

26th - 27th June 2025 | Cloth Hall Court, University of Leeds

Chapel Allerton Orthopaedics in partnership with ISKSAA proudly presents

# GREAT NORTH DEBATE

*Hip & Knee*

and the ISKSAA 2025 Annual Meeting



Welcome to the inaugural Great North Debate, in partnership with ISKSAA, as we explore the latest hot topics in hip and knee surgery. Experience ground-breaking discussions, pioneering insights, and innovative solutions that are transforming patient care.

**Elevate your practice.**

**Be part of the Great North Debate.**

Awarded 11.5 CPD hours by RCSEd

# PROGRAMME

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## Hip & Knee

### CONVENORS:



**Mr Sanjeev Anand**  
Leeds



**Prof Hemant Pandit**  
Leeds



**Mr Jeya Palan**  
Leeds



**Dr Pushpinder Bajaj**  
ISKSAA

### ISKSAA:



**Prof Lalit Maini**  
ISKSAA

### SESSION ORGANISERS:



**Mr Colin Holton**  
Leeds



**Mr Niall Maher**  
Leeds



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## Hip & Knee

### INTERNATIONAL FACULTY:



**Dr Vicente J. León-Muñoz**  
Murcia, Spain



**Dr Geert Peersman**  
Antwerp, Belgium



**Dr Charles Riviere**  
Bordeaux, France

### NATIONAL FACULTY:



**Mr Adil Ajuied**  
London



**Mr Kash Akhtar**  
London



**Mr Oday Al-Dadah**  
Newcastle



**Mr Abtin Alvand**  
Oxford



**Mr Bobby Anand**  
Surrey



**Mr Sanjay Anand**  
London



**Mr Adeel Aqil**  
Huddersfield



**Mr Tanveer Ashraf**  
Birmingham



**Mr Colin Ayre**  
Bradford



**Prof Paul Baker**  
Middlesborough



**Mr Rahul Bhattacharyya**  
London



**Prof Leela Biant**  
Manchester



**Mr Ben Bloch**  
Nottingham



**Ms Hayley Carter**  
Derby



**Mr Sebastian Dawson-Bowling**  
London



**Mr Sam Dawson**  
Manchester



**Mr David Duffy**  
Harrogate



**Mr David Elson**  
Newcastle



**Prof Max Fehily**  
Manchester



**Mr Panos Gikas**  
London

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## Hip & Knee

### NATIONAL FACULTY:



**Prof Richie Gill**  
Bath



**Mr Chim Gupte**  
London



**Mr Steve Guy**  
Bradford



**Prof Fares Haddad**  
London



**Prof Caroline Hing**  
London



**Mr Jim Holland**  
Newcastle



**Mr Simon Jameson**  
Middlesbrough



**Mr Nick Kalson**  
Newcastle



**Mr Vikas Khanduja**  
Cambridge



**Mr Sandeep Kohli**  
London



**Mr Josh Lamb**  
Wrightington



**Mr David Langton**  
Newcastle



**Mr Chris Lewis**  
Mid-Yorkshire



**Prof Nick London**  
Harrogate



**Mr Ajay Malviya**  
Northumbria



**Prof Stephen McDonnell**  
Cambridge



**Mr Nick Nicolau**  
Sheffield



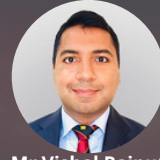
**Mr Shaun O'Brien**  
Sunderland



**Mr Tim Petheram**  
Northumbria



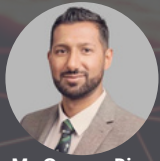
**Mr Mike Petrie**  
Sheffield



**Mr Vishal Rajput**  
Dewsbury



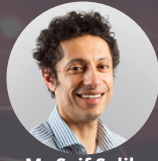
**Mr Rohit Rambani**  
Peterborough



**Mr Osman Riaz**  
Huddersfield



**Ms Claire Robertson**  
London



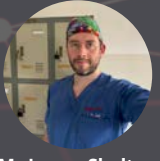
**Mr Saif Salih**  
Sheffield



**Mr Alasdair Santini**  
Liverpool



**Mr Akash Sharma**  
Birmingham



**Mr James Shelton**  
Sheffield



**Mr Pete Thompson**  
Coventry



**Mr Graham Walsh**  
Huddersfield



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## Hip & Knee

### LEEDS FACULTY:



**Mr Joe Aderinto**  
Leeds



**Mr Milad Ahmadi**  
Leeds



**Ms Anna Anderson**  
Leeds



**Mr Sam Jain**  
Leeds



**Mr Campbell MacEachern**  
Leeds



**Mr Ben Van Duren**  
Leeds



**Mr Veysi Veysi**  
Leeds



**Mr Owen Wall**  
Leeds



**Mr George Whitwell**  
Leeds

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## Hip & Knee

**REGISTER NOW - Click here**

| <b>Registration fee includes:</b><br>coffee breaks and buffet lunch.                                                           | <b>EARLY</b><br>before 7th May<br><br><b><u>FULL 2 DAYS</u></b><br>attendance | <b>EARLY</b><br>before 7th May<br><br><b><u>SINGLE DAY</u></b><br>attendance | <b>REGULAR</b><br>after 8th May<br><br><b><u>FULL 2 DAYS</u></b><br>attendance | <b>REGULAR</b><br>after 8th May<br><br><b><u>SINGLE DAY</u></b><br>attendance |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Consultant Surgeons</b>                                                                                                     | £195                                                                          | £175                                                                         | £250                                                                           | £200                                                                          |
| <b>Trainees / AHPs</b><br>Trainees and allied health professionals                                                             | £125                                                                          | £95                                                                          | £175                                                                           | £150                                                                          |
| <b>Conference Dinner</b><br>Thursday 26th June<br>includes: welcome drink, 3 course meal, table wine or non-alcoholic options. | £65                                                                           |                                                                              |                                                                                |                                                                               |

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*Hip & Knee*

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The VELYS™ Robotic-Assisted Solution is designed to increase the accuracy of implant alignment and works exclusively with the ATTUNE™ Knee System which may help shorten patient recovery and reduce postoperative complications.<sup>1-4</sup>

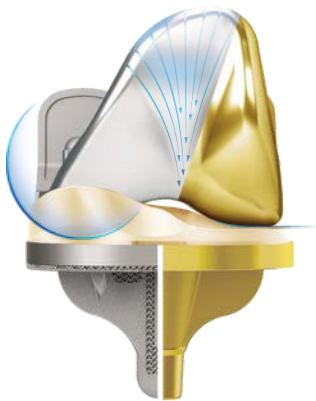
References: 1. Doan, G.W., et al., Image-Free Robotic-Assisted Total Knee Arthroplasty Improves Implant Alignment Accuracy: A Cadaveric Study. J Arthroplasty, 2022, 37(4): p. 795-801. 2. Claverworthy, M. (2018). An Early Outcome Study of the ATTUNE™ Knee System vs. the SIGMA™ CR30 Knee System. DePuy Synthes Companies White Paper. 100959-18097. 3. Claverworthy, M. Patient-Specific TKA with the VELYS™ Robotic-Assisted Solution. Surgical Technology International, 2022, Mar 23, 40: p. 14-4. Etter, K, Lerner, J, Kalkreuth, J, de Moor, C, Yoo, A, Senek, M. Comparative analysis of hospital length of stay and discharge status of two contemporary primary total knee systems. J Knee Surg. 2018; 31(5): 541-550. 4. DePuy Synthes User Experience Evaluation of the VELYS Robotic-Assisted Solution for Total Knee. July 2020/Windchill #103744839  
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**\* For the Mako Total Knee application, "cut less" refers to less soft tissue damage and greater bone preservation as compared to manual surgery.<sup>5,6</sup> For the Mako Total Hip and Partial Knee applications, "cut less" refers to greater bone preservation as compared to manual surgery.<sup>4,7</sup>**

1. Anthony I, Bell SW, Blyth M, Jones B et al. Improved accuracy of component positioning with robotic-assisted unicompartmental knee arthroplasty. J Bone Joint Surg Am. 2016;98-A(8):627-35.
2. Illgen, R, Bukowski, B, Abiola, R, Anderson, P, Chughtai, M, Khlopas, A, Mont, M. Robotic-assisted total hip arthroplasty: Outcomes at minimum two year follow up. Surgical Technology International. 2017 July 25; 30:365-372.
3. Mahoney O, Kinsey T, Mont M, Hozack W, Orozco F, Chen A. Can computer generated 3D bone models improve the accuracy of total knee component placement compared to manual instrumentation: a prospective multi-center evaluation? International Society for Technology in Arthroplasty 32nd Annual Congress. Toronto, Canada. October 2-5, 2019.
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7. Banks, Scott A, PhD. Haptic Robotics Enable a Systems Approach to Design of a Minimally Invasive Modular Knee Arthroplasty. Am J Orthop. 2009;38(2 suppl):23-27. February 2009.

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## Hip & Knee

Thursday 26th June

08.00 REGISTRATION & COFFEE - Merchant Hall

08.30 INAUGURATION & ISKSAA WELCOME - Herringbone room

ROOM: Herringbone

**PRIMARY TOTAL KNEE ARTHROPLASTY:  
CURRENT CONCEPTS**

Moderators : **Mr Jeya Palan and Mr Ben Bloch**

**08.45** Coronal plane alignment in knees: Is CPAK enough? **Prof Hemant Pandit**

**09.00** Different alignment philosophies for knee replacement. **Prof Fares Haddad**

**09.15** Why do I do Kinematic alignment?  
**Dr Charles Riviere**

**09.30** Why I do Mechanical alignment?  
**Mr Adeel Aqil**

**09.45** PANEL DISCUSSION

ROOM: Tweed

**FREE PAPERS SESSION**

Moderators: **Mr Sam Jain and Mr Sandeep Kohli**

**08.45 - 10.00**

Please refer to full abstracts at the end of this programme.

**5 minutes presentation** followed by **2 minutes discussion**.

ROOM: Herringbone

Industry Session



**10.00 - 10.30**

**An efficient and productive NHS arthroplasty service - dream or possibility?**

**Mr Tim Petheram**

This session will focus on a variety of aspects of a service that provides high volume and efficient arthroplasty services within the NHS:

- Pre-operative optimisation
- Theatre utilisation including the use of LLPs
- Day case Arthroplasty
- Implant policies - the benefits of a single implant policy
- Efficient follow up

The session will allow plenty of chance for discussion and debate.

