



Third Annual Meeting
Of The
Royal London Hospital Orthopaedic
& Trauma Society

2nd July 2010

Kensington Roof Gardens
London



The Royal London Hospital Orthopaedic and Trauma Society

Dear Colleagues,

Welcome to the Third Royal London Hospital Orthopaedic and Trauma Society Meeting at the Kensington Roof Gardens.

This Day Event is the annual culmination of Orthopaedic Surgical Training for the Royal London Training Rotation and includes visiting speakers whose topics cover Sports Injuries of the Hip, Knee and Shoulder as well as presentations of Research projects by Trainees on the Orthopaedic Programme. The latter will be scored and that judged to be best in originality, content and format will receive the Freeman Prize, to be presented by Mike Freeman at the end of the meeting.

As part of the formal Trainees Programme your support and participation both professionally and socially is greatly valued and I hope that you will find the meeting enjoyable.

Thomas Bucknill
Chairman
Royal London Hospital Orthopaedic and Trauma Society
chairman@rlhots.org

Ali Noorani
Treasurer

treasurer@rlhots.org

Nic Wardle
Membership/IT Secretary
webadmin@rlhots.org

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Nima Heidari
Academic Secretary
academic@rlhots.org

Junior Committee Members:

Sam Heaton, Charlie Jowett, Sarah McMahon, Alasdair Thomas, Jo Thomas.

The Third Annual Meeting of The Royal London Hospital Orthopaedic & Trauma Society has been generously sponsored by Stryker, Johnson & Johnson, Synthes and Orthovita. Please take the time to visit the exhibition stands throughout the day.

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RLHOTS Travelling Fellowship

Ortho Solutions have generously provided sponsorship for a travelling fellowship. The award is for £1000, and is intended to provide support for a senior registrar on the Royal London Rotation who is embarking upon a fellowship. The award is given to aid expenses and is not intended to go towards covering the cost of courses.



Ortho Solutions are an independent, UK-based company specialising in instrumentation and implants for Foot & Ankle surgery. They also supply a wide range of sterile trauma products. "We are proud to support the Royal London Hospital Orthopaedic and Trauma Society, believing that it is the medical device industry's responsibility to contribute towards high-quality training."

Eligibility is based on strict criteria:

- 1) The applicant must be on the Royal London Training Programme and hold a valid National Training Number or equivalent
- 2) The applicant must be able to provide evidence that the award will go towards an accredited fellowship; such evidence will include prospective permission from the SAC to take up the fellowship, or a copy of the application for the same
- 3) The fellowship does *not* have to be outside of the United Kingdom to be eligible

Applications should be submitted to the academic secretary, and must include a current Curriculum Vitae, and a 500 word proposal outlining the fellowship and how the funds would be used.

Selection will be performed by a senior consultant committee, one of whom will be the current Chairman of the society.

The result of the selection process will be announced at the annual academic meeting.

Applications are open for 2011 (the awards first year of use), and the closing date has been set as 28th February 2011.

Freeman Prize

Each year the best registrar paper is awarded the Freeman Prize. The value of this is £250 towards an academic meeting or course of the winners choice.

Past Winners of The Freeman Prize

2008 - Mr P.J.H. Sloper

Bilateral Cementless Total Knee Replacement Following Previous Unilateral High Tibial Osteotomy: Functional Results at an Average of 8 Years

2009 - Mr N. Heidari

Thromboprophylaxis policy and mortality following hip fractures



3rd Annual Academic Meeting
Of The
Royal London Hospital Orthopaedic and Trauma Society
Kensington Roof Gardens
Friday 2nd July 2010



08:20 – 09:00	Registration and Coffee
09:00 – 09:10	Mr TM Bucknill Welcome address from the Chairman
09:10 – 09:50	Mr A Williams <i>"The Present and Future of Sports Knee Surgery"</i>
09:50 – 10:25	Registrar Papers (3)
10:25 – 10:55	Ms A Jaggi <i>"Shoulder Rehabilitation in the Athlete"</i>
10:55 – 11:25	Coffee & Workshop
11:25 – 12:00	Registrar Papers (3)
12:00 – 12:40	Mr M Freeman <i>"Which is more important after TKR: AP Stability or Longitudinal Rotation?"</i>
12:40 – 12:55	Mr D Nawabi <i>"EFORT Travelling Fellowship"</i>
12:55 – 14:25	Lunch & Workshop
14:00 – 14:25	AGM
14:25 – 15:00	Registrar Papers (3)
15:00 – 15:40	Mr S Corbett <i>"The Present and Future of Sports Shoulder Surgery"</i>
15:40 – 16:05	Coffee & Workshop
16:05 – 16:45	Mr F Haddad <i>"The Present and Future of Sports Hip Surgery"</i>
16:45 – 17:00	Presentation of the Freeman Prize and closing remarks

