive Committee took over at IAACON, Mumbai; but now doing something else to adjust to our fighting against this pandemic.

We started with a series of webinars in order to discuss the finer technical aspects in arthroplasty surgery and it was a grand success. We completed 5 weekly webinars in different aspects and still counting. As we are entering the phase of Unlock 1.0, we shall hold it once or twice a month on focused topics. You can watch these anytime through our You Tube link <https://www.youtube.com/channel/UCMNXXVs7Bqv3tVykj44ZwROg/live>.

We have designed our new website- www.indianarthroplastyassociation.com. Now eligible orthopods can become members by paying online membership fees. This is due to tremendous efforts of Dr. N. Rajkumar from Coimbatore. Hence, I insist all of you to become members as you are our strength to build a better association for the future.

This is our first newsletter this year. We have given guidelines for DVT prophylaxis for Joint Replacements based on literature review. As esteemed members of this august association I invite you to contribute for this newsletter in the form of case discussions, guidelines for day to day practice of arthroplasty etc. I appreciate the efforts of Dr. Debabrata Padhy & Dr. Krishna Kiran for giving its final shape.

We have shifted our Annual Conference IAACON 2020 to next year and it will be held at Coimbatore itself in 2021. Soon we shall be announcing the new dates. We have written to all our members to give their opinion till 31st May 2020 for continuation of the present Executive Committee to next year as a special consideration due to the pandemic. None of our members had any objection and on the contrary confirmatory mails were received from Dr. Deepak Dave from Ahmedabad and Dr. Chandrasekhar Yadav from Delhi in this aspect. I thank you all for your unstinted support in this matter.

Now as the Lockdown 5.0/ Unlock 1.0 is taking place, I wish you a healthy, safe and long life for years to come. Please send your suggestions in this email- drssmohanty@hotmail.com.

Jai Hind! Jai IAA!!

Best regards,

Prof. (Dr.) Shubhranshu S. Mohanty



Editorial

This edition of the newsletter of the IAA has come up after a long gap. This has been possible because of the efforts of the executive committee of the association especially of our President Dr SS Mohanty. The prevailing Covid crisis has shown us a seemingly endless journey to tide over and be the winner. On the background of this crisis, this newsletter has a tinge of Covid along with some really useful and some spicy stuff to make it interesting. This edition will be a full e version. Hope this becomes a regular event and the members enjoy reading this summer 2020 edition.

Dr Debabrata Padhy
Bhubaneswar

Reaching for the Horizon

Arthroplasty Beyond 2020...



Dr Bharat Mody, Vadodara

When any generation claims that it is reaching for the horizon, it would perhaps be important to remind ourselves of the following quote by one of the greatest of human intellects to grace this planet: *"If I have seen a little further, it is by standing on the shoulders of giants!"* (Sir Isaac Newton)

The era of true modern total joint arthroplasty started with the contributions of Sir John Charnley, aptly referred as the father of modern arthroplasty, during the 1960s and early 1970s. 1970s & 1980s has been described as the golden age of modern arthroplasty, offering a high degree of predictability of good outcomes and reproducibility. A wide range of advancements and new ideas were produced in the following two decades some of which were passing clouds, which did not bring rain, whereas others brought not only rain but also bountiful harvest!

I propose to give ourselves a bird's eye view on these "clouds" during rest of the article:

- **Computer Assisted Surgery (CAS):-** This technology was introduced in Arthroplasty during the early 90s onwards. It evoked significant enthusiasm across the arthroplasty fraternity. Whilst it has been clearly demonstrated that it adds accuracy of bone cuts and implant positioning, the gains in clinical outcomes were not to the extent that was anticipated vis-à-vis the high cost involved. The author expects that whilst the initial adrenalin rush for CAS as an instrument of accuracy and marketing has subsided, it has been able to harness the commitment of a definitive number of surgeons across the world which will ensure that it will be around for quite some time. This is even truer due to the arrival of robotics in arthroplasty.