ROOM: Tweed



Industry Session

ZIMMER BIOMET

**Achieving better TKAs with robotics and data analytics**

**10:00** Introduction

**10:05** Achieving better TKAs through implant design & selection. **Mr Akash Sharma**

**10:10** Personalizing TKA Alignment with Robotics.  
**Mr Akash Sharma**

**10:15** Connecting data to optimize TKA outcomes.  
**Mr Akash Sharma**

**10:20** Personalizing the patient experience from consultation to recovery.  
**Mr Akash Sharma**

**10:25** Q&A

10.30 COFFEE | INDUSTRY EXHIBITION - Merchant Hall



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## Hip & Knee

Thursday 26th June

### ROOM: Herringbone

#### COMPLEX AND REVISION KNEE ARTHROPLASTY

Moderators :

**Mr Adeel Aqil & Dr Charles Riviere**

**11.00** Post traumatic OA with severe bone loss.

**Prof Paul Baker**

**11.15** Severe deformities around the knee.

**Mr Veysi Veysi**

**11.30** The problem TKR? Diagnosis and investigation. **Mr Ben Bloch**

**11.45** Instability after TKR. **Mr Alasdair Santini**

**12.00** Explant analysis, metal ions, genetics and outcomes: national research study.

**Mr David Langton**

**12.15** PANEL DISCUSSION: Cases

### ROOM: Tweed

#### YOUNG ADULT HIP

Moderator: **Mr Colin Holton and Mr Saif Salih**

**11.00** Hip and Groin Pain in a Physically Active Adult - ESSKA, EHPA, ESMA consensus statement. **Mr Vikas Khanduja**

**11.15** Hip arthroscopy- FAI management.

**Mr Ben Van Duren**

**11.30** Hip Arthroscopy- Tips and tricks.

**Prof Max Fehily**

**11.45** Femoral osteotomy. **Mr Saif Salih**

**12.00** Periacetabular osteotomy (PAO).

**Mr Ajay Malviya**

**12.15** PANEL DISCUSSION

**12.30 - 13.15 GROUP 1 (please refer to your name badge) proceed to...**

**LUNCH | INDUSTRY EXHIBITION | POSTER VIEWING - Merchant Hall**

**12.30 - 13.15 GROUP 2 (please refer to your name badge) proceed to...**

**Industry Session (Room: Herringbone)**

Anterior Minimally Invasive Surgery: incorporating it into your practice.

**Mr Panos Gikas**



**13.15 - 14.00 GROUP 2 (please refer to your name badge) proceed to...**

**LUNCH | INDUSTRY EXHIBITION | POSTER VIEWING - Merchant Hall**

**13.15 - 14.00 GROUP 1 (please refer to your name badge) proceed to...**

**Industry Session (Room: Herringbone)**

Anterior Minimally Invasive Surgery: incorporating it into your practice.

**Mr Panos Gikas**



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Thursday 26th June

## ROBOT WARS ROBOT WARS



14.00 - 15.30

ROOM: Herringbone

**EVALUATING THE KEY FEATURES OF DIFFERENT ROBOTIC SYSTEMS FOR THR AND TKR - WHAT IS THE EVIDENCE BASE?**

Moderators : Prof Paul Baker and Prof Hemant Pandit

14.00

J&J MedTech Velys™ Mr Ben Bloch

**Johnson & Johnson**  
MedTech

14.15

Medacta NEXTAR™ Dr Geert Peersman



14.30

Stryker Mako™ Prof Fares Haddad



14.45

Zimmer Biomet ROSA™ Mr Akash Sharma



15.00 - 15.30 Discussion and Debate

15.30 TEA | INDUSTRY EXHIBITION - Merchant Hall



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## Hip & Knee

Thursday 26th June

### ROOM: Herringbone

#### PERIPROSTHETIC JOINT INFECTIONS

Moderators :

**Mr Jeya Palan & Mr George Whitwell**

**16.00** Biomarkers and diagnosis of PJI.

**Dr Vicente J. León-Muñoz**

**16.15** Role of an infection registry BAJIR: current and future value. **Mr Tim Petheram**

**16.30** Role of a DAIR: Tips and tricks.

**Mr Abtin Alvand**

**16.45** Revision for PJI: 1 stage, 1.5 stage, 2 stage.

**Mr Mike Petrie**

**17.00** MOCK infection MDT cases to discuss Microbiology & Radiology.

**All speakers**

### ROOM: Tweed

#### WHAT'S NEW IN (HIP & KNEE) REHABILITATION?

Moderator: **Mr Niall Maher & Mr Osman Riaz**

**16.00** OA knee and hip – “Back to school for improved outcomes”. **Ms Anna Anderson**

**16.15** Shared decision-making in ACL injury management. **Ms Hayley Carter**

**16.30** ACL healing- role of Cross bracing.

**Mr Colin Ayre**

**16.45** The Adolescent Hip: Key Considerations for Management & Rehabilitation in Youth Athletes. **Mr Sam Dawson**

**17.00 Discussion**

### ROOM: Herringbone

#### GOVERNANCE AND PRACTICE

Moderators : **Sam Jain and Jeya Palan**

**17.30** Role of ODEP and Beyond Compliance. **Mr Rohit Rambani**

**17.45** Day case arthroplasty. **Mr Graham Walsh**

**18.00** DAY 1 CLOSE

### 19:30 CONFERENCE DINNER (Entry by pre-booked ticket)

Palm Court Suite, The Queens Hotel, Leeds, LS1 1PJ

Connect with colleagues and join us for an evening of stories, laughter, and sporting inspiration.



#### After-Dinner Speaker: Farokh M. Engineer

A legend of Indian and international cricket, Farokh M. Engineer brought flair and charisma to the game — and life — with a spring in his step and joy in his heart. Known as one of cricket's original matinee idols and famously one of the “Brylcreem Boys,” Farokh was not only a dashing batsman but also a world-class wicketkeeper.

His scintillating century in Madras (now Chennai) against the fearsome West Indies attack of Hall, Griffith, and Sobers remains etched in cricketing folklore.

Farokh holds the unique distinction of being the **only Indian cricketer ever selected as the No. 1 wicketkeeper-batsman for the elite World XI on three separate occasions** — a testament to his exceptional talent and international reputation.

No less than Sir Donald Bradman once said:

“I always enjoyed Farokh's entertaining batsmanship and the way he enjoyed the game of cricket. He is one of the game's great ambassadors on and off the field — always a delight to talk to — and without doubt, one of the world's great wicketkeeper-batsmen.”

As a mark of his admiration, “The Don” even presented Farokh with one of his cherished baggy green caps — a rare and profound gesture of respect.

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## Hip & Knee

Friday 27th June

### 08.00 REGISTRATION & COFFEE - Merchant Hall

#### ROOM: Herringbone

##### PRIMARY HIP ARTHROPLASTY

Moderator : **Mr Josh Lamb**

**08.30** Direct Anterior Approach for THR.

**Mr Joe Aderinto**

**08.45** Dual mobility in primary THR.

**Mr Sebastian Dawson-Bowling**

**09.00** Complex primary cases: primary THR after failed trauma. **Mr Simon Jameson**

**09.15** Complex primary cases: THR in severe hip dysplasia. **Mr James Shelton**

**09.30** Role of hip resurfacing. **Mr Jim Holland**

**09.45** PANEL DISCUSSION

#### ROOM: Tweed

##### SOFT TISSUE KNEE I ACL

Moderators: **Mr Steve Guy & Mr Shaun O'Brien**

**08.30** Decision making in ACL surgery: who and when? **Mr Oday Al-Dadah**

**08.45** Choosing the graft including video demo.

**Mr Rahul Bhattacharyya**

**09.00** How do I do an ACL recon including video demo? **Mr Chim Gupte**

**09.15** Revision ACL principles. **Mr Adil Ajuied**

**09.30** Paediatric ACL. **Mr Nick Nicolaou**

**09.45** PANEL DISCUSSION

#### ROOM: Herringbone

**10.00 - 10.30**

##### Complex case-based discussion Hip & Knee Arthroplasty

Moderators: **Jeya Palan & Mike Petrie**

#### ROOM: Tweed

##### Industry Session



ZIMMER BIOMET

##### Achieving better TKAs with robotics and data analytics

**10:00** Introduction

**10:05** Achieving better TKAs through implant design & selection. **Mr Akash Sharma**

**10:10** Personalizing TKA Alignment with Robotics. **Mr Akash Sharma**

**10:15** Connecting data to optimize TKA outcomes. **Mr Akash Sharma**

**10:20** Personalizing the patient experience from consultation to recovery.

**Mr Akash Sharma**

**10:25** Q&A

### 10.30 COFFEE | INDUSTRY EXHIBITION - Merchant Hall



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## Hip & Knee

Friday 27th June

### ROOM: Herringbone

#### REVISION HIP ARTHROPLASTY

Moderators : **Chris Lewis and Simon Jameson**

**11.00** Periprosthetic fractures around the hip:  
current updates. **Mr Josh Lamb**

**11.15** Periprosthetic fractures: fix or revise.  
**Mr Sam Jain**

**11.30** Dealing with bone loss: Femoral side.  
**Mr Sebastian Dawson-Bowling**

**11.45** Dealing with bone loss: Acetabular side.  
**Mr Josh Lamb**

**12.00** Role of custom implants. 3D printing for  
complex cases.

**Prof Lalit Maini**

**12.15** PANEL DISCUSSION

### ROOM: Tweed

#### ASSOCIATED INJURIES - MENISCUS, OTHER LIGAMENTS AND CARTILAGE INJURIES

Moderators: **Mr Owen Wall & Mr Vishal Rajput**

**Please Note:** 12 minutes presentation followed  
by 3 minutes discussion.

**11.00** Meniscal pathology: trim, repair or replace?

**Prof Stephen McDonnell**

**11.15** MCL injuries. **Mr Bobby Anand**

**11.30** LCL/PLC injuries. **Mr Pete Thompson**

**11.45** PCL injury. **Mr Kash Akhtar**

**12.00** Multi-ligament injuries. **Mr Sanjeev Anand**

**12.15** Chondral pathologies - management  
update. **Prof Leela Biant**

**12.30 - 13.15** GROUP 1 (please refer to your name badge) proceed to...

**LUNCH | INDUSTRY EXHIBITION | POSTER VIEWING - Merchant Hall**

**12.30 - 13.15** GROUP 2 (please refer to your name badge) proceed to...

**Johnson & Johnson  
MedTech**

#### Industry Session (Room: Herringbone)

The VELYS™ Robotic Assisted Solution - an imageless, accurate and reproducible  
Robotic system for TKA and UKA - a surgeon demonstration.

