

16th International Conference on Orthopaedics, Arthroplasty and Arthroscopy

June 29, 2023 | Webinar

Poster Presentation



ORTHOPAEDICS, ARTHROPLASTY AND ARTHROSCOPY

June 29, 2023 | Webinar

Received date: 05.05.2023 | Accepted date: 07.05.2023 | Published date: 07.07.2023

Total knee arthroplasty in patient above 95 years old: A case report

Hatim Mohammed A AlShareef

King Fahad Armed Forces Hospital, Saudi Arabia

With increasing longevity, more patients older than age 95 in middle east now are becoming candidates for total knee arthroplasty. Total knee arthroplasty (TKA) in the elderly population is becoming increasingly prevalent. This study aimed to assess the outcomes of TKA in patients aged >95 years in middle east, and their post-operative outcomes. Total knee surgery can be performed safely in patients older than 95 years old with excellent pain relief and enhanced quality of life. The surgeon should be aware of the patient's past medical history because this predisposes to postoperative morbidity. To the best of our knowledge, there are no reports of TKR in patients above 95 years old in the current literature. This case provides valuable insight into the feasibility and success of TKR in this age group.

Recent Publications:

- 1 A Systematic Review and Meta-Analysis of Tranexamic Acid in Total Knee Replacement .UK. 2022/ Nov
2. -Functional outcome of ACL reconstruction in Saudi patients At Western region published in Saudi Surgical Journal
3. Anaerobic Spondylodiscitis: A Case Report published in Journal of Medical Cases

Biography

Hatim AlShareef is an Orthopedic surgeon has completed his fellowship in Sport medicine & lower limb reconstruction Arthroplasty from Vienna university and Toronto University, Canada. He is Consultant Orthopedic and head of Quality management and Research committee in Orthopedic department at King Fahd forces armed Hospital, Saudi Arabia. He is participating in Teaching residents and students. He has over 20 publications that have been cited over 100 times, and his publication h-index is 25. He has been serving as an editorial board member of several reputed journals.

dr.hatim.alshareef@gmail.com

Received date: 19.06.2023 | Accepted date: 22.06.2023 | Published date: 07.07.2023

Trapezium fracture: Case report

Mohammed Aljuhani

East Jeddah Hospital, Saudi Arabia

Trapezium fractures are very rare and can lead to a significant deficit of hand function if missed. Isolated fractures of the trapezium account for 3–5% of all carpal fractures (1, 2). However, they should not be missed because inadequate treatment of trapezium fractures can lead to permanent impairment based on the substantial forces experienced at the trapeziometacarpal (TMC) joint in pinch and grip (3, 4). The trapezium forms a double-saddle articulation with the base of the thumb metacarpal allowing motion in two planes—both flexion/extension and abduction/adduction. The volar —beak ligament from the metacarpal to the trapezium is a key structure in maintaining joint stability and resisting dorsal radial subluxation during a key pinch. The trapezium body articulates with the carpal bones. The trapezium ridge is a volar structure that serves as a radial attachment for the transverse carpal ligament (5). Trapezium fractures include body and ridge fractures. Fractures of the trapezium ridge can result from a direct blow or from an avulsion injury. Pain in the thenar area following a wrist injury should alert surgeons to the possibility of a scaphoid fracture, but trapezium fractures can occur, albeit more rarely.

Recent Publications:

1. Borgeskov S, Christiansen B, Kjaer A et al. (1966): Fractures of the carpal bones. *Acta Orthopaedica Scandinavica*, 37: 276–287.
2. Bosmans B, Verhofstad M, Gosens T (2008): Traumatic thumb carpometacarpal joint dislocations. *Journal of Hand Surgery*, 33: 438–441.
3. Martins I, Vasques A, Pereira F et al. (2017): Open Reduction and Fixation of Trapezium Fracture. *MOJ Orthop Rheumatol* 9 (3): 00356. DOI: 10.15406/mojor.2017.09.00356

Biography

Mohamed Aljuhani has working in the Department of Orthopedic Surgery, East Jeddah Hospital, Jeddah, Saudi Arabia.

mohaljh@hotmail.com

Received date: 10.03.2023 | Accepted date: 13.03.2023 | Published date: 07.07.2023

Concomitant ipsilateral transcervical and intertrochanteric fractures of the femur: a case report