- **Minimally Invasive TKA & THA :-** On this topic, I am reminded of a quote from Shakespeare's classic Romeo & Juliet, in which if my memory serves me right, the bard has said "... 'tis not so deep as a well, nor so wide as a church-door, but 'twill serve..." "Minimally Invasive" concepts were introduced in the practice of Total Knee Arthroplasty (TKA) about a decade back, however it soon faded away as the realization percolated that an experienced surgeon does not create an incision any more than what is ideal for a given case. Direct Anterior Approach (DAA) in THA is at present being looked upon as significant progress. In the author's opinion even this

will eventually fade away for the vast majority of surgeons as it requires too much effort in the form of specialized operation tables and instruments while risking a higher complication rate during the learning curve.

- **Patient Specific Instrumentation (PSI) in TKA:-** This also seems to be a passing cloud! The lead time and extra effort required during the pre-operative stage is inconvenient. It precludes additional steps such as revision of a bone cut which may be a standard part of TKA surgical practice. PSI will eventually be judged as a fad rather than the future.

- **Biomaterial Advancements:-** This is probably the most lasting advancement in arthroplasty made during the last two decade. The introduction of moderately/highly cross-linked polyethylene, anti-oxidant added polyethylene combined with improvements in manufacturing and packaging of polyethylene has made very positive impact on the long-term survival of the insert. The use of Cobalt-Chromium in tibial trays has allowed a high degree of polishing and improved capture mechanisms have addressed backside wear. Use of ceramic, and similar material like oxinium have reduced the frictional wear. In the author's opinion, research in the field of biomaterial is going to be the most productive resource deployment in the field of arthroplasty.

- **Hard on Hard Bearings:-** Combination of Metal on metal and ceramic on ceramic was capable of delivering on its promise in theory, but in practice it was a case of Paradise Lost! This bearing couple proved to be too technique sensitive allowing for an extremely tight margin for error. It is therefore destined to be restricted to its use only in the hands of very few surgeons who are capable of hitting the bull's eye every time.

- **Large Head in THA:-** The improvement in polyethylene characteristics have allowed the use of larger head sizes. Typically, 32 mm or larger head sizes are now possible to be deployed in a majority of cases, which is here to stay in the long term.

- **Short Stems in THA & Surface Replacement in Arthroplasty (SRA):-** A plethora of short stem designs started with neck conserving principle were technique sensitive and were associated with higher failure. In the author's opinion, this is also a passing cloud. SRA offered true bone conservation but the problems associated with hard on hard bearing couple sabotaged its widespread adoption. It remains to be seen whether it will make a comeback in future.

- **Robotics in TKA & THA :-** The last decade has seen the advent of application of Robotics in surgery, including arthroplasty. At present, the high cost associated with it combined with other limitations in its intra-operative use make it a subject of evaluation rather than widespread adoption. It is an added layer on the established platform of CAS. It certainly offers some specific advantage e.g. preparation for acetabular cup placement. In the author's opinion it will be an area of active interest at least over the next decade.

- **Future Areas of Focus:-** The real game changing opportunity in arthroplasty are probably in the field of biomaterials, diagnostics related to infection, measures which mitigate infection, perioperative pain control and similar associated areas rather than just surgical techniques or implant geometry. Frontline research is being done in each of these above areas e.g. implants with special coatings which

would prevent bacterial colonization are being developed, Next Gen Sequencing and similar methods are being focused upon for dependable and early diagnosis of infection in arthroplasty. Further development of specialized implant products which help in revision arthroplasty situations such as sleeves, trabecular metal cones, modular combo proximal sleeve and stems, etc. have added tremendous value for the arthroplasty surgeon and the patient community to improve clinical outcomes.

In conclusion, an arthroplasty surgeon irrespective of the stage of evolution of his career should have information, knowledge and wisdom to assess the overall landscape of arthroplasty so that he can chart his pathway, and his patients' pathway towards reaching a happy outcome. The difference between adventurism and adventure is only slight, and it is only the last part of our mental evolution – not information, not even knowledge, but wisdom which will allow us to strike the right balance in future times as we travel towards the horizon beyond the 2020!