**Mr Ben Bloch**

**13.15 - 14.00** GROUP 2 (please refer to your name badge) proceed to...

**LUNCH | INDUSTRY EXHIBITION | POSTER VIEWING - Merchant Hall**

**13.15 - 14.00** GROUP 1 (please refer to your name badge) proceed to...

**Johnson & Johnson  
MedTech**

#### Industry Session (Room: Herringbone)

The VELYS™ Robotic Assisted Solution - an imageless, accurate and reproducible  
Robotic system for TKA and UKA - a surgeon demonstration.

**Mr Ben Bloch**

Chapel Allerton Orthopaedics in partnership with ISKSAA proudly presents

# GREAT NORTH DEBATE

and the ISKSAA 2025 Annual Meeting



# Hip & Knee

Friday 27th June

## ROOM: Herringbone

### COMPLEX AND REVISION KNEE ARTHROPLASTY

Moderators : **Mr Sebastian Dawson-Bowling**  
and **Mr Campbell MacEachern**

- 14.00** Periprosthetic fractures around a knee:  
Fix or replace? **Mr Jeya Palan**
- 14.15** TKR with extensor mechanism deficit.  
**Dr Vicente J. León-Muñoz**
- 14.30** Sleeves, cones and stems in revision TKR.  
**Mr Ben Bloch**
- 14.45** Management of post-operative stiffness  
after TKR. **Mr Nick Kalson**
- 15.00** PANEL DISCUSSION

## ROOM: Tweed

### SOFT TISSUE KNEE II: PATELLOFEMORAL PROBLEMS

Moderators:  
**Mr Sanjeev Anand & Prof Caroline Hing**

- 14.00** Anterior knee pain: Assessment.  
**Prof Caroline Hing**
- 14.15** Non op Management and rehab.  
**Ms Claire Robertson**
- 14.30** Surgical strategies for anterior knee pain:  
TTO. **Mr Sanjay Anand**
- 14.45** PFJ instability: assessment and surgical  
management. **Mr Tanweer Ashraf**
- 15.00** CASE BASED DISCUSSION

**15.15 TEA | INDUSTRY EXHIBITION - Merchant Hall**

## ROOM: Herringbone

### UNICOMPARTMENTAL KNEE ARTHRITIS

Moderators :  
**Prof Richie Gill** and **Mr David Duffy**

- 15.45** High tibial osteotomy- planning and  
execution. **Mr David Elson**
- 16.00** Personalised HTO - accurate and faster  
recovery. **Prof Richie Gill**
- 16.15** Why do I do fixed bearing UKR?  
**Prof Nick London**
- 16.30** Why do I do mobile bearing UKR?  
**Mr Nick Kalson**
- 16.45** PANEL DISCUSSION  
When to do a HTO / UKR?

## ROOM: Tweed

### FREE PAPERS & RAPID FIRE PAPERS SESSION

Moderators:  
**Mr Milad Ahmadi** and **Mr Gautam Reddy**

- 15.45 - 17.00**  
Please refer to full abstracts at the end of this  
programme.
- Free Papers **5 minutes presentation** followed by  
**2 minutes discussion.**
- Rapid Fire Papers **2 minutes presentation**  
followed by **1 minute discussion.**

## ROOM: Herringbone

**17.00 - 17.15**

**Prizes - Best Free Paper, Best Poster, Exhibition Prize draw winners.**  
**followed by Closing Remarks**

**08:45 - 08:50**

**(#27)**

**DIRECT ANTERIOR APPROACH IS PHYSIOLOGICALLY MORE DEMANDING FOR THE SURGEON THAN THE POSTERIOR APPROACH.**

Amy Firth<sup>1</sup>, Sophie Walker<sup>1</sup>, Benjamin Bloch<sup>1,2</sup>, **Bernard van Duren**<sup>1,3</sup>, Mark Higgins<sup>1</sup>

<sup>1</sup>Nottingham University Hospital, Nottingham, United Kingdom. <sup>2</sup>University of Nottingham, Nottingham, United Kingdom. <sup>3</sup>University of Leeds, Leeds, United Kingdom

Physiological fatigue, an inevitable consequence of surgery, has been linked to reduced performance and increased errors in high-responsibility roles e.g. airline pilots. Up to 33% of intraoperative errors may stem from fatigue. Understanding a procedure's physiological demands should inform operative list planning. The Direct Anterior Approach (DAA) in total hip replacement (THR) is increasingly popular for minimizing soft tissue disruption and encouraging early recovery. However, early reports suggest greater physiological stress for surgeons using DAA versus the Posterior Approach (PA), possibly due to more challenging femoral exposure and the use of lead aprons during fluoroscopy. This study compares surgeon physiological load between DAA and PA.

This prospective cohort study included procedures by a fellowship-trained surgeon proficient in both approaches. Intraoperative cardiorespiratory data—energy expenditure, heart rate, and tidal volume—were recorded, along with operative time, BMI, and complexity. Independent samples t-tests were used to compare continuous variables.

DAA was associated with longer operative time (60 vs. 49 minutes) and greater energy expenditure (mean 309 [SD: 85] vs. 213 [SD: 44] kcal;  $p < 0.05$ ). The energy expenditure rate was also higher with DAA (313 vs. 266 kcal/hour;  $p < 0.05$ ). Mean heart rate was slightly higher in DAA (97 vs. 92 BPM), but not significant; tidal volume showed no difference.

THR via DAA requires significantly greater energy expenditure than PA. This added physiological demand may influence surgical approach selection, case scheduling, and workflow planning. Emerging technologies such as navigation may help reduce reliance on lead protection in the future.

**08:52 - 08:57**

**(#22)**

**BILATERAL SIMULTANEOUS HIP REPLACEMENT USING THE DIRECT ANTERIOR APPROACH IS A SAFE AND PRACTICAL OPTION FOR PATIENTS WITH RECOVERY TIMES COMPARABLE TO UNILATERAL THA.**

**Bernard van Duren**<sup>1,2</sup>, Sophie Walker<sup>1</sup>, Mark Higgins<sup>1</sup>

<sup>1</sup>Nottingham University Hospitals Trust, Nottingham, United Kingdom. <sup>2</sup>University of Leeds, Leeds, United Kingdom

Around 25% of patients needing hip replacement have bilateral disease. Simultaneous bilateral total hip arthroplasty (THA) offers faster recovery, improved mobility, fewer hospital visits, and cost savings compared to staged procedures. However, it carries higher risks, including greater blood loss and cardiovascular strain. It is less commonly performed due to logistical challenges, particularly with the posterior approach (PA). The Direct Anterior Approach (DAA) in supine position may help overcome these challenges.

We undertook a retrospective cohort study comparing bilateral (18 patients) to unilateral THA (100 DAA and 100 PA) patients. All followed a standardised short-stay protocol with preoperative optimisation, standard anaesthesia, early mobilisation, and same-day discharge when appropriate. Outcomes included operative time, postoperative haemoglobin, aid use at 6 weeks, walking time, and Oxford Hip Score (OHS).

Mean operative times were 125 minutes (bilateral), 66 (DAA), and 60 (PA) ( $p < 0.05$ ). Median hospital stays were 47.5 hours (bilateral), 24.0 (DAA), and 29.5 (PA). Mean postoperative haemoglobin in the bilateral group was 113, with no transfusions. Each group had one intraoperative fracture; unilateral groups saw two readmissions and one delayed discharge. At 6 weeks, 65% (bilateral), 61% (DAA), and 44% (PA) walked without aids. OHS and walking times showed no significant differences.

Though bilateral THA had longer surgical times and hospital stays, it did not lead to more complications. Patients achieved similar functional outcomes, with fewer needing walking aids than in the unilateral groups. We conclude that bilateral THA is a safe and viable option, offering practical benefits for both patients and surgeons.



**08:59 - 09:04**

**(#28)**

**EXPERIMENTAL FAILURE OF HIP ARTHROPLASTY UNDER TORSION LOADING**

**Elinor Dhesi**<sup>1</sup>, Samir Salih<sup>2</sup>, Rachel Tomlinson<sup>1</sup>, Saif Salih<sup>2</sup>

<sup>1</sup>University of Sheffield, Sheffield, United Kingdom. <sup>2</sup>Sheffield Teaching Hospitals, Sheffield, United Kingdom

Polymethylmethacrylate (PMMA) bone cement is strong in compression, however tends to fail under torsion. Sufficient pressurisation and interdigitation between cement and bone are critical for the mechanical interlock of cemented orthopaedic implants, and an irregular acetabular cup surface is necessary for reasonable fixation at the cup-cement interface. Limited literature exists on torsional failure mechanisms in cemented polyethylene acetabular prostheses (PAP) with and without cement spacers.

An in vitro study compared three groups of PAP cemented into prepared sawbone hemipelvises:

Group 1 (n=3): PAP without PMMA spacers, with an even cement mantle

Group 2 (n=3): PAP without spacers, 'bottomed-out' into the acetabulum

Group 3 (n=3): PAP with PMMA spacers

The constructs were tested to torsional failure on a custom designed setup, and statistical analysis included a one-way ANOVA and Tukey-Welsh test.

Group 3 demonstrated superior torsional resistance with a statistically significant torque of (145±12Nm) at failure, compared to group 2 (109±7Nm) and group 1 (99±8Nm). Group 3 experienced failure at the bone-cement interface, whereas groups 1 and 2 exhibited failure at the cup-cement interface, with no significant difference between groups 1 and 2. Qualitative failure mode analysis indicated efficient redistribution of stress throughout the cement mantle, consistent with greater cement uniformity.

PMMA spacers increase torsional resistance at the implant-cement interface. Acetabular components without spacers (groups 1 and 2) failed at the implant-cement interface before the cement-bone interface, at a significantly lower torque. PMMA spacers may reduce cement interdigitation with bone, but the torque to failure is likely supraphysiological.

**09:06 - 09:11**

**(#25)**

**COMPLICATIONS REQUIRING RE-OPERATION AFTER HIP, PERIPROSTHETIC AND FEMORAL FRACTURES: A 2-YEAR ANALYSIS USING THE NATIONAL HIP FRACTURE DATABASE**

**Kiran Paknikar**, Eleanor Tung, Sandeep Kohli

Kings College Hospital NHS Foundation Trust, London, United Kingdom

Hip, periprosthetic and femoral fractures in the elderly represent a major orthopaedic challenge due to high morbidity and potential complications. Our hospital treats a high number of these fractures due to the elderly demographics of the local area. Our study evaluates the incidence, causes and outcomes of re-operations in these patients over a two year period in order to improve outcomes.