Invited Keynote Speakers

Andrew Williams *MBBS, FRCS, FRCS(Orth)*

*Consultant Orthopaedic Surgeon, Chelsea & Westminster Hospital, London, UK
Visiting Professor at Imperial College London*

Fares Haddad *BSc, MCh(Orth), FRCS(Ed), FRCS(Orth), Dip. Sports Med, FFSEM*

Consultant Orthopaedic Surgeon, University College London, London, UK

Michael Freeman *FRCS(Orth)*

Visiting Professor at the Charles University (Prague) and University College (London)

Anju Jaggi *BSc, MCSP*

Clinical Physiotherapy Specialist, Royal National Orthopaedic Hospital Trust (UK)

Steve Corbett *BSc, PhD, FRCS, FRCS(Tr & Orth)*

Consultant Orthopaedic Surgeon, Guys & St Thomas' Hospital



Registrar Podium Presentations

Session 1 9:50-10:25

Impaction femoral allografting at revision hip arthroplasty using a proximally hydroxyapatite coated stem without cement

Masterson S, Lidder S, Yoon WW, Scott G

Superior functionality results can be obtained treating displaced intracapsular hip fractures with modern metaphyseal fit uncemented hemiarthroplasty

Pastides P, Anwar H, Croft L, Haddo O, Saksena J

Low complication rate of a press-fit lumbar interspinous stabilisation device

Way A, Chatakondur SC

Session 2 11:30-12:05

Prospective comparative study of vicryl rapide and nylon closure of hand and wrist surgery wounds.

Heaton S, Johal K, Dennell L, Sorene E, Taylor E

How does knee motion change after total knee replacement?

Alam M, Bull AMJ, Kessler O, Amis AA

Fractured Neck of femur: The effect of fracture fixation and timing on mortality?

Jowett CRJ, Prime M, Davies T, Basu I, Levack B

Session 3 14:15-15:00

Knee OCD lesions fixed by the AO Hook system; A four year clinical follow-up.

Pengas IP, Kokkinakis M, Myers P, Arbuthnot JE, McNicholas MJ

Have advances in TKR kinematics led to an improvement in function? The 20:20 study.

Crone DM, Heidari N, Mula VR, Loeffler MD, Scott G, Freeman MAR

Impaction femoral allografting at revision hip arthroplasty using a proximally hydroxyapatite coated stem without cement

Masterson S, Lidder S, Yoon WW, Scott G
Royal London Hospital

Introduction

There are conflicting reports in the literature regarding the migration of femoral stems in revision hip arthroplasty following the use of impaction allografting with or without cement. In some cemented series distal migration of the prosthesis within the cement mantle has been recorded, as well as migration of the whole cement / prosthesis construct into the graft.

Method

The results of 26 cases of revision hip replacement using femoral impaction allografting in the absence of bone cement are reported. The mean follow up was 8.5 years (range 4 to 17 years). The technique employed a Freeman stem coated proximally with hydroxyapatite.

Results

Three cases required further revision at 2, 4 and 5 years for high subsidence and unacceptable thigh pain. The remaining 23 cases stabilised following a period of initial settlement and overall results have been comparable to other series that have utilised cement. The initial sinkage in this series occurred mainly in the first six postoperative months.

Discussion

These results, from a single surgeon series, demonstrate that the method is highly technique dependent and relies on adequate graft impaction. With sufficient graft and an appropriate prosthetic design, cement is not essential to the overall success of this method. However, the extent of the initial migration did not accurately predict a successful outcome for the procedure. The absence of cement removes any confusion as to the location of any migration. All prostheses settled into the graft bed. These results should be extrapolated to other prosthetic designs with caution.

