

Newsletter of Indian Arthroplasty Association

Welcome to the Silver Jubilee Year of the Association !



IAA AUTUMN 2021

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From the Desk of the President



Dear Friends,

It gives me great pleasure to release this newsletter on the occasion of the Silver Jubilee celebration of our Indian Arthroplasty Association. We have crossed 25 long years of repairing, remodeling and restoring the destroyed human joints relieving pain, getting alignment, making stable and providing movements. The greatest gift we get is the smile of gratitude from our patients.

This issue contains some of the exciting articles from our senior members and some music videos, which can be captured from barcode by your smart phone. Because IAA is not only limited to Joints but there is life beyond the joints as well.

We have gone through tough times during the yester years to see the fruit of success today with more than 650 members of our association. Let's strive together to make our association an unparalleled academic body to train our young orthopods and adapt the new technology to evolve into a stronger nation, but not forgetting to practice the basics of Arthroplasty!

Happy Reading!

Prof. Dr. Shubhanshu S Mohanty,
President, IAA

Editorial



Dear Friends,

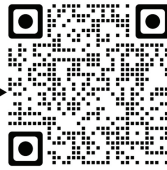
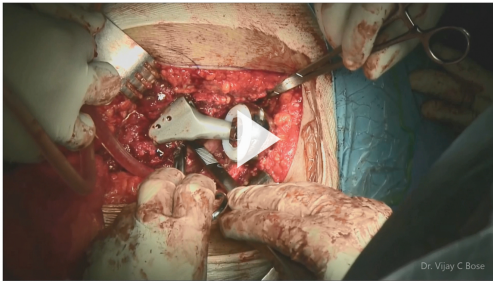
At the outset let me extend a warm welcome to the Silver Jubilee edition of our association and a video newsletter for the first time ever being brought about during the annual conference IAACON 2020one. Our commitment over time is to provide educational opportunities for our members, to interact professionally and constantly upscale the skill set with regards to academics and clinical research.

In this video newsletter we aim to address an increasingly broad array of scientific topics on primary and revision arthroplasty and not only that even some interesting aspects of life apart from academics. The videos are QR coded and can be scanned and viewed at your comfort.

I wish you all a more engaging academics during the IAACON 2020one - a physical conference with a whiff of fresh air and in the coming year.

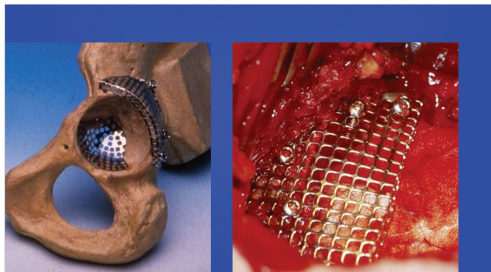
Thank You,
Kind Regards
Dr Smarajit Patnaik

Watching & Learning From the Experts



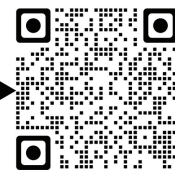
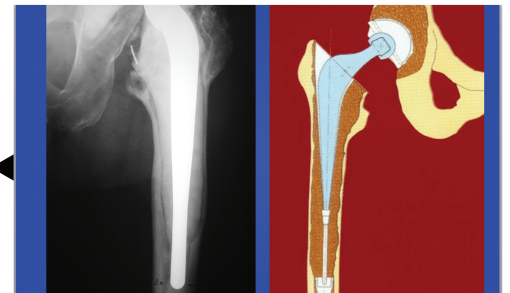
Dr. Vijay C Bose on Wagner Reconstruction for Unstable IT Fractures in Elderly using ITLwO Technique.

Dr. Anoop Jhurani on Soft Tissue Reconstruction for Proximal Quadriceps Insufficiency post TKA



Dr. K. J. Reddy's Power Point Presentation on Acetabular Impaction Grafting

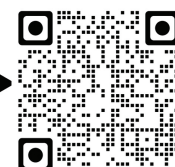
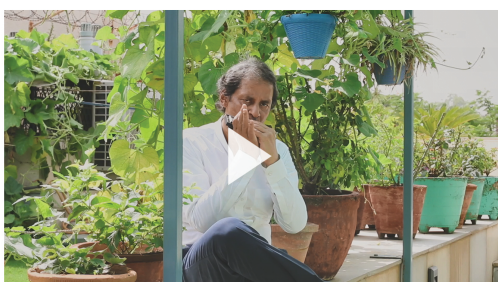
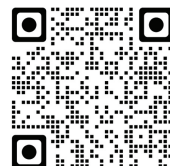
Dr. K.J. Reddy's Power Point Presentation on Femoral Impaction Grafting



Dr. Rajeev Sharma's exclusive video talk on TKA in post trauma OA.

Life Beyond Joints

Dr. Yash Gulati joyfully playing "Ajeeb Daastan hai ye" on the Saxophone.



Dr. Ashok Rajgopal playing the old classic "Mere Mehboob" on the mouth organ.