First IAA conference 1995, a nostalgic moment to a glorious beginning. President Dr KT Dholakia, Secretary Dr ON Nagi and Treasurer Dr MS Dhillon are seen with Dr Chittaranjan Ranawat. Vice Presidents Dr NS Laud and Dr PS Maini are also seen in the picture.

IAA website

Renewed website with a new look and getup is ready for use at www.indianarthroplastyassociation.com.

This has been possible by the effort of the organizing team of IAACON2020 headed by Dr S Rajasekharan and Dr N Rajkumar along with the support of the members of the executive committee. Membership portal is open for use. With the efforts of all involved, it has become very interactive with academic portals and other educational exhibits and videos have become a part of the website for the members to access.



New look interactive website of Indian Arthroplasty Association

“IAA document for DVT prophylaxis in arthroplasty practice”



Dr Rajeev K Sharma, New Delhi

The risk of postoperative venous thromboembolism in orthopedic patients is among the highest of all surgical specialties especially in Hip and knee arthroplasty. One must assess the risk of bleeding by taking a full history and examination. Patients with individual risk factors for bleeding include those with contraindications to pharmacologic prophylaxis

Agents of Prophylaxis : Pharmacological Agents (Low-Dose Heparin (LDH), Low Molecular Weight Heparin (LMWH)–Preferred, Vitamin K Antagonist, Fondaparinux, Apixaban, Dabigatran, Rivaroxaban and Aspirin); Mechanical prophylaxis (Graduated Compression Stockings, Pneumatic Compression Devices, Foot Pumps and finally Vena Cava Filters).

Administration

Timing of initiation — The optimal timing with the known variability depends upon the methods chosen: Low molecular weight and unfractionated heparin –Many prefer to administer thromboprophylaxis 12 hours or more preoperatively and/or 12 hours or more postoperatively. Oral agents –warfarin, aspirin, and DOACs (Direct Oral Anticoagulant), are generally begun postoperatively 8 to 12 hours or more after surgery, provided the patient can eat. However, specific recommendations for each of the DOACs vary. For most patients with THA and TKA, low molecular weight (LMW) heparin or a DOAC is suggested rather than warfarin. When a DOAC is selected, preferences were given to Rivaroxaban or Apixaban. If oral intake is expected to be delayed, then LMW heparin (or UFH) should be administered subcutaneously in the interim. Mechanical methods are typically placed on the patient just prior to the start of surgery and used continuously postoperatively until hospital discharge or ambulation. When mechanical methods are used in patients at high risk of bleeding, pharmacologic agents are started or added postoperatively, as soon as hemostasis is achieved and it is considered safe (eg, 12 to 72 hours).

Duration

Recommended administration of pharmacologic prophylaxis for a minimum of 10 to 14 days and suggested that it be continued for up to 35 days after surgery; however, most clinicians prefer courses within the lower end of that range (e.g. 10 to 14 days) in those undergoing TKA with longer courses in the upper end of that range (e.g. 30 days) in those undergoing THA.

AAOS Guidelines for Prevention of VTE in Hip and Knee Arthroplasty

- It is suggested that patients discontinue antiplatelet agents (e.g., aspirin, clopidogrel) before undergoing elective hip or knee arthroplasty.
- It is suggested the use of pharmacologic agents and/or mechanical compressive devices for the prevention of venous thromboembolism in patients undergoing elective hip or knee arthroplasty, and who are not at elevated risk beyond that of the surgery itself for venous thromboembolism or bleeding.
- Patients, who have a previous venous thromboembolism, receive pharmacologic prophylaxis and mechanical compressive devices.
- Patients, who have a known bleeding disorder, use mechanical compressive devices for preventing venous thromboembolism.
- Patients should undergo early mobilization following elective hip and knee arthroplasty. Early mobilization is of low cost, minimal risk to the patient, and consistent with current practice.
- We suggest the use of neuraxial (such as intrathecal, epidural, and spinal) anaesthesia
- Unable to recommend for or against the use of inferior vena cava filters