Superior functionality results can be obtained treating displaced intracapsular hip fractures with modern metaphyseal fit uncemented hemiarthroplasty

Pastides P, Anwar H, Croft L, Haddo O, Saksena J
The Whittington Hospital, Magdala Avenue, London N19 5NF

Introduction

The cemented Thompson hemiarthroplasty has been shown both from joint registry data and randomised controlled trials to outperform the uncemented Austin Moore hemiarthroplasty in terms of post-operative pain, function and revision rates. However, the use of cement in these frail, elderly patients can be contraindicated due to the potential for cardiopulmonary complications and even intra-operative cardiac arrest.

We propose that modern uncemented hemiarthroplasty implants which are press fit to the metaphysis can achieve similar stability and therefore functional outcomes as cemented implants while avoiding the risks of cement. We present our experience of these implants over the last 2 years.

Materials and Methods

Out of 99 consecutive patients presenting to our institution with displaced intracapsular fracture neck of femur between January 2007 to December 2009, 84 were treated with uncemented, hydroxyapatite (HA) coated metaphyseal fit JRI LOL™ hemiarthroplasty's. The case notes of all patients were reviewed to gather pre, peri and post-operative data in particular, complication rates. All patients were contacted at a mean follow up of 1 year post surgery. Pre and post operative functional scores were recorded. This data was compared with functional data for hemiarthroplasty from the literature.

Results

The mean age of patients at the time of surgery was 84 and mortality at an average of 1 year follow up was 29%. 2 patients required re-operation. There were 5 patients who suffered intra-operative femoral fractures requiring treatment with circlage cables. Other complication rates were similar to published data. Pre-operative functional scores had a median of 7 and post-operative scores were 5. This compared with published data showing post-operative scores of 4 for cemented hemiarthroplasty.

Conclusion

Results using this modern uncemented hemiarthroplasty are comparable to published data for cemented prostheses. Post-operative functional scores were higher than those published for cemented hemiarthroplasty. However the rate of reported intra-operative fracture requiring wiring was higher in this series. There are technical considerations in using these press fit implants in patients with fragility fractures. However, satisfactory outcomes can be obtained without the risks associated with cement.

Low complication rate of a press-fit lumbar interspinous stabilisation device

Way A, Chatakondur SC
Frimley Park Hospital, Surrey, United Kingdom.

Introduction

A variety of interspinous devices exist, with differing fixation methods. This device utilises a press-fit method. We have used it in a variety of clinical settings and have analysed the clinical and radiological outcomes

Methods

113 devices have been implanted into 87 patients, over a 3.5 year period. The indications were central/lateral recess stenosis +/- a foraminal component, grade 1 spondylolisthesis, degenerative scoliosis and as a top-off device above a fusion. Many of the patients had either a complex clinical picture or pathology and were unsuitable for a spinal fusion. An analysis of the MRI scans and radiographs has been carried out together with a clinical review

Results

Average age 60.3 years with a mean follow up 24 months. Pathology: 50 lateral recess, 30 central canal and 23 foraminal stenoses, 19 Grade 1 spondylolisthesis, 10 degenerative scoliosis and 2 top-off patients. 61 single, 25 double and 2 triple level procedures were performed. 48(57%) patients were excellent, 12(14%) were significantly improved, 24(29%) patients were no better and 3 patients were lost to follow-up. Postoperative radiographs were analysed and there were no spinous process fractures, 4 cases of radiolucency around the implant and 1 case of peri-spinous process calcification. None of these cases has required implant removal. There are no dislodgements despite progression of 2 degenerative scoliosis cases and 6 spondylolistheses cases.

Only 1 implant has been removed since our use of this device for clinical failure and 1 patient has been listed for a spinal fusion for progression of spondylolisthesis.

Conclusion

This implant has been used in a variety of clinical situations where it was felt short-term symptomatic failure would occur if a simple lumbar decompression was performed. Population heterogeneity prevented randomisation so we cannot prove that the clinical efficacy of the implant. However radiographic and clinical analysis suggests a low level of implant related complications at up to 3.5 years follow up.

Prospective comparative study of vicryl rapide and nylon closure of hand and wrist surgery wounds.

Heaton S, Johal K, Dennell L, Sorene E, Taylor E

Orthopaedic department. Upper Limb division. University College London Hospital, 235 Euston Road, London, NW1 2BU.

Introduction

Skin closure of hand and wrist wounds is routinely undertaken using both absorbable and non-absorbable suture material. To our knowledge, there have been no studies that have compared absorbable to non-absorbable sutures for all hand surgery operations, in both elective and trauma settings.