Jos Machado

Hospital Pedro Hispano, Portugal

Concomitant ipsilateral femoral neck and trochanter fracture is a very rare injury and hence there is no consensus for its management. Its diagnosis can be missed on standard plain radiographs, which highlights the necessity of further imaging examinations. Careful preoperative assessment and planning are necessary for successful treatment. Case Report: A 70-year-old man was admitted to our emergency department following a fall from standing height at home. On physical examination, our patient reported pain in his right hip. He was unable to move his right lower limb, which presented shortening and external rotation. He had no other injuries. Plain radiographs confirmed the presence of simultaneous transcervical femoral neck and intertrochanteric fractures. To further characterize the fracture a computed tomographic (CT) scan was performed. The patient was proposed for surgery, undergoing a total hip arthroplasty with an uncemented acetabular cup and an uncemented distally fixed modular femoral stem, associated with trochanter fixation with a trochanteric grip plate and a interfragmentary screw. Our patient's post-operative rehabilitation protocol included immediate walking with crutches with partial to full weight-bearing with good evolution. At the last follow-up, 1 year after surgery, the patient had returned to his previous activities, his Harris hip score was 86 and control radiographs showed solid union of the trochanteric fracture and no complications related to the hip arthroplasty. Given the rarity of this injury, the treatment strategy is not standardized. Nonetheless, many options exist which must be adapted to the patient and fracture configuration, taking into consideration the complication risks, disadvantages, and advantages of each one.

Biography

Jose Machado is a resident of Traumatology and Orthopaedics with a vast interest in lower limb pathology, including hip, knee, foot and ankle pathology.

josemachadoortopedia@gmail.com

ORTHOPAEDICS, ARTHROPLASTY AND ARTHROSCOPY

June 29, 2023 | Webinar

Received date: 23-12-2022 | Accepted date: 25-12-2022 | Published date: 15-03-2022

Hip resurfacing in a karate instructor

Jos Machado

Hospital Pedro Hispano, Portugal

Hip arthroplasty in the younger and more active patient remains a challenge for the orthopedic community. The excellent results achieved in an elderly and inactive population are generally not replicated in the younger group. In addition, the expectations of a younger arthritic population have changed over the past decade such that modern prosthetic design must address both the low demand requirements of an elderly patient and the work and leisure aspirations of the younger patient. Case Report: A 41-year-old male martial arts instructor presented with a constant and localized pain in the right hip and groin. Following the examination, the patient was diagnosed with right hip impingement and osteoarthritis (OA). Due to his age and active lifestyle, the patient elected to undergo Birmingham Hip Resurfacing (BHR) rather than Total Hip Arthroplasty (THA). Our patient's post-operative rehabilitation protocol included immediate walking with crutches with partial to full weight-bearing with good evolution. He returned to practicing Karate just 3 months after the surgery. At the last follow-up, 6 year after surgery, the patient kept practicing Karate and working as a Karate instructor and his Harris hip score was 100. BHR is currently being used worldwide as a means to delay THA in the younger patient with OA of the hip or as an option for the more active individual. BHR is chosen in active individuals because a higher level of activity post THA is typically not advised and can be damaging to the implant. In addition, the patient's own femur is spared due to the surgical method..

Biography

José Machado is a resident of Traumatology and Orthopaedics with a vast interest in lower limb pathology, including hip, knee, foot and ankle pathology

josemachadoortopedia@gmail.com

16th International Conference on Orthopaedics, Arthroplastyt and Arthroscopy

June 29, 2023 | Webinar

Accepted Abstracts



Received date: 31.01.2023 | Accepted date: 02.02.2023 | Published date: 10.07.2023

Protective effect of a lateral hinge screw for medial opening wedge high tibial osteotomy in a sawbones model: a matched comparison study

Wiemi A Douguih

Regional Medical Director of MedStar Sports Medicine, USA

Lateral hinge fracture (LHF) occurs in up to 30% of medial open-wedge high tibial osteotomy (MOWHTO) cases. LHF can lead to delayed union, correction loss, and pseudo-arthritis. Recently, a protective hinge wire intersecting the osteotomy plane was shown to increase resistance to hinge fracture by 880% and nearly doubled the angle of correction before fracture. While intraoperative LHF can be decreased with the use of a laterally based wire, no studies have elucidated the protective effect that a hinge screw would confer in simulated postoperative loading.

We hypothesize the lateral hinge would increase the resistance to varus stress.

Methods: In vitro biomechanical testing was conducted utilizing the MTS where varus stress was applied to specimens along the tibial shaft after being mounted proximally at the tibial plateau. Sawbones were prepared with a proprietary patient specific cutting guide to create a standardized 6-degree biplanar MOWHTO.

A protective hinge wire was placed through the guide to prevent LHF during opening of the osteotomy. In 6 of the 12 specimens, a protective antegrade 4.0 mm cannulated screw was placed from the proximal lateral tibial plateau within 1 cm of the lateral tibial cortex. In the remaining 6 specimens the hinge wire was removed after the osteotomy was secured, without hinge screw constituting the control group. Varus load was applied continuously until lateral hinge fracture occurred in all 12 specimens.

Results: The maximum load to hinge breakage was statistically higher in the hinge screw group compared to the control group (437 N vs 336 N, $p = 0.046$). Load to failure was 76% higher in MOWHTO using a hinge screw versus the control.

Conclusions: This study demonstrated that during MOWHTO, screw fixation at the lateral hinge location increased construct resistance to varus stress.