NICE guidelines for VTE prophylaxis for patients undergoing elective THR or TKR

THR -

LMWH for 10 days then Aspirin for further 28 days
LMWH for 28 days in combination with anti-embolism stockings (until discharge)
Rivaroxaban/Apixaban/Dabigatran >14 days

TKR -

Aspirin (75 or 150 mg) for 14 days
LMWH for 14 days in combination with anti-embolism stockings (until discharge)
Rivaroxaban/Apixaban/Dabigatran >14 days

(This is a consensus statement and IAA is not responsible for any untoward event while following this document)
Full article in the website.

An Orthopaedic Resident : reporting LIVE from COVID-19 Battlefield; Lessons Learnt !!



Dr Rajiv V Kulkarni , Dr Kalyan V Tadepalli, Mumbai

In an Orthopaedic Resident's life - during his tenure of residency, moments of achievement are - Thesis Acceptance and Result of Final Examinations. Year 2020 starting with thesis acceptance and beginning of Final PG exam preparations, little did we know what was in the store ahead. As we were gearing up with our academic sessions, PG teachings and the Final "Last Punch" for the exams, somewhere in Wuhan, there was this "Birth of a positive sense single stranded RNA genome packet with a lipid bilayer"

One fine day the announcement of "Nation-wide Lockdown" was declared and we were heading towards an unprecedented situation which was "novel" to everyone. Daily new SOPs were drafted, new machinery was rolled out in hospitals, new protocols were implemented. It was like some mystery was unfolding. Our duties were "customised", fashioned in a way to preserve energy, resources, and manpower and "exposure" to this little monster from Wuhan. Like we "follow" the West world, here we were actually "tracking" their health care situation on daily basis and bracing for the storm that was to be supposedly unleashed on us.

It took less than a week for us to realise that we are dealing with something which is "here to stay" and will have great repercussions on all aspects of our lives. We realised we are at WAR, a war for survival. We being the "Enthusiastic buddies" amongst our team we decided to take a plunge in the situation by volunteering in the COVID-19 "duties" as a "Frontline Soldiers". We were commissioned at various "ActionPosts" such as "Screening duties", "Home Collection swab duties on ambulance", "Flu Clinics" and Isolation Wards. As a resident in orthopaedics who is well accustomed to managing resources at hand in terms of "mobilising the software, hardware, and managing the OTs and postop, here the need of hour was to acquire different skill sets. We were given our "Gear" - the PPEs (personal protective equipment), we learnt the "Donning and Doffing of it as per the guidelines. The ICMR terminologies, MOHFW advisories and AIIMS protocols were rapidly memorised throughout as if we were expecting those as questions in our MS/DNB exams.



Usually the orthopaedic fraternity "Respects the Bacteria" for its devastating effects on our surgical results but here the situation is that we were made to bow in front of "Little Monster - the Virus". As we know the most important Orthopaedics Preop Profile consists of "The Three Musketeers" - HIV/HBsAg/HCV, this novel bug is all set to become the "member of Fantastic Four". Many Lessons were learnt such need to adapt to dynamic situations, anticipating the community perceptions of the scenario and being prepared for the worst. Utmost protection of our team members, assistants, staff nurses, helpers is paramount when dealing with such evolving situation. To lead from the front with safety measures and not being a bravado is the essence. Judicious usage of Personal Protective Equipment (PPEs) and biomedical waste management protocols should be meticulously followed.

Last but not the least, every crisis provides us with an opportunity - where the humans have evolved to a next level. We still are in the process of turn around as, we have not yet arrived at a clear picture about how things are going to pan out, but as the first "ground report" from the battlefield, we wish to say that we need to acquire and get ourselves accustomed to New Era of Orthopaedics Post lockdown.

Signing off from the COVID - 19 out post, "Over and Out"!!