Our study was designed to compare the short term outcome in closure of hand and wrist wounds using nylon versus vicryl rapide. The main questions to be answered were

1. Is there an increased incidence of sterile stitch abscesses or infections with vicryl rapide?
2. Is there an increased incidence of dehiscence with vicryl rapide in view of its lower tensile strength and more rapid loss of tensile strength?
3. Do the patients find the short term outcome more acceptable with vicryl rapide vs nylon?
4. Is vicryl rapide or nylon more acceptable in terms of ease of removal?

Methods and Materials

106 patients of ages 12-93 years were recruited. Procedures included all elective and trauma cases seen by the specialist hand unit. All surgery was carried out by orthopaedic surgeons (2 consultants, 2 Registrars and 2 Senior House Officers) with no surgeon allowed to show preference for any one particular type of suture. Cases were assigned as either absorbable (4/0 vicryl rapide) or non-absorbable (4/0 Ethilon nylon) on a random basis, 53 in each group. All sutures were interrupted and covered with paraffin gauze, wool and crepe dressing. Sutures were removed at 2 weeks in dressing clinic by nursing staff.

All operations had a record of the procedure, the suture type and the incision site made at operation. This record followed the patient to the dressing clinic. The patients were then asked to assess on a visual analogue scale from 1 – 10 as series of variables. These included pain, itching, colour, thickness, irregularity.

Dressings nurses assessed the ease of suture removal on the visual scale mentioned above. They also assessed whether or not there was any evidence of dehiscence, infection or stitch abscess.

Results

1. There was no significant difference in infection rates or sterile stitch abscesses
2. There was no significant difference in wound dehiscence.
3. Patients found the short term outcome more acceptable with vicryl rapide vs. nylon in terms of pain, itchiness and scar irregularity but this was not statistically significant.
4. The remnants of the vicryl rapide were easier to remove than nylon, this was statistically significant.

Conclusions

Both absorbable and non-absorbable sutures can be used in hand and wrist surgery with comparable rates of success and of complications. The only significant difference we were able to show was that patients preferred the ease with which vicryl rapide can be brushed off. Absorbable sutures in a patient who can sensibly manage their own wounds could negate the need for wound checks and dressing changes in hospitals and GP surgeries, freeing up resources.

How does knee motion change after total knee replacement?

Alam M, Bull AMJ, Kessler O, Amis AA

Background

The long-term results of Total Knee Arthroplasty (TKA) are favourable with greater than 90% survival at 10-15 years. However survival rates do not give any indication of patient's subjective impression of function and pain. Reported dissatisfaction rates may be up to 20%. This study was aimed at looking at changes in kinematics following TKA which may help explain this dissatisfaction.

Hypothesis

We hypothesised changes in rotations and translations after TKA, with a fixed-bearing ACL-sacrificing, PCL-retaining design with equal-sized, circular femoral condyles, would reflect the changes of articular geometry.

Methods

Using 8 cadaveric knees, we compared the kinematics of normal knees and TKA in a standardised navigated position with defined loads. The kinematics of normal cadaveric knee was measured under specified knee moments and drawer forces, with and without quadriceps contraction. Navigation was used to accurately position the TKA to a standardised position. The quadriceps was tensed; moments and drawer forces applied during knee flexion-extension while recording the kinematics with the navigation system. These post TKA measurements were compared to the kinematics of normal cadaveric knees.

Results

TKA caused loss of the screw-home; the flexed tibia remained at the externally rotated position of normal full knee extension with considerably increased external rotation from 63° to 11° extension. The range of internal-external rotation was shifted externally from 30° to 20° extension. There was a small posterior tibial translation from 40° to 90° flexion. The varus-valgus alignment and laxity did not change after TKA.

Discussion

Navigated TKA provided good coronal plane alignment but still lost some aspects of physiologic motion. The loss of tibial screw-home was related to the symmetric femoral condyles, but the posterior translation in flexion was opposite the expected change after TKA with the PCL intact and the ACL excised. Thus, the data confirmed our hypothesis for rotations but not for translations. It is not known whether the standard navigated position provides the best match to physiologic kinematics.

Fractured Neck of femur: The effect of fracture fixation and timing on mortality?