Recent Publications:

1. Douguih WA, Zade R, Bodendorfer B, Siddiqi Y. Outcomes of Selective ACL Repair of the Anterior Cruciate Ligament with Suture Augmentation. *Arthroscopy, Sports Medicine and Rehabilitation* Aug 2020.
2. Bachmaier S, DiFelice, GS, Sonnery-Cottet B, Douguih WA, Smith PA, Pace LJ, Ritter D, Wijdicks CA. Treatment of Acute Proximal Anterior Cruciate Ligament Tears- Part 1: Gap Formation and Stabilization Potential of Repair Techniques. *Orthopedic Journal of Sports Med.* January 2020; 8 (1).
3. Bachmaier S, DiFelice, GS, Sonnery-Cottet B, Douguih WA, Smith PA, Pace LJ, Ritter D, Wijdicks CA. Treatment of Acute Proximal Anterior Cruciate Ligament Tears- Part 2: The Role of Internal Bracing on Gap Formation and Stabilization of Repair Techniques *Orthopedic Journal of Sports Med* January 2020; 8 (1).

Wiemi.a.douguih@gunet.georgetown.edu

ORTHOPAEDICS, ARTHROPLASTY AND ARTHROSCOPY

June 29, 2023 | Webinar

Received date: 23.02.2023 | Accepted date: 25.02.2023 | Published date: 10.07.2023

The effectiveness of virtual reality (VR) in arthroplasty training for surgical trainees: a systematic review with meta-analysis

William Beedham

Sandwell and West Birmingham NHS Foundation Trust, UK

Introduction: Virtual Reality (VR) provides high-fidelity simulation, enabling trainees to practice surgical procedures whilst reducing patient risk. The focus in orthopaedic literature has been on basic surgical skills and arthroscopic procedures. Research into arthroplasty simulation resources is under-represented, and yet this currently represents a significant portion of orthopaedic procedures. This systematic review assesses current literature on the effectiveness of VR for arthroplasty training.

Methods: A systematic literature search was conducted across all relevant bibliographic databases. Randomised controlled trials (RCTs) meeting the inclusion criteria were selected and assessed by three independent reviewers.

The primary outcome was the standardised mean difference (SMD) in either the global rating score or task-specific checklists at pre/post-intervention. This outcome was extracted using a piloted data extraction tool. Where heterogeneity permitted, studies were combined into a meta-analysis. Studies were also assessed for risk of bias using a piloted risk of bias tool, based on that of Cochrane.

Results: 628 studies were identified, of which 624 did not meet the inclusion criteria. All four studies included within this review were combined into the meta-analysis. This meta-analysis displayed a trend that VR improved surgical competence more than existing methods (SMD 1.57, 95% CI [-0.45 to 3.59]; P=0.13), but this did not meet statistical significance. Secondary outcomes in all studies showed VR improved trainee confidence and provided a more enjoyable experience than traditional teaching methods.

Discussion: VR improved surgical competency and improved trainee confidence in performing arthroplasty procedures, therefore indicating that this training modality could benefit both trainees and patients in the future. However, there is a paucity of evidence for VR in arthroplasty training, making results less precise and creating significant inter-study heterogeneity. This highlights the need for further high-quality RCTs to be produced assessing the effectiveness of VR for arthroplasty training.

Recent Publications

1. Lohre R, J.P.Warner J, S.Athwal G, P.Goel D. The Evolution of Virtual Reality in Shoulder and Elbow Surgery. JSES International. 2020 Jun 1;4(2):215–23.
2. Lohre R, Bois AJ, Pollock JW, Lapner P, Mcllquham K, Athwal GS, et al. Effectiveness of Immersive Virtual Reality on Orthopaedic Surgical Skills and Knowledge Acquisition among Senior Surgical Residents. JAMA Network Open. 2020 Dec 28;3(12):e2031217.
3. Lohre R, Bois AJ, Athwal GS, Goel DP. Improved Complex Skill Acquisition by Immersive Virtual Reality Training. The Journal of Bone and Joint Surgery. 2020 Mar;102(6):e26.

Email: beedhamwilliam@gmail.com

INDEX

Angela Munoz Navarro Gasco	10
Aparajita Kumar	33
Archana Ramalingam	49
Archana Ramalingam	52
Bharathkumar Balasubramanian	23
Elena Kovbasa	18
Elena Kovbasa	37
Hatim ALShareef	19
Hatim Mohammed A AISHareef	40
Jassim Shah	29
Javad Norouzi	31
Jos Machado	17
Jos Machado	42
Jos Machado	43
Kevin Larkin A Callos	45

Loveneet kaur	22
Lynette Marielle M Ritos	47
Madhavi Kammela	24
Mohammed Aljuhani	41
N John Camm	35
Nicole Recah D Mabalod	50
Niladri Dutta	30
Sachin Patel	20
Sachin Patel	21
Suhaib JS Ahmad	26
T Rajini Samuel	27
Tobias Bothmann	12
Yasser Mohammed Hassanain Elsayed	36
Yenuksha Amarasena	44