Acknowledgements:

For strengthening our morale - Dr Vaibhav Bagaria, Dr Arjun Dhawale, Dr Kshitij Chaudhary and Dr Lokesh Naik.
For Microbiological Technical tips - Dr Rupashree Patkar
Most Important - our "better half" - Dr Priyanka Kulkarni and Dr Sudha Tadepalli.

References -

1. Bagaria V, Sahu D. Orthopaedics in Times of COVID 19. *Indian Journal of Orthopaedics*. 2020 Apr 27:1
2. Tanne JH, Hayasaki E, Zastrow M, Pulla P, Smith P, Rada AG. Covid-19: how doctors and healthcare systems are tackling coronavirus worldwide. *Bmj*. 2020 Mar 18;368.

Join the Indian Arthroplasty Association.
Be part of the 360° IAA Webinar.

Resuming arthroplasty practice post COVID-19



Dr Krishna Kiran, Hyderabad

On March 11, 2020 novel corona virus outbreak was declared as a pandemic by WHO. As part of the larger healthcare ecosystem, orthopedic surgeons do have a crucial role to play.

Impact on Orthopedic practice

Elective surgery, which constitutes nearly 50% of orthopedic practice has been put on hold. However, as the curve flattens it will be imperative to resume some of the routine orthopedic surgeries including arthroplasty. This paper aims to list out recommendations for resuming arthroplasty practice post COVID-19 based on current available evidence. It is the prerogative of the surgeons to follow at his/her own risk.

What we know so far

Currently there is no herd immunity against the virus. There is no cure and vaccine trials are ongoing. Routine testing for COVID-19 is not universally available and the tests available can have false negative results (RT-PCR, ELISA). Nearly 30% of the individuals are asymptomatic carriers and growing evidence shows that these could be the drivers of community spread. It has been reported that if the patient becomes COVID positive post-surgery the ICU admission rate is 44.1% and the mortality rate of 20.5%. It is also clear that mortality is higher with COVID-19 in patients older than 60, those with cardiovascular diseases (10.5%), diabetes mellitus (7.3 %), respiratory diseases (6.3%) and cancer (5.6%), as compared to normal population (1.4%).

Ideal time to resume arthroplasty

It is reasonable to resume elective arthroplasty post lockdown in conjunction with the guidelines issued by local governments to restart elective surgeries. There must be a sustained reduction of positive cases for 14 days before resumption. The hospital must be able to ensure safety of the patient and healthcare workers and have demarcated areas for non COVID patients. Also preoperative testing with RT-PCR for SARS CoV-2 must routinely be available for screening the patients. The staff involved in patient care must be tested for SARS CoV 2 with RT-PCR and antibody testing from time to time. There must be adequate supply of PPE for healthcare workers to perform the surgery safely.

Choosing right patient to operate?

Patients with active COVID, age above 70, presence of comorbidities like CAD, diabetes mellitus, uncontrolled hypertension, respiratory illness, obstructive sleep apnoea and immuno-compromised state must not be operated in the early days when elective arthroplasty surgery is resumed. Patients with ASA 1 and 2, preferably less than 70 years of age should be operated in the early days when elective arthroplasty is resumed. It may be prudent to start off with unilateral knee and hip arthroplasties when resuming elective arthroplasty.

Preoperative evaluation

Evaluation must include history of flu like symptoms, travel, contact and cluster must be obtained. Social distancing must be followed during patient interaction and mask (both patient and provider) and protective eyewear (provider) must be used.

The informed consent must include risk of COVID transmission in the perioperative period.

Patients must be evaluated by RT-PCR for SARS CoV 2 3-7 days before the surgery. If possible, one could include chest CT for screening. Only patients with negative RT-PCR and normal chest CT should be scheduled for surgery.

The patients must be admitted on the day of surgery. The attendants must be limited to one. Admission to common pre surgery bays should be avoided while restarting elective arthroplasty. Contact and droplet precautions must be followed during patients stay in the hospital. Visitors should not be allowed.

