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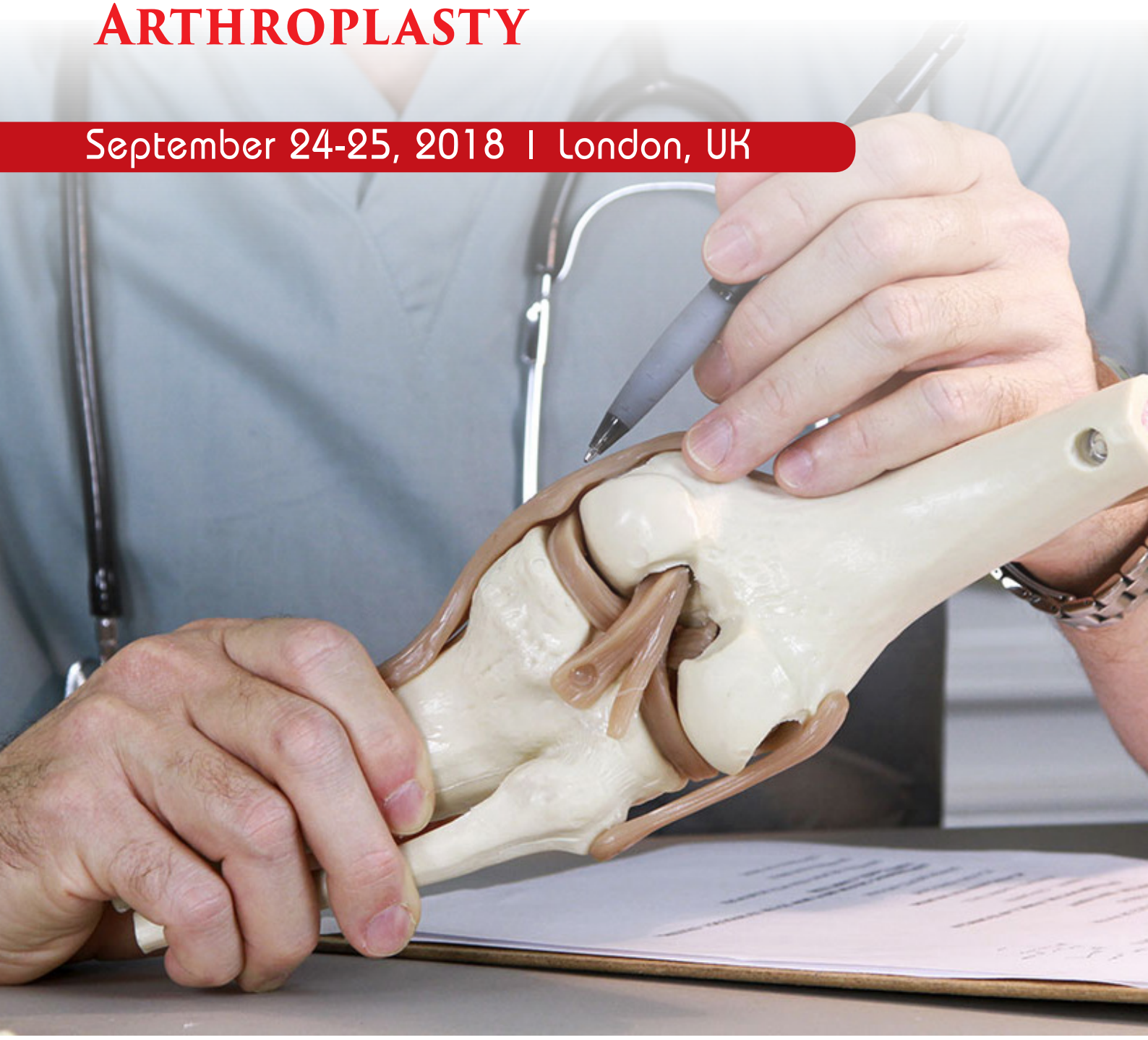
September 24-25, 2018 I London, UK



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11th International Conference on

Arthroplasty

September 24-25, 2018 London,UK

Keynote Forum

Day 1

11th International Conference on
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Luca Lucente

Nuova Itor Clinic, Italy

The new surgical technique to the positioning of hip prosthetic implants: The medial-inguinal approach