We conducted a retrospective analysis of the National Hip Fracture Database (NHFD) spanning two consecutive years (2023 and 2024) on patients admitted with hip, periprosthetic and femoral fractures in a District General Hospital. Cases requiring re-operation were analysed to determine indications for return to theatre, patient demographics, fracture type and surgical methods.

A total of 869 cases were identified: 740 neck of femur fractures (85.16%), 90 peri-prosthetic hip fractures (10.36%) and 39 femoral shaft/distal femur fractures (4.49%).

Of these, 13 (1.50%) needed re-operation: 4/433 in 2023 (0.92%) and 9/436 in 2024 (2.06%). Of the patients needing re-operation, 6/13 (46.15%) had more than one return to theatre.

Neck of femur fractures had lower rates of re-operation (1.35%) than periprosthetic fractures (2.22%) and femoral shaft/distal femur fractures (2.56%). The most common indications for re-operation were dislocation, infection and periprosthetic fractures.

Complications requiring re-operation after femur fracture lead to significant morbidity. Awareness of key risk factors and indicators for failure can guide clinical decision making and reduce complication rates. Continued monitoring through national databases like the NHFD is essential for quality improvement in orthopaedic trauma care.

**09:13 - 09:18**

**(#21)**

**REVISION OF UKA TO TKA: NOT ALWAYS A STRAIGHTFORWARD CONVERSION TO PRIMARY.**

**Bernard van Duren**<sup>1,2</sup>, Fady Atia<sup>1</sup>, David Spiers<sup>1</sup>, Reshid Berber<sup>1</sup>, Hosam Matar<sup>1</sup>, Benjamin Bloch<sup>1,3</sup>

<sup>1</sup>Nottingham University Hospitals Trust, Nottingham, United Kingdom. <sup>2</sup>University of Leeds, Leeds, United Kingdom.

<sup>3</sup>University of Nottingham, Nottingham, United Kingdom

Unicompartmental knee arthroplasty (UKA) is a surgical option for treating isolated compartment osteoarthritis (OA) of the knee. One commonly perceived advantage of UKA is that, if it fails, it can be easily converted to a standard primary total knee arthroplasty (TKA). However, this is not always the case. The aim of this study was to establish what proportion of UKA to TKA revision procedures required more than a primary TKA.

A retrospective review of our departmental prospectively maintained database was undertaken to identify all UKA to TKA revisions. 47 UKA to TKA revisions for reasons other than infection were identified.

The mean time to revision after primary UKA was 9.7 years (SD: 5.0 years). The most frequent indications for revision were progression of OA (n=32) and aseptic loosening (n=13). The remaining indications including component wear, unexplained pain, and instability. 20 (43%) were revised to primary TKA components with 57% requiring additional stems, augments, or sleeves. Furthermore, of those converted to standard TKA components 4 (20%) required an insert of 15mm or more.

In summary 66% of UKA revisions required more than a conversion to "straightforward" primary TKA at the time of revision with either thick inserts, stems, augments, or cones utilised. This highlights that tibial bone defects are frequently encountered when revising UKA. The potential complexity of revision surgery following a UKA failure should be carefully considered by both patient and surgeon when weighing up the option of a primary UKA vs. TKA.

**09:20 - 09:25**

**(#10)**

**SATISFACTION AND QUALITY OF LIFE AFTER TOTAL KNEE REPLACEMENT IN THE RURAL POPULATION OF INDIA: A PROSPECTIVE OBSERVATIONAL STUDY**

**Harish Kumar**

Uttar Pradesh University of Medical Sciences SAIFAI, Etawah, India

In rural India, lifestyle demands and functional expectations following total knee replacement (TKR) differ significantly from urban populations due to customary habits such as cross-leg sitting and squatting. This study aimed to evaluate the levels of satisfaction and happiness post-TKR among patients from rural backgrounds.

A prospective observational study was conducted in the Department of Orthopaedics, UPUMS, Saifai, Etawah, following ethical clearance from the Institutional Ethical Committee. A total of 36 rural patients undergoing TKR were enrolled. Clinical and functional outcomes were assessed using the preoperative and postoperative Knee Society Score (KSS) and WHO Quality of Life (WHOQOL) score at baseline, 3 months, and 6 months post-surgery.

Results showed a statistically significant improvement in both KSS and WHOQOL scores at 6 months compared to preoperative values ( $p < 0.05$ ). Despite cultural limitations in postural habits, most patients reported high levels of satisfaction, reduced pain, and improved mobility and quality of life.

This study highlights that with proper counselling and realistic expectation setting, TKR can significantly improve functional outcomes and overall happiness in the rural Indian population.

Keywords: Total Knee Replacement, Rural India, Patient Satisfaction, WHOQOL, Knee Society Score, Functional Outcome.

**09:27 - 09:32**

**(#18)**

**REMOTE REHABILITATION AFTER TKR: DIGITAL INTERVENTION IMPROVES OUTCOMES AND REDUCES RESOURCE USE. INTERIM RESULTS OF THE ACCELEROMETRY AND REHABILITATION AFTER KNEE REPLACEMENT SURGERY (ARK) STUDY**

**Samuel King**<sup>1,2</sup>, Tracey Smith<sup>2</sup>, Charlotte Moses<sup>3</sup>, Farag Shuweihdi<sup>1,4</sup>, Bernard van Duren<sup>1,5</sup>, Hemant Pandit<sup>1,2</sup>, Jeya Palan<sup>1,2</sup>

<sup>1</sup>University of Leeds, Leeds, United Kingdom. <sup>2</sup>Leeds Teaching Hospitals Trust, Leeds, United Kingdom. <sup>3</sup>Hull York Medical School, York, United Kingdom. <sup>4</sup>Libyan International University, Benghazi, Libya. <sup>5</sup>Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom

Increasing demand, long waiting lists and emphasis on cost reduction have contributed to moving post-TKR physiotherapy from face-to-face sessions to self-directed unsupervised home exercises. Physiotherapy adherence with this approach is often poor. Wearable sensor (WS) for remote supervision of physiotherapy is a potential solution, as it allows feedback and bespoke care. However, cost- and clinical effectiveness needs to be proven.

A 200-participant prospective single-centre RCT compared rehabilitation methods for TKR. Allocation was 1:1 unsupervised exercise standard care (SC) group vs remotely supervised rehabilitation with a WS group (BPMPathway sensor, B.Braun, Melsungen, Germany) including pre-surgery instructions and sensor use for a two-week period. Patients were followed up at six-weeks, six-months and twelve-months post-TKR. Primary outcome was OKS at six months. Secondary outcomes included EQ-5D-5L, KOOS, TUG test, ROM and unplanned interventions.

186 patients have reached the primary end point. The two groups were well-matched and there was no difference between the groups for PROMs, functional measures or complications. Compared with SC, WS participants needed less face-to-face physiotherapy (12.8 vs 31.8minutes,  $p=0.007$ ), and fewer surgeon appointments ( $p=0.022$ ) and phone calls ( $p=0.026$ ), but more physiotherapy phone calls (43.4 vs 25.7minutes,  $p<0.001$ ). WS participants with high exercise adherence ( $>2$  exercises/day; 31%) had better early functional outcomes (improved TUG and ROM) vs lower adherence groups (10.07 vs 11.72seconds,  $p=0.044$ ; 110 vs 100degrees,  $p=0.037$  respectively).

Wearable sensors allow remote supervised rehabilitation post-TKR. They reduce face-to-face follow-up, improve adherence and facilitate earlier functional recovery. A multi-centre prospective RCT is needed to confirm these preliminary findings.

**09:34 - 09:39**

**(#19)**

**PERONEUS LONGUS VS HAMSTRING GRAFT FOR ACL RECONSTRUCTION. DO WE REACH TO CONSENSUS?**

**Anshul Dahuja**, Rashmeet Kaur, Supreet Singh  
Guru Gobind Singh Medical College Faridkot, Faridkot, India

ACL reconstruction is one of the leading surgery performed in the athletes. This study aim to compare the functional outcome of ACL reconstruction using Peroneus longus versus Hamstrings autograft. The study will provide valuable information on the preference of autografts for ACL reconstruction.

In this prospective study after clinical and MRI based diagnosis of ACL tear, inclusion and exclusion criteria were applied to select 100 patients. 50 patients were included in PL group & 50 patients in HS group by simple randomisation Tools-Modified Cincinnati Score, Lysholm Score, AOFAS score, FADI score and Tegner activity scale.

PL group showed significantly less surgical time (42.49 minutes vs 55.98 minutes)

MCS/Lysholm score (82.24/82.92 in PL group vs 76.52/77.96 in HS group), AOFAS (90.45) & FADI (91.00) score was better in PL group at the end of 6 months.

Mean thigh hypotrophy in PL group was 0.4cm compared to 1.07cm in HS group after 3 months of surgery. Earlier return to sports (after 9 months) in PL group (22 out of 26 sportsperson) compared to HS group (12 out of 24 sportsperson). Complications like neuropraxia, decreased knee flexion, superficial infection & graft loosening were observed in HS group.

PL is a better autograft than HS for ACL reconstruction, had satisfactory functional outcomes, and do not have any major impact on the ankle joint.



**09:41 - 09:46**

**(#15)**

**ACL RECONSTRUCTION USING TIGHTROPE AUGMENTATION**

**Hayat Ahmad Khan**, Abdullah Saeed Al Zahrani  
Dr Sulaiman al Habib Hospital, Riyadh, Saudi Arabia

Anterior Cruciate Ligament (ACL) injuries are frequently encountered in active individuals, often requiring surgical intervention for optimal recovery. ACL reconstruction using TightRope augmentation has shown promising biomechanical stability and clinical outcomes.

A retrospective analysis was conducted on 30 patients (26 males, 4 females) who underwent ACL reconstruction with TightRope augmentation over the last five years. The surgeries involved 18 right and 12 left knees, with patients aged between 19 and 38 years. Clinical outcomes were assessed using the Lysholm Knee Scoring System, with an average follow-up duration of 24 months.

All patients demonstrated marked improvement in knee function postoperatively. Lysholm scores ranged from good to excellent in all cases, reflecting restored stability and return to pre-injury activity levels. No major complications such as graft failure or infection were reported.

TightRope augmentation in ACL reconstruction is a reliable technique that provides excellent clinical outcomes in young and active patients. The procedure consistently yields good to excellent functional recovery with a low complication rate.