Intraoperative considerations

- Orthopedic procedures can produce aerosols, which may contain the virus.
- Consideration should be given to the use of portable HEPA filter systems that can remove viral particles from the OR air without converting to a negative pressure environment. Wherever possible regional anaesthesia must be used.
- Space suits with open fan systems (standard ortho suits) should not be used.
- Full PPE where available must be preferably used. Separate buffer areas to doff the PPE safely must be used.
- Pulsatile lavage should not be used; suction must be used along with cautery.
- Operations must be performed as quickly as possible and wound closure must be done using absorbable subcuticular sutures where feasible. Transparent dressings must be applied. Postoperative radiographs must be performed in the OR itself before shifting the patient.
- As SARS-CoV-2 has been shown to survive on inanimate surfaces for a relatively long time, all non-essential equipment should be kept outside of the operating room.
- Standard cleaning protocols for instruments are sufficient and must be diligently followed.

Postoperative considerations and discharge

Standard postoperative protocols can be followed include antibiotics, pain management and DVT prophylaxis. In the postoperative ward patients must be kept at least 2 metres

apart. The patients as well as care givers must use masks. In patient stay must be minimized and patient must be discharged to home as soon as possible. At the time of discharge RT-PCR may be repeated. If positive standard protocol for COVID positive must be followed. The team in contact must be isolated at home for 14 days. Postoperative care can be carried out using video conference based consultations and rehabilitation.

(IAA is not responsible for any untoward consequences following the above guidelines.)

IAA Fellowships

*The Indian Arthroplasty Association promotes multiple international and national fellowships from time to time. Members avail these fellowships by selection on eligibility and merit basis.
(The fellowships for the year 2019-20 has been postponed to 2020-21 due to the prevailing COVID-19 situation.)*

IAA International Fellowships Granted for the Year 2019-20

Sl. No.	Name of Member	Home State	Fellowship Awarded
1.	Dr. Aman Hooda	Panchkula, Haryana	Indo-UK
2.	Dr. Hardik Kumar Kapopara	Gujrat	Indo-Korean
3.	Dr. Vijya Singh	Mumbai	Indo-Irish
4.	Dr. Piyush Aggarwal	Rajasthan	Indo-US
5.	Dr. Rajesh Kumar Rajnish	Chandigarh	Indo-Australian

IAA National Fellowships Granted for the Year 2019-20

Sl. No.	Name of Member	Home State
1.	Dr. Karthick SR	Tamilnadu
2.	Dr. Lokesh Kumar SN	Chennai
3.	Dr. Saurabh Aggarwal	Chandigarh
4.	Dr. Anju Jain	Noida
5.	Dr. Arun Kumar Sharma	Jaipur

Forthcoming events

IAACON2020 cancelled due to the COVID pandemic and postponed to 2021 at Coimbatore and Dr N Rajkumar is the Organising Secretary. Weekly academic webinars are being conducted starting from May 1, 2020 in the name of IAA 360° webinar series on different aspect of arthroplasty practice. This is proposed to be continue till the COVID situation normalizes for formal meetings. All updates will be informed through the website and mail to the members.



IAA-Presidential take over by President Elect Dr SS Mohanty from Past President Dr Anoop Jhurani in the Annual General Body meeting IAACON 2019, Mumbai.



All credit to the success of IAACON 2019 goes to Organising Chairman Dr Sanjeev Jain.



Glimpses of IAACON 2019 at Hotel JW Marriot, Juhu, Mumbai

IAACON 2019

The 16th annual conference of the Indian Arthroplasty Association was organized at JW Marriot, Juhu, Mumbai on 20th and 21st September, 2020. The Organising Chairman was Dr Sanjeev Jain. Galaxy of international faculty including Dr H Graichen, Dr K Corten and Dr M Zimmerman attended the conference along with our national stalwarts. The conference was an overwhelming success with live surgeries and high-level case discussions. A combined symposium with the International Congress for Joint Reconstruction (IAA-ICJR) was organized on the background of the conference. Dr SS Mohanty took over as the President of the association from Dr Anoop Jhurani and Dr Rajeev Sharma was selected President Elect.



Dr Henry Clarke presenting his talk at the IAACON 2019