True to the concept of tissue sparing surgery, we invented this new surgical technique to reach the coxo-femoral joint by starting at the inguinal-medial region. We performed total hip arthroplasty on 100 patients suffering from hip arthritis. In our case study, operation time and blood loss were lower, there were no complications, and recovery time was incredibly fast. We have invented a surgical process that allows for a safe, easy and fast replacement of the hip and that spares the hip stabilizer muscles completely. Throughout the operation, the surgeon can view the acetabulum from the front, a view that is preferable to the one available with known techniques. There is no need for special equipment or special operating tables and surgeons don't face a steep learning curve when first introduced to the procedure. Since risks of dislocation are non-existent, the patient is allowed to lie in bed in any position. The procedure is preferable aesthetically, since any scarring is hidden from view in the inguinal folds of skin. Patients can resume walking immediately, using 2 Canadian crutches only for a few days. Thanks to its low costs and ease of performance and replication, this technique offers nothing but advantages for the patient. Easier rehabilitation is another positive aspect. The procedure can be considered a valid alternative to other common surgical approaches.

Biography

Luca Lucente is an Italian Orthopedic Surgeon, expert in prosthetic surgery, especially of the hip and he has devised a new surgical approach to implant the hip prosthesis: It is the inguino-medial approach. He had participated in national and international conferences and has published scientific papers in national and international journals. He is currently a Medical Director at the Orthopedic Department of the Nuova Itor Nursing Home and he is a Freelancer at the Quisisana Nursing Home and the Villa Salaria Nursing Home in Rome.

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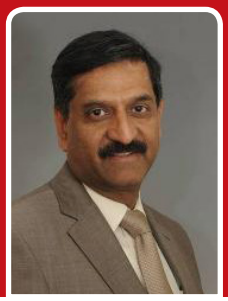

Videsh Raut

Wrightington Hospital, UK

Cruciate-retaining total knee replacements for valgus deformity secondary to osteoarthritis: 5.5 years follow-up survival study

Background & Aim: Clinical survival studies for cruciate-retaining TKR for valgus knees are very limited in literature. We present our series of valgus knees secondary to osteoarthritis treated with lateral soft tissue releases and CR-TKR.

Methods: A survival study of CR-TKR in knee OA with valgus deformity with functional MCL has been performed by retrospective analysis of hospital data. Revision for any cause is considered the end point. 108 TKR in 102 patients with a minimum follow up of 1 year, who had a CR-TKR for knee arthritis with valgus deformity between December 2001 and November 2012 are included in the study.

Results: Mean follow up is 5.5 years (median 5 years, range 1-14 years). Mean improvement in the valgus angle is 14.28 degrees 2 degrees at 95% CI (Median 14, SD 9 degrees). Mean flexion is 105 degrees (Median 100, range 80-150). 10 patients have died due to non-orthopedic causes. One patient has non-progressive lucency around the components and has not required revision. None of the tibio- femoral components have been revised so far. One patient had a fall and dislodged the patellar button which had to be removed. No instability has been noted in any of the patients during follow up. Two patients have persistent pain, but investigation has not shown any cause.

Conclusion: CR components for TKR for knee OA with valgus deformity has shown satisfactory survival at 5 years with low revision rate when adequate soft tissue balance is achieved at the time of implantation.

Implications: CR-TKR, which helps preserve femoral bone stock, can be successfully implanted in valgus knees as shown in our series with 100% survival at an average of 5.5 years when the soft tissues are balanced at time of implantation. However, long term follow-up is required to ensure there are no late failures.

Biography

Videsh Raut has been working as a Consultant Orthopedic Surgeon at Wrightington Hospital since 1996. He did his basic Orthopedic Training in Bombay, India at the King Edward Memorial Hospital, University of Bombay and was a Lecturer in Orthopedic Surgery at the university hospital before coming to the UK. He trained in UK as a Registrar in Orthopedics at Oswestry on a 3-year rotation. His Senior Registrar Rotation was at Birmingham working at the Royal Orthopaedic Hospital in Birmingham and the Coventry District General Hospital. During his training period he acquired a master's degree in Orthopedic Surgery (M.Ch.Orth.) from the University of Liverpool and from the University of Bombay (M.S.Orth.). He secured the Specialty Fellowship in Orthopedics from the Royal College of Surgeons of Edinburgh.