**09:48 - 09:53**

**(#11)**

**ADAPTIVE PATIENT CLUSTERING VIA MACHINE LEARNING FOR PERSONALISED ORTHOPEDIC REHABILITATION: ANALYSING KINETIC DATA FOR IMPROVED OUTCOMES**

**Mikail Aktas**, Shameem Sampath  
Al Rehab, Lytham, St Anne's, United Kingdom

Orthopaedic rehabilitation increasingly demands personalised strategies that integrate precise biomechanical assessments of patients. Traditional approaches reliant on subjective clinical assessments fail to leverage detailed biomechanical insights, limiting the precision of patient-specific interventions. The present study investigates how state-of-the-art machine learning clustering models can adaptively classify patients into clinically meaningful groups based on remotely home-based captured kinetic data.

Our primary aim was to validate whether unsupervised clustering methods applied to home-based kinetic and motion data from knee exercises could inform personalized rehabilitation strategies, and identify patient-specific recovery trajectories.

High-dimensional temporal force and spatial movement (bi-lateral knee) data were prospectively collected from 32 patients using the Slider® home rehabilitation device during knee flexion-extension exercises. Four unsupervised clustering algorithms (K-means, hierarchical clustering, PAM, and CLARA) were applied to this data. Cluster validation employed silhouette analysis, and demographic predictors of cluster membership were evaluated via logistic regression with analysis of covariance adjustment.

The study successfully identified three distinct, clinically relevant kinetic clusters for each knee. Hierarchical clustering showed optimal performance (average silhouette score 0.637) for the right knee, while CLARA performed best (score 0.598) for the left knee. Significant demographic predictors ( $p < 0.01$ ) of cluster membership included BMI, gender, and age, enabling personalized patient stratification.

Adaptive clustering using machine learning significantly enhances identification of rehabilitation patterns, offering clinicians a powerful tool for personalized, data-driven rehabilitation programs, potentially improving orthopaedic outcomes and patient-specific decisions.

**15:45 - 15:50**

**(#3)**

**BIOACTIVE ELECTROSPUN NANOFIBER MEMBRANES FOR PRECISION TREATMENT AND PREVENTION OF BACTERIAL INFECTIONS**

**HE JiBing**

Shanghai Sixth People's Hospital Affiliated to Shanghai Jiao Tong University School of Medicine, Shanghai, China

Periprosthetic infections post-joint replacement cause severe complications due to antibiotic overuse and resistance. To address these issues, we developed an itaconic acid-grafted nanofiber membrane (P/G-CS-OI) to target bacterial infections and promote tissue repair.

Itaconic acid, a byproduct of the tricarboxylic acid cycle, plays critical roles in both bacterial and cellular metabolism. We validated the efficacy of the itaconic acid-based electrospun nanofiber membrane in vitro, as well as in murine wound biofilm infection models and subcutaneous implant-associated biofilm infection models.

The P/G-CS-OI electrospun membrane demonstrated excellent mechanical strength, flexibility, and biocompatibility. Both in vitro and in vivo studies revealed that sustained release of itaconic acid endowed the nanofiber membrane with potent antibacterial and anti-inflammatory activities. Specifically, itaconic acid exerts its antibacterial effects by inhibiting bacterial isocitrate lyase (ICL) activity. ICL is a key enzyme in the glyoxylate cycle, which is absent in animals but critical for prokaryotes, lower eukaryotes, and plants. During chronic infections, bacterial metabolic pathways shift, characterized by reduced glycolysis and enhanced glyoxylate cycle activity. By blocking the glyoxylate cycle, itaconic acid selectively suppresses bacterial proliferation and pathogenicity. Additionally, itaconic acid effectively downregulated pro-inflammatory cytokines (IL-1 $\beta$ , IL-6, TNF- $\alpha$ ) while upregulating anti-inflammatory cytokines (IL-4, IL-10). This immunomodulatory effect promotes macrophage polarization, reduces inflammatory infiltration, enhances angiogenesis, and ultimately facilitates tissue regeneration.

P/G-CS-OI enables precision treatment and prevention of bacterial infections, demonstrating promising potential for combating periprosthetic infections following artificial joint replacement surgeries.

**15:52 - 15:57**

**(#2)**

**THE P2X7R/NLRP3 INFLAMMASOMES AXIS SUPPRESSES ENTHESIS REGENERATION THROUGH INFLAMMATORY AND METABOLIC MACROPHAGES-STEM CELLS CROSSTALK**

**Haihan Gao**, Jia Jiang

Department of Orthopedic Surgery, Shanghai Jiao Tong University Affiliated Sixth People's Hospital, Shanghai, China

The tendon-to-bone interface, referred to as the enthesis, is a complex structure consisting of the tendon, uncalcified fibrocartilage, calcified fibrocartilage, and bone. The sophisticated structure of the enthesis underpins its function.

Injuries to the enthesis, including rotator cuff tears (RCT) and anterior cruciate ligament injuries, are prevalent among the elderly and physically active individuals. Unfortunately, due to the limited regenerative capacity of the enthesis, the intricate structure and function cannot be fully restored post-injury, resulting in an increased risk of reinjury. However, key regulators underlying unsatisfactory regeneration remain poorly understood.

This study reveals that the Purinergic Receptor P2X7 (P2X7R)/Nod-like Receptor Family Protein 3 (NLRP3) inflammasomes axis suppresses enthesis regeneration by amplifying IL-1 $\beta$ -mediated inflammatory crosstalk and suppressing docosatrienoic acid (DTA) metabolic crosstalk. NLRP3 inflammasomes were activated in macrophages following enthesis injury, thereby impairing the histological and functional recovery of the injured enthesis. Single-cell RNA-sequencing (scRNA-seq) indicated that Nlrp3 knockout attenuated pathological inflammation and ameliorated the detrimental effects of IL-1 $\beta$  signaling crosstalk. Furthermore, NLRP3 inflammasomes suppressed the secretion of anti-inflammatory cytokines (IL-10 and IL-13) and DTA. The NLRP3 inflammasomes-mediated secretome reduced differentiation and migration of stem cells. Neutralizing IL-1 $\beta$  or replenishing docosatrienoic acid accelerated enthesis regeneration. Moreover, conditional knockout of P2rx7 in myeloid cells attenuated NLRP3 inflammasome activation and facilitated enthesis regeneration.

Overall, this study demonstrates that the P2X7R/NLRP3 inflammasomes axis represents a promising therapeutic target for enthesis repair.

**15:59 - 16:04**

**(#23)**

**IMPACT OF COMPLEX TRAUMA CASES ON A DEDICATED HIP FRACTURE LISTS: A REGIONAL AUDIT FROM WEST YORKSHIRE ASSOCIATION OF ACUTE TRUSTS**

**Kunal Namjoshi**, Opeyemi Fasasi, Abhishek Chaturvedi, Jeya Palan  
Leeds Teaching Hospital NHS Trust, Leeds, United Kingdom

There are increasing number of complex cases that often affect the productivity and efficiency of a hip fracture trauma list. For example, a revision case for periprosthetic fractures (PPF) around a hip or knee replacement or a periprosthetic joint infection (PJI) case involving a hip hemiarthroplasty/THR or knee replacement. The aim of this audit was to evaluate the frequency and impact of complex trauma cases listed on dedicated hip fracture theatre sessions across a large regional trauma network.

A retrospective audit was conducted at Leeds Teaching Hospitals NHS Trust from 1st January 2024 to 31st March 2025. Daily trauma lists were reviewed to identify and collect data for routine hip fractures, miscellaneous procedures and complex cases. Complex cases included: PPF, PJI, EPR, Complex Revisions and Prophylactic nailing.

Over the audit period, a total of 1,745 cases were listed across 456 theatre sessions. These comprised of 1,292 routine cases (74.0%), 191 complex cases (10.9%), and 262 miscellaneous cases (15.0%). Within the complex case group, periprosthetic fractures (n=78, 40.8%) and prosthetic joint infections (n=64, 33.5%) were the most common sub-types.

There were 167 routine case cancellations (12.9%) related to the presence of complex or miscellaneous cases — complex only (n=68, 40.7%), miscellaneous only (n=54, 32.3%), and both present (n=45, 26.9%).

Complex and miscellaneous trauma cases accounted for 13% of routine cancellations, while a further 118 routine cancellations occurred independently of these cases. It is essential to develop a protocol to avoid greater impacts on dedicated hip fracture lists.

**16:06 - 16:11**

**(#40)**

**COMPARISON OF EARLY POST OPERATIVE CLINICAL AND RADIOLOGICAL OUTCOMES AFTER ROBOTIC AND MANUAL TOTAL KNEE ARTHROPLASTY IN THE SAME PATIENT WITH SINGLE STAGED BILATERAL TOTAL KNEE ARTHROPLASTY.**

**Nikunj Agrawal**, Voonna Charan Kumar, Sunil Sharma  
Institute of Orthopaedics and joint replacement, Robotics, Max Super Specialty Hospital, Vaishali, Uttar Pradesh, Delhi-NCR, India

Robotic-assisted TKR (RATKA) has recently emerged as a potential alternative to conventional TKR(CTKR), aiming to improve surgical precision and potentially enhance clinical and radiological results. This study was done to assess early post operative patient reported clinical and radiological outcomes in a unique patient population undergoing simultaneous bilateral TKR to compare conventional and robotic total knee arthroplasty in the same patient.

This Prospective study included 80 patients who underwent primary TKR for osteoarthritis of both knees from APRIL 2024 to SEPTEMBER 2024. Patients were randomly divided into two groups: those who underwent RATKA n= 80 for one knee and those who underwent CTKR n = 80 for another knee in same patient at a single stage, by same surgeon. Knee function was evaluated by the preoperatively, postoperatively at 3weeks, 6weeks, 3months, 6months. Postoperative knee ROM, KSS and WOMAC and FJS was assessed. Radiographic Assessments using full-length weight-bearing X-rays of the lower limb and anteroposterior and lateral X-rays of the knee were obtained for determination of the mechanical alignment and detect any features suggestive of loosening.

The operation was significantly longer in the RA-TKA group than in the C-TKA group (75min vs 45min,  $p < 0.001$ ). The knee ROM, KSS, and WOMAC were significantly improved in RATKA group till 90 days after the operation compared with before the operation as compared to Conventional TKA ( $p < 0.05$ ), but there were no significant differences between the two groups at 6 months follow up ( $p > 0.05$ ). Radiologically, the robotic-assisted TKR group exhibited significantly better component coronal alignment, though no implant loosening was observed in any of the groups.