ALIGNMENT IN TKA

INQUISITIVE INSIGHTS

Dr. Anoop Jhurani, Dr. Piyush Agarwal



Alignment in TKA is an ever evolving concept. With better availability of full-length standing radiographs, accurate measurement of angles and technology, limb alignment can be analysed. The objective of TKA is to restore native limb alignment & kinematics without disrupting the soft tissues.

Currently, three main concepts have developed to achieve optimal alignment post TKA. Before we dive deep further, we need to understand **3 main phenotype variations of limb anatomy**.

1. Constitutional Varus

These patients can be identified on long leg radiographs by high neck shaft angle, coxa vara, femoral & tibial bowing. This is common in short obese females [Fig 1A].

2. Neutral mechanical alignment

This limb alignment pattern is found in thin muscular males & it is represented by straight femur with femoral valgus angle of 5-7° and a straight tibia [Fig 1B].

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3. Valgoid alignment

In these patients, there is valgus remodelling of femur & tibia with increased involvement of lateral & patellofemoral articulations [Fig 1C].

Matching alignment to native phenotypes:

1. Kinematic alignment (KA)

Kinematic alignment is most suited for 1st phenotype in which patients have constitutional varus. KA aims to restore the original knee kinematics in all 3 axis. The distal femur cut is equivalent to implant thickness accounting for the loss of cartilage. So, if the medial condyle has the complete loss of cartilage, then only 7mm should be resected from the medial condyle

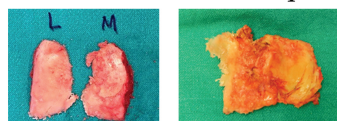


Fig 2: Distal femur and proximal tibia cut

to compensate for lost cartilage [Fig 2]. Similarly, the rotation of the femoral component should be adjusted accounting for the wear in the posteromedial femoral

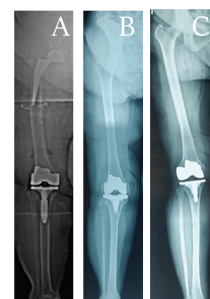
condyle. The tibia cut is taken in 2-3° varus to minimize soft tissue release & reproduce the oblique joint line. The main advantage of KA is restoration of joint line parallel to ground, preservation of bone & minimal soft tissue release. The chief concern is early loosening of tibial component because of varus positioning of component and overall mechanical axis [Fig 3A].

2. Mechanical alignment (MA)

MA can be reciprocated in 2nd phenotype where the distal femur is cut at 6° of valgus & 9-10 mm resection from the uninvolved lateral condyle. The rotation is set 3° with respect to posterior condylar axis & parallel to inter-epicondylar to the mechanical axis of tibia and 8-10 mm is resected from the uninvolved lateral condyle. Significant soft tissue release may be required to balance the knee especially in severe deformities [Fig 3B].

3. Functional alignment (FA)

FA can be achieved with robotic assisted method by fine tuning the component positioning to minimize the soft tissue releases [Fig 4A,B]. Robotic assisted methods help in better replication of the components especially in sagittal plane. The 3rd phenotype of valgus alignment is best suited for the functional method. In this type,



Figures 3 A, B, C: Postoperative long leg radiographs



Figures 1 A, B, C: Long Leg Radio-graphs of the three phenotypes.



Figures 4 A, B: Robotic screen shot showing femoral & tibial cut fine tuning to achieve balance.

femoral component can be accurately positioned in 1-2 degrees of varus, the rotation is set parallel to transverse axis of knee & the tibial cut adjusted in accordance with valgoid tibia. This ensures overall neutral mechanical axis with optimal soft tissue release under robotic guidance [Fig 3C].

Conclusion

The alignment methodology in TKA should mirror the preoperative patient anatomy. The pre-arthritis alignment can be assessed with full length radiographs & measurement of deformity & angles. Based on preoperative phenotype & anatomy of the bones, TKA can be planned with kinematic, mechanical or functional alignment.



Indian Arthroplasty Association
is happy to announce Fellowships in the Art of Arthroplasty:

International Fellowships:

1. Indo UK Fellowship: Dr. Venu Kavarthapu
2. Indo Australian Fellowship: Dr. Ross Crawford
3. Indo Irish Fellowship: Dr. Anand Mahapatra
4. Indo Korean Fellowship: Dr. J. D. Chang
5. Indo US Fellowship: Dr. Neil Sheth

National Fellowships:

1. Dr. K T Dholakia Fellowship (Mumbai):
Dr. N S Laud & Dr. Harish Bhende.
2. IAA Chennai Travelling Fellowship (Chennai & Hyderabad)
Dr. Vijay C Bose & Dr. K J Reddy.
3. National Fellowship (New Delhi & Mohali)
Dr. S K S Marya & Dr. Ramesh Sen.
4. National Fellowship (Chandigarh)
Dr. M S Dhillon.
5. National Fellowship (Jaipur)
Dr. Anoop Jhurani.

IAA Membership Mandatory

For details, visit www.indianarthroplastyassociation.com

Physical interview for selection for Fellowship: every year during IAACON.

Dr S S Mohanty
President, IAA

Dr. Sameer Aggarwal
Secretary, IAA

Dr. M S Dhillon
Chairman, Fellowships

Dr. K J Reddy