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Keynote Forum
Day 2

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Rajesh Kushwaha

Shree Vishudanand Hospital, India

Fracture neck of femur and acetabulum with free floating femoral head in true pelvis: A rare case report

60-year male patient presented with fracture neck femur right side with acetabular floor fracture. Femoral head migrated through the acetabular floor defect into the pelvis and lying free floating in the pelvic cavity. Patient was operated once at periphery with exposure of hip by posterior approach and failure to retrieve head of femur from the pelvic cavity. CT scan and 3D reconstruction images of hip showed acetabular floor defect and fracture of acetabulum anterior column and wall with head of femur lying inside the true pelvis near superior pubic rami brim. Single stage surgery was planned. Head of femur was extracted from true pelvis by right anterior ilioinguinal approach. Acetabular floor and wall reconstruction was done with recon plate fixation. Cemented THR was done in lateral decubitus position through old posterior approach. Mesh wire net was used in floor of reconstructed acetabulum to prevent cement leak into pelvic cavity. Gentle range of movement's hip joint started from the next post-operative day and was mobilized with walker. Full weight bearing mobilization started after suture removal. Acetabular fractures are complex fractures and difficult to treat due to its complex anatomy and proximity to vital structures. Fracture of acetabulum associated with dislocation of hip, protrusio, central dislocation has been reported in literature. However acetabular fracture with neck femur fracture and migration of free floating femoral head into the true pelvis is very rare and not reported. Single stage fracture fixation and total hip replacement is good option for pain free early mobilization. However, one should be familiar with different approaches to remove the femoral head from the pelvic cavity.

Biography

Rajesh Kushwaha is a Consultant Orthopedic Surgeon and Head of Trauma Unit at Shree Vishudanand Hospital and Research Institute, Kolkata. He is also the Head of Cerebral Palsy Unit at Mahavir Seva Sadan and a Freelancing Consultant Orthopedic Surgeon at Bellevue Clinic, Medicare Nursing Home and Marwari Relief Society Hospital.

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Khurshid Alam

Sultan Qaboos University, Sultanate of Oman

Exploring benefits of ultrasonically - Assisted drilling in bone

Introduction: Drilling in bone is a common surgical procedure in orthopedics for fixation and reconstructive surgeries. Excessive force and torque, elevated temperature and microcracking in the complex composite microstructure of bone caused by drilling operation may seriously affect osseointegration leading to the weakening of implants anchoring the bone. Ultrasonically assisted drilling (UAD) has recently been successfully employed as a feasible substitute to conventional drilling (CD) to overcome the prescribed issues.

Materials and Methods: Ex-vivo drilling tests are performed on fresh bovine femur using surgical drills in the presence of ultrasonic vibrations imposed on the drill in the cutting direction and controlled irrigation. Ultrasonic vibrations were generated and coupled with the drill using a custom designed transducer. Force dynamometer and infrared camera were used to measure the drilling force, torque and temperature during drilling. Micro-CT and Scanning Electron Microcopy were performed to quantify microcracks in the drilled specimens. Surface profilometry of the cutting edges of drills were performed to measure the roughness profile of the cutting edges of the drills. Post drilling microscopic examination of specimens were performed to visualize the death of osteocytes near the drilling track.

Results: A parametric study has been conducted to explore benefits of UAD over CD. UAD, using controlled frequency of vibration up to 20 kHz, demonstrated lower penetration effort experienced by the drill, lower temperature in the drilling region and fewer microcracks surrounding the hole in bone tissue compare to CD. Statistical analysis revealed strong correlation between the roughness of the cutting edges of the drill and force and temperature produced irrespective of drilling technique. UAD produced small chips and facilitated fast evacuation from the drilling track. In addition, UAD facilitated almost twice number of holes compared to CD before the drill turned blunt and lost cutting ability. Histological investigations of bone tissue revealed the death of fewer osteocytes in UAD in the immediate vicinity of drilled hole compared to CD.

Conclusion: It is expected that utilization of this novel technique in bone surgical procedures will enhance safety of the process, minimize surgical complications and financial burden on healthcare systems.

Biography

Khurshid Alam is an Assistant Professor in the Department of Mechanical and Industrial Engineering at Sultan Qaboos University of Oman. He is involved in teaching and research in Mechanical and Biomechanical Engineering. He has completed is courses in Applied Finite Element Analysis, Engineering Drawing & Graphics, Fundamentals of Biomechanics, Solid Mechanics, Properties and Strength of Materials, Statics, Engineering Dynamics.

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