Robotic-assisted TKR demonstrated superior accuracy in component alignment and potentially better early functional outcomes compared to conventional TKR. While long-term clinical benefits require further long term follow up, the improved radiological precision achieved with robotic assistance may contribute to enhanced implant longevity.



## Friday 27th June - Free Papers & Rapid Fire Session 15:45-17:00

2 minutes presentation followed by 1 minute discussion.

**16:13 - 16:15**

**(#26)**

### **FIFTEEN YEARS WITH THE CPT: A TALE OF CAUTION FOR EVERY ARTHROPLASTY SURGEON?**

Amy Firth, Jonathan France, Hisham Elbashir, **Bernard van Duren**, Mark Higgins, Andrew Manktelow  
Nottingham Elective Orthopaedics, Nottingham, United Kingdom

The use of Collarless Polished Taper Stem (CPTTM) stem in primary total hip replacement (THR) is associated with an increased rate of postoperative periprosthetic femoral fracture (POPFF). The CPTTM was used as the primary hip stem in our institution from 2009 until 2023, yet an increased POPFF rate had not been obvious within our unit.

CPTTM THRs between 2009-2021 were examined using a combination of National Joint Registry (NJR) and Hospital Episodes Statistics (HES) data with a prospectively maintained local database. Fractures were verified by comprehensive manual radiographic review.

2802 CPTTM stems were identified (18,342 implant years). 41 (1.46%) POPFF were related to the femoral stem. 88.6% of the operated fractures were treated with Open Reduction Internal Fixation (ORIF). 11.4% underwent revision. Prosthesis Time Incidence Rate (PTIR) for POPFF was 2.24%. PTIR for revision remains lower than comparative studies at 0.22%.

Implant specific CPTTM registry-based data publications capturing POPFF resulting in revision have previously demonstrated a POPFF rate of 0.46%. Our review of 2802 CPT stems has demonstrated a PTIR revision incidence of 0.22%. This likely reflects the preference for fixation over revision in our centre.

Whilst the frequency of POPFF with use of the CPTTM in our institution is lower than predicted it is still in excess of comparable stainless steel taper-slip stems or collared cementless femoral stems. Accurate and contemporary review of outcomes and complication rates at a local level remains essential. Registry data does not yet accurately capture all implant related adverse events.

**16:16 - 16:18**

**(#6)**

### **IMPACT OF 'JOINT SCHOOL' ON THE REHABILITATION PATHWAY OF PRIMARY TOTAL HIP AND KNEE ARTHROPLASTIES.**

**Saurabh Sarkar**, Manish Divekar, Ilona Babich  
Royal Cornwall Hospital NHS Trust, Truro, United Kingdom

In England and Wales, between 150,000 and 200,000 primary hip and knee replacements are performed yearly, with projections indicating this number will surge to 268,107 by 2060. UK hospital trusts are actively enhancing perioperative patient services to meet this growing demand. An effective strategy for improving recovery is the implementation of preoperative 'Joint Schools.' This study compares the outcomes of patients who attended the Joint School to those who did not.

This non-randomised study analysed two groups of 53 adult patients in each group, scheduled for elective primary hip or knee Arthroplasties. Patients with revision surgeries, significant mobility issues, or delayed physiotherapy were excluded. The first group underwent surgery without the Joint School service, while the second group received the service before surgery. Comprehensive data was collected on demographics, with the primary outcome focused on the time taken to achieve physiotherapy goals.

The first group (mean age 65.23 years, BMI 30.78, ASA 1.94) required an average of 1.87 days to meet their physiotherapy goals. In contrast, the second group (mean age 68.74 years, BMI 29.58, ASA 1.96) achieved their goals in an average of just 1.38 days ( $P < 0.001$ ).

Patients who received the Joint School service demonstrated significantly faster recovery times and felt noticeably well-prepared for surgery. This study strongly endorses the widespread implementation of Joint Schools as a crucial element of rehabilitation, emphasizing their significant impact on reducing post-operative hospital stays.

**16:19 - 16:21**

**(#14)**

**SKIN TEMPERATURE CHANGE FOLLOWING INFECTED AND NON-INFECTED TOTAL KNEE ARTHROPLASTY: A SYSTEMATIC REVIEW.**

**Fadel Jesry**<sup>1</sup>, Hemant Pandit<sup>2</sup>, Dominic Clarke<sup>3</sup>, Ramakrishnan Venkatesh<sup>1</sup>

<sup>1</sup>Leeds Teaching Hospitals Trust, Leeds, United Kingdom. <sup>2</sup>Leeds Institute of Rheumatic and Musculoskeletal Medicine, University of Leeds, Leeds, United Kingdom. <sup>3</sup>Invio Ltd, University of Leeds, Leeds, United Kingdom

Total knee arthroplasty (TKA) is a common treatment for end-stage knee osteoarthritis. Postoperative changes in skin temperature ( $\Delta$ ST) over the operated knee are well documented, but their clinical relevance—particularly in identifying periprosthetic joint infection (PJI)—remains unclear.

To define the pattern of skin temperature change following TKA and evaluate its potential in detecting PJI.

A systematic review was conducted using PubMed, EMBASE, Google Scholar, and the Cochrane Database up to April 2025, following PRISMA guidelines. Eleven studies involving 1,212 patients met inclusion criteria: adults ( $\geq 18$  years), objective anterior knee  $\Delta$ ST measurements, and  $\geq 6$  months follow-up. Both uncomplicated and PJI-complicated TKA cases were analysed narratively.

In uncomplicated TKA,  $\Delta$ ST peaked within the first postoperative week with a weighted mean of  $3.42^{\circ}\text{C}$ , declining to  $0.9^{\circ}\text{C}$  at 6 months and  $0.48^{\circ}\text{C}$  at 1 year. PJI cases ( $n=25$ , conservatively managed) showed higher and more prolonged  $\Delta$ ST, with a  $0.78^{\circ}\text{C}$  greater mean  $\Delta$ ST than non-infected cases at 1 week. Patients undergoing revision for PJI ( $n=3$ ) exhibited extreme elevations ( $>4^{\circ}\text{C}$ ) persisting up to 3 months postoperatively.

Skin temperature over the knee follows a predictable postoperative decline in uncomplicated TKA. Elevated or sustained  $\Delta$ ST may indicate infection, but current evidence—limited by small sample sizes and methodological variability—does not support  $\Delta$ ST as a reliable stand-alone diagnostic tool for PJI. Further large-scale, standardised studies are needed to clarify its role in early infection detection.

**16:22 - 16:24**

**(#31)**

**CEMENTED OR UNCEMENTED TKR: A SYSTEMATIC REVIEW COMPARING PATIENT EXPERIENCE AND SATISFACTION**

**Francis Irem-Oko**<sup>1</sup>, Edidiong Essiet<sup>2</sup>, Mohammed Qasim Rauf<sup>3</sup>, Ikenna Ugochukwu<sup>1</sup>

<sup>1</sup>Leeds Teaching Hospital NHS Trust, Leeds, United Kingdom. <sup>2</sup>Royal Free London NHS Trust, London, United Kingdom. <sup>3</sup>Hillingdon Hospital NHS Foundation Trust, London, United Kingdom

Knee Arthroplasty is one of the most performed orthopaedic procedures, with options for cemented and Uncemented Implants. Meanwhile, patient experience and satisfaction for each option have not been well established in terms of a robust comparison established and the course and risk factors for AVN in this population post-surgery is not well known.

To compare patient experience and satisfaction post Cemented and Uncemented Total Knee Replacement (TKR)

The Medline (PubMed), Embase, and Web of Science repositories were systematically searched from January 1, 1990, to April 30, 2024. Publications that passed an inclusion test were reviewed for data comparing Patient-Reported Outcome Measures (PROMS) after uncemented and Cemented total knee replacements (TKR). Findings from the included studies were appraised, using the Methodological Index for Non-randomised studies score (MINORS). The results were descriptively analysed and reported as standardised values, including the mean weighted annual incidence rate.

1460 TKR, 842 Cemented and 641 uncemented implants. The mean age was 67.3 (SD 62.0-71.0).

Both Cohorts reported improvement in PROMS (QALYS, KSS, and VAS) at 5 years post-procedure, with no statistically significant difference between the two cohorts. The average MINORS score was  $18.7/24 \pm 2.7$  for all studies ( $n=7$ ).

There is no significant difference in patient experience and satisfaction between patients who undergo cemented and cementless total knee replacements (TKR). There is an argument that the uncemented group has an increased risk of loosening, but this does not necessarily translate to a worse patient experience.

**16:25 - 16:27**

**(#32)**

**PRIMARY VERSUS SECONDARY TOTAL KNEE ARTHROPLASTY FOR TIBIAL PLATEAU FRACTURES: A META-ANALYSIS AND SUBGROUP CHARACTERISATION.**

**Michael Akinfala**<sup>1</sup>, Matthew Hearth<sup>2</sup>, Abdul Waheed<sup>2</sup>

<sup>1</sup>Royal National Orthopaedic Hospital, London, United Kingdom. <sup>2</sup>Mid and South Essex NHS Trust, Basildon, United Kingdom

In elderly patients, tibial plateau fractures are often managed with ORIF, but complications may necessitate secondary TKA. Primary TKA has been proposed as an alternative approach in the management of patient specific cases. This meta-analysis investigates and compares both treatment modalities.

A systematic review of 15 studies from 2010 to 2025 was conducted using PubMed, Cochrane, and Embase. Outcomes evaluated include functional scores, complication rates, and revisions. Subgroup analysis explored regional, sample size, and study design differences.

A total of 512 patients were included. Primary TKA was associated with lower complication and revision rates, with equivalent or improved functional scores compared to Secondary TKA.

These findings support the use of Primary TKA as a primary treatment strategy in selected cases of complex Tibial plateau Fractures, with implications for surgical decision-making and resource allocation.

**16:28 - 16:30**

**(#37)**

**RESTRICTED KINEMATIC VS MECHANICAL ALIGNMENT IN PRIMARY TOTAL KNEE ARTHROPLASTY: A RETROSPECTIVE STUDY**

**Sai Kishan Sirasala**

Medicover Hospitals, Hyderabad, India

Seeing as there are many alignment strategies for total knee arthroplasty (TKA), we need to determine differences between them in a rigorous scientific way. Therefore, we sought to compare perioperative and postoperative functional outcomes in patients undergoing TKA for varus osteoarthritis with a mechanical alignment vs restricted kinematic alignment, both executed with the same implant and same technological guidance.

200 patients who underwent TKA using a mechanical alignment technique were 1:1 matched to 200 patients who underwent TKA using a restricted kinematic alignment (KA) technique, using the same implant and robotic technology. Patient-reported outcomes were measured postoperatively at 6 weeks, 6 months, 1 and 2 years.

Mean VAS scores were higher in the mechanical alignment group during the first 6 weeks (P 1/4 .04), but statistically similar at 1 year. Six-week Veterans RAND 12 Item Health Survey mental and physical components were statistically similar (P 1/4 .1). Patients did not differ in 6-week or 1-year knee range of motion (P > 0.43). Knee Injury and Osteoarthritis Outcome Score Joint Replacement was significantly better in the KA group at 6 weeks, 1 year, and 2 years (P 1/4 .09). Forgotten Joint Score at 1 and 2 years postoperatively were significantly higher in the KA group (P < .001).

Patients undergoing TKA with KA experienced less pain in 6 weeks after surgery, and higher Forgotten Joint Scores at 1 and 2 years postoperatively. Alternative TKA alignment and balancing strategies should be considered to increase patient satisfaction.



**16:31 - 16:33**

**(#30)**

**OUTCOMES FOLLOWING TARGON PLATE FIXATION IN NECK OF FEMUR FRACTURES: A RETROSPECTIVE STUDY OF 105 HIPS**

**Atul Bandi**, Ramesh Thalava, Yeshwanth Nandimandalam  
Tameside General Hospital, Manchester, United Kingdom

Neck of femur fractures present challenges across age groups. The Targon plate system offers a fixed-angle device with dynamic compression to enhance fixation, particularly in minimally displaced fractures.

We retrospectively reviewed 105 hips in 104 patients (mean age: 76 years; range: 22–101 years) treated with Targon plate fixation. Garden and Pauwels classifications were recorded. Outcomes assessed included union rates, avascular necrosis (AVN), and secondary procedures, with a minimum follow-up of two years.

Union was achieved in 98.1% of cases. AVN developed in 17.1% (18 hips), of which 11.1% (10 hips) required total hip replacement (THR). Non-union occurred in 1.9% (2 hips). Periprosthetic fractures were seen in 2.8% (3 patients) after union. Good outcomes correlated with Garden I-II fractures, younger age, and post-reduction angulation less than 10°. Poorer prognosis was associated with higher grade displacement, advanced age, and increased preoperative posterior tilt.

Targon plate fixation is a safe and effective option for minimally displaced neck of femur fractures, demonstrating high union rates and acceptable complication rates even in elderly patients.

**16:34 - 16:36**

**(#4)**

**FUNCTIONAL OUTCOME OF BUCKET HANDLE MEDIAL MENISCAL TEAR REPAIR IN CONCOMITANT ACL RECONSTRUCTION USING HYBRID TECHNIQUE.**

**Hunar Mohammed Ali**

Shar Hospital, Sulaimaniyah, Iraq

Is a type of meniscal tear pattern which is characterized by a meniscal tear that runs vertically and moves the torn inner fragment into the intercondylar notch region. Neglected bucket handle meniscal tear (BHMT)s are those that experience locking during pivoting and spontaneous unlocking during knee extension numerous times before surgery.

This study's goal was to evaluate the clinical success rate, functional outcome knee scores (retrospective study).

All the data has been collected in a pre-recorded computerized program in (Twy Malik Hospital/Sulaymaniyah City/Iraq) with hybrid technique from 2019 to 2021. A total of 58 menisci were assessed in sequential order for the collection of data. postoperative functional knee scores: International Knee Documentation Score (IKDC), Tegner scores and Lysholm scores were evaluated.

58 patients met the inclusion criteria . The mean age of the patients was  $34.78 \pm 4.46$  years old, ranging from 28 to 45. 58.6% of the patients were overweight. The mean follow-up period was 29 months. The mean clinical success rate was 86.2%. In regard to functional outcome scores, the mean of IKDC in pre-operative was 42.89; it was improved to 81.18; the mean of Lysholm score

Patients who underwent repair for BHMTs combining with ACL reconstruction achieved high clinical success rate. The majority of them were able to reach fair to good postoperative Lysholm, IKDC scores, and close to preinjury Tegner score.

**16:37 - 16:39**

**(#7)**

**INCIDENCE AND MANAGEMENT OF RAMP LESIONS IN CASES OF ACL INJURY: PERSPECTIVES FROM A TERTIARY CARE CENTRE.**

**Aakarsh Aggarwal**, Sumit Banerjee, Nitesh Gahlot

All India Institute of Medical Science Jodhpur, Jodhpur, Rajasthan, India

Meniscocapsular separation or Ramp lesions have been reported to be associated with ACL injuries however, no study has been conducted on an Indian population.

This study investigates the incidence of Ramp Lesions in Indian Patients with ACL injury; the extent of lesion and need for repair. We also attempt to assess the sensitivity of MRI in detecting these lesions.

This study was a prospective case series and all patients undergoing ACL reconstruction (ACLR) in the past 18 months were included. The patients' MRI were evaluated for signs of Ramp lesion. During arthroscopy the posteromedial compartment was visualized through the standard anterolateral portal using the trans notch maneuver. If a Ramp lesion was identified, a postero medial portal was created to probe the extent of the lesion and repaired with fibre wire sutures, if required.

Ramp lesion was identified in 15 patients (11.5%) during diagnostic arthroscopy (n= 125). MRI was only 30 % sensitive in identifying ramp lesions (5/15). 11 of the lesions were associated with separation of the mensicotibial ligament on probing and were repaired using fibre wire sutures through the posteromedial portal. The rest 4 lesions were partial lesions with mensicotibial ligament not completely separated and were stable on probing, these weren't repaired.

MRI isn't reliable in diagnosing Ramp lesions preoperatively. All patients undergoing ACLR must have their posterior compartment visualized and a posteromedial portal is essential to probe and repair Ramp lesions.

**16:40 - 16:42**

**(#8)**

**OUTCOME OF A COMBINED ANTERIOR CRUCIATE AND ANTEROLATERAL LIGAMENT RECONSTRUCTION WITH A MINIMUM 2 YEAR FOLLOW UP.**

**Iftikhar Wani**, Shahan Malik

Hospital for Bone and Joint Surgery, Srinagar, India

The anterolateral ligament is a recently identified anterolateral structure involved in rotatory laxity after ACL Rupture. We hypothesised that combined ACL and ALL reconstruction results in better outcome in patients with high grade pivot shift. The objective of this study was to report the outcome after combined ACL and ALL reconstruction in patients with high grade pivot shift test.

Study design: Case series, Level of Evidence IV.

A total of 27 patients who underwent both ACL and ALL reconstruction were included in the study. Indications for combined reconstructions were chronic ACL tear, pivot shift test grade 3, high demand sports and associated second fracture. All patients were assessed pre-operatively and post-operatively with knee stability test and Lysholm scoring.

The mean follow up was 28.2  $\pm$ 3.9. One patient was lost to follow up and another had contralateral ACL tear and were excluded. A total of 27 patients were included for final follow up. The Lysholm score significantly improved in all patients postoperatively ( P <0.01). Preoperatively, all 27 patients had grade 3 pivot shift. Postoperatively 24 had negative ( grade zero ) and three patients had grade 1 pivot shift ( P <0.01)

Our study demonstrates that a combined ACL and ALL reconstruction can be an effective procedure in patients with high grade pivot shift without specific complications. However, long term follow-up studies are necessary to determine whether these combined ALL reconstructions improve the results of ACL treatment, especially with regard to problematic, persistent rotational laxity or graft rupture.

**16:43 - 16:45**

**(#24)**

**HAMSTRING VS PERONEUS LONGUS GRAFT TO ASSESS THE FUNCTIONAL OUTCOME IN ACL RECONSTRUCTION.**

**Abhinav Singla**

Government Medical College and Hospital Chandigarh, Chandigarh, India

The choice of graft material for ACL (anterior cruciate ligament) reconstruction is critical for optimal outcomes. The present study aims to compare postoperative knee, ankle and foot function between patients receiving PL (Peroneus Longus) and STG (Semitendinosus) grafts for ACL reconstruction.

The PL group had 56 patients, and the STG group included 60 patients. Preoperative and postoperative knee and ankle range of motion (ROM) and functional scores were measured at multiple intervals, focusing on six-month outcomes. The two groups were matched with respect to their demographic profiles (age, BMI, sex).

The mean graft diameter for PL group was  $8.14 \pm 0.14$  and STG group was  $8.2 \pm 0.4$ . ( $p > 0.417$ ). Tegner Lysholm score was comparable between groups ( $p > 0.05$ ). AOFAS showed significant difference at 6 weeks, 3 months and 6 months ( $p = 0.009$ ). At six months postoperatively, mean knee ROM was comparable between groups ( $p = 0.464$ ). Ankle ROM differed, with significant difference seen at immediate post-operative period ( $p = 0.0003$ ) and at 6 weeks ( $p = 0.0412$ ). This difference was insignificant at 6 months ( $p = 0.925$ ). KT1000 difference between the two groups was not significant ( $p = 0.33$ ).

ACL reconstruction using either PL or STG autografts yields comparable knee function and range of motion postoperatively. However, PL graft leads to decreased ankle and foot function post operatively. Further long-term studies are needed to assess the clinical outcome with either graft.

**16:46 - 16:48**

**(#5)**

**EFFECTIVE CARE MODEL FOR EMERGENCY OPERATIONS ON HIP FRACTURES IN THE GERIATRIC POPULATION.**

**Saurabh Sarkar**, Manish Divekar, Rory Middleton, Iulia Stoian, Ilona Babich

Royal Cornwall Hospital NHS Trust, Truro, United Kingdom

Life expectancy has been increasing in recent decades, leading to rising numbers of geriatric patients. Hip fractures are a common cause of emergency admissions in this population. Improving outcomes for neck of Femur (NOF) fractures is crucial, as surgery involves complex management, and any delays can severely impact their prognosis. Approximately 75000 NOF fractures are reported annually in the UK.

This observational study analysed 878 geriatric patients with NOF fractures in 2024, closely monitoring their management and outcomes from injury presentation until discharge. The study specifically assessed whether surgery was performed within the critical 36-hour window following presentation.

Among 834 patients requiring surgery, only 275 (32.97%) received it within this timeframe (mean age 82.05, ASA 2.99, time to surgery 52.25 hours). The delays were mainly attributed to: (i) incompatibility with the operating team's skill set or equipment issues ( $n = 30$ ), (ii) awaiting essential medical reviews and stabilisation ( $n = 102$ ), and (iii) insufficient theatre capacity, particularly after weekends ( $n = 423$ ).

The staggering results demonstrate an urgent need to overhaul the management practices for NOF fractures in our institution. Increasing theatre capacity is essential, and moving from the Traditional model to adopting a Geriatric-led care model would improve the time to surgery. This revised approach would involve establishing a dedicated specialist team supported by Anaesthetic and Orthopaedic teams. The objective is to ensure timely diagnosis, implement early interventions, shorten hospital stays, and significantly improve outcomes.



**16:49 - 16:51**

**(#9)**

**WHEN LIFE GIVES YOU LEMONS...A CASE REPORT DESCRIBING THE USE OF A BONY DEFECT TO BYPASS DEFORMITY AND INSERT A TIBIAL NAIL**

**Harjas Singh Shinmar**, Ayush Singh, Satyajit Naique  
Imperial College Healthcare NHS Trust, London, United Kingdom

In this case report we discuss the usage of an osteomyelitic cloaca, to help insert an intramedullary nail to treat an open distal third (Gustillo Anderson 3B) tibial fracture.

A 60-year-old man presented to the emergency department after sustaining a direct collision with a car, sustaining and isolated right open tibial fracture. The patient in question however had suffered from ipsilateral proximal tibial osteomyelitis 20 years prior to this injury, leaving him with proximal tibial bowing, shortening, an 'S' shaped tibial shaft and a 16mm\*31mm anteromedial cloaca. This operative conundrum was managed initially with external fixation and debridement, followed by humeral nail insertion through the proximal tibial cloaca, with plastic surgeons performing a local flap and split skin graft.

To our knowledge this is one of the first documented usages of a pathological bony defect to aid the passing of a humeral intramedullary nail to fix a tibial shaft fracture. This method may be used as an additional technique in a surgeon's armamentarium to gain intramedullary access in fractures with pre-existing complex bony deformity.

**16:52 - 16:54**

**(#12)**

**NEWBORN SCREENING & DETECTION OF DEVELOPMENTAL DYSPLASIA OF THE HIP IN INFANTS WITH RISK FACTORS IN A DISTRICT GENERAL HOSPITAL**

**Harveer Narula**, Mahmoud Barakat, Karen Schwarz  
Calderdale and Huddersfield NHS Foundation Trust, Halifax, United Kingdom

Developmental Dysplasia of Hips (DDH) involve abnormal development of the hip joints in newborns, ranging from mild dysplasia to complete dislocation. Early detection and management are essential to prevent long-term complications.

Aims:

- Evaluate compliance with NIPE newborn hip screening guidelines for newborns with risk factors for DDH and timely referral for ultrasound scan
- Identify investigations and/or orthopaedic involvement for DDH cases

Methodology:

- Retrospective review of records for newborns born at Calderdale between 1<sup>st</sup> April 2023 to 30<sup>th</sup> March 2024, with at least 1 risk factor for DDH
- Review of NIPE screening documentation for hip examinations.
- Time to referral of hip ultrasound and onward orthopaedic review if abnormal findings

Data was available for 230 infants (73%) with at least one risk factor for DDH. Six infants were excluded as they were not born in Calderdale Hospital. From 224 infants (125 girls and 99 boys), 39 (17%) were born < 37 weeks gestation. 13 newborns had delayed NIPE screening examination, 10 infants (4.5%) had an abnormal NIPE examination. Three infants had a delayed hip ultrasound occurring beyond six weeks of age. Eight infants (3.5%) required urgent orthopaedic referrals; four (1.8%) diagnosed with DDH requiring a Pavlik harness, one infant had hip immaturity on repeat ultrasound despite a normal hip examination.

This review found that most at-risk infants received timely hip ultrasounds, with a DDH frequency of just under 2% in our cohort. This may aid discussions with the families of these infants.

**16:55 - 16:57**

**(#29)**

**ELECTIVE ORTHOPAEDIC HOT CLINIC QUALITY IMPROVEMENT PROJECT: PRELIMINARY DATA**

**Zara Coull**, Emma Tonner, Danielle Archer

Chapel Allerton Orthopaedic Centre, Leeds, United Kingdom

Post-operative elective orthopaedic patients often have concerns related to pain, infection, wounds and dressings. At our centre, patient-initiated contact (PIC) occurs via phone call or ward attendance, outside of the patients' planned follow-up. We likely underestimate PIC captured via 'virtual ward' lists, and patient experience varies due to clinician availability. Furthermore, the Trust receives no financial remuneration for these reviews. To address these issues, we developed a quality improvement project to create the "Orthopaedic Hot Clinic".

Objectives:

- Create 'Orthopaedic Hot Clinic' and defined pathway
- Clinic outcomes - clinical and financial audit of services and financial remuneration.
- Understand post-operative needs of patients.
- Staff development and training opportunities.

Data was collected and analysed at two points pre-and post-clinic implementation. 1<sup>st</sup> cycle: 15th October to 31st January 2025. 2<sup>nd</sup> cycle: 1st March to 30th April 2025.

Results:

- 100 episodes of PIC (average=25 pcm) pre-clinic.
- Reassurance and discharge most common outcome 31% (n=31)
- 97 episodes of patient contact (mean=49 pcm) post-clinic implementation.
- Reassurance and discharge most common outcome 49% (n= 48)
- Documentation and clinic outcome measures completed for 100% of patients.

There are significant patient needs post-operatively. The "Orthopaedic Hot Clinic" is an SHO developed and led service, where patients can be seen in a dedicated and appropriately resourced outpatient space separated from the elective inpatient area. The 'ward attender' pathway helps to triage patients, enables prompt review, and improves overall patient experience. Coded clinic outcomes enable financial remuneration and audit.

**16:58 - 17:00**

**(#33)**

**DO WE REALLY NEED MORE THAN ONE PLATE TO FIX BICONDYLAR TIBIAL PLATEAU FRACTURES?**

**Mayank Kumar**, Masroor Ahmed, Ahmad Mohamed, Matija Krkovic

Cambridge University Hospitals NHS Trust, Cambridge, United Kingdom

Tibial plateau (TP) fractures are among the most common traumatic injuries around the knee. The management of fractures stage 5 and beyond of the Schatzker's classification is debatable, with options ranging from internal to external fixation. This study aims to assess the efficacy and outcomes of unicolumnar fixation, using either medial or lateral plates, for TP fractures (Schatzker 5,6).

A retrospective review of electronic records of patients (>16 years) presenting to a MTC with an isolated TP fracture between 2014-2020 was conducted. Only patients with unicolumnar fixation (medial/lateral) were included. The endpoint was defined as radiological evidence of union and pain-free weight bearing on the affected leg. Complications were defined as non-union, implant failure, and collapse of the articular surface requiring further surgery within 12 months.

The cohort comprised 26 patients (15 females, 11 males) with mean age of 45.4 years (range 17-76). Four patients had a single medial plate, while the remainder had a lateral plate. The mean follow-up duration was 14 months (range 0-86). One patient had restricted range of motion (0-50 degrees) but improved significantly after MUA and diagnostic arthroscopy (0-110 degrees). All patients were discharged after follow-up with pain-free weight bearing and comparable range of motion to the contralateral knee. None of the patients required surgery for complications.

Unicolumnar fixation of bicondylar TP fractures is an efficient and cost effective approach with good outcome for treating Schatzker 5&6 fractures where medial tibial condyle is either not displaced or can be reduced without additional fixation.

# POSTERS DISPLAY

Poster display #1

## **FUNCTIONAL AND RADIOLOGICAL OUTCOME IN PATIENTS TREATED WITH PHILOS PLATING FOR PROXIMAL HUMERUS FRACTURES**

**Nishank Chauhan**

Teerthankar Mahaveer University, Moradabad, India

Poster display #2

## **CLEAN JOINTS, CLEAN PLANET: A REVIEW OF THE LITERATURE ON SUSTAINABLE PRACTICES IN ORTHOPAEDIC JOINT REPLACEMENTS**

**Amey Borse**<sup>1</sup>, Janam Merchant<sup>2</sup>, Nahush Borse<sup>3</sup>

<sup>1</sup>Royal Oldham Hospital, Manchester, United Kingdom. <sup>2</sup>WWL, Wigan, United Kingdom. <sup>3</sup>PIMS, Islampur, India

Poster display #3

## **THE CORAIL FEMORAL STEM - DISTAL FIXATION WITH PROGRESSIVE PROXIMAL LOOSENING. A REPORT OF TWO CASES AND A REVIEW OF THE LITERATURE.**

**Babatunde Adewale**, Abhinav Bhardwaj, Gaurang Shah, Gian Singer

Frimley Health NHS Trust, Slough, United Kingdom

Poster display #4

## **SURGICAL CORRECTION OF A RIGID LEFT FOOT CAVOVARUS DEFORMITY IN AN ADULT USING CALCANEUS LATERALISATION AND FIRST METATARSAL OSTEOTOMY**

**Deepak Varghese Kurian**, Tom Ankers

Countess Of Chester Hospital, Chester, United Kingdom

Poster display #5

## **IMPACT OF IMPLEMENTING LIFESTYLE MODIFICATIONS IN OA KNEE**

**Satya Koduru**

Wakefield, United Kingdom

Poster display #6

## **HINGED TOTAL KNEE ARTHROPLASTY FOR CHARCOT NEUROARTHROPATHY OF THE KNEE IN A PATIENT WITH PERIPHERAL NEUROPATHY: A COMPLEX PRIMARY RECONSTRUCTION WITH EARLY FUNCTIONAL RECOVERY**

**Henry Wynn Jones**, Nithin Venkat Mourougayan

Wrightington Wigan and Leigh, Wigan, United Kingdom

Poster display #7

## **REVISION HIP IN LOW RESOURCE SETTINGS - OUR EXPERIENCE**

**Thangamani Satish Kumar**

Stanley Medical College Hospital, Chennai, India

Poster display #8

## **DO ARTHROPLASTY SURGEONS REALLY COMPLY WITH REGIONAL HIP AND KNEE MEETING DECISIONS?**

**Pulkit Kalra**

Royal Oldham Hospital, Oldham, United Kingdom

Poster display #9

## **COMPARATIVE ANALYSIS OF THE EFFECT OF GLENOHUMERAL AND SUBACROMIAL STEROID INJECTIONS IN PRIMARY FROZEN SHOULDER: A PROSPECTIVE, RANDOMIZED SHORT-TERM COMPARATIVE STUDY**

**Sudhir Kushwaha**

Department of Orthopaedics, All India Institute Of Medical Sciences, Gorakhpur, India