Jowett CRJ, Prime M, Davies T, Basu I, Levack B
Queen's Hospital Romford, Rom Valley Way, Essex, RM7 OAG

Introduction

Current practice supports early fixation of patients with a fractured neck of femur because studies have shown improved outcomes. We investigated the relationship between patient mortality, timing of procedure and method of fixation.

Method

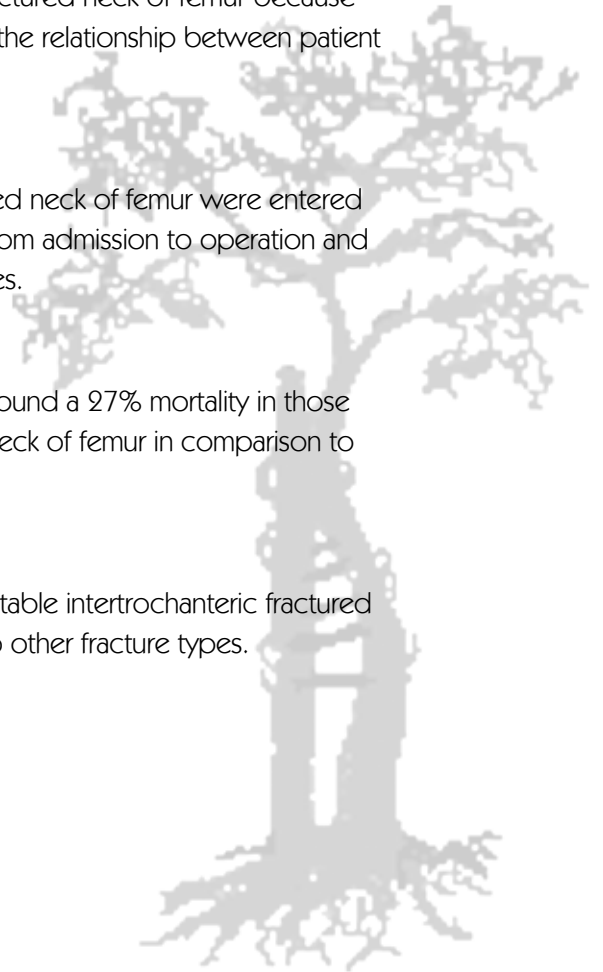
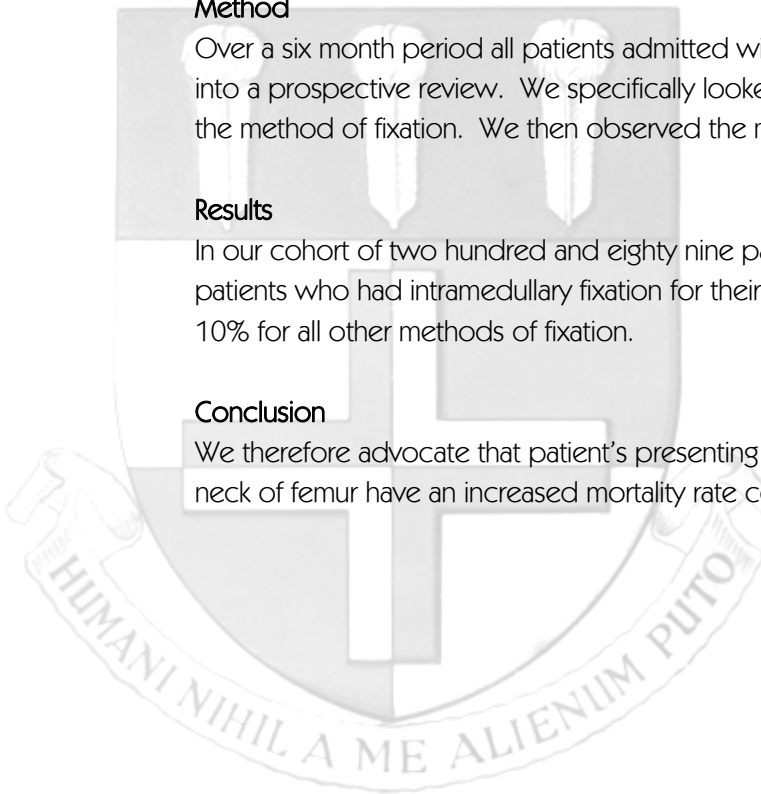
Over a six month period all patients admitted with a fractured neck of femur were entered into a prospective review. We specifically looked at time from admission to operation and the method of fixation. We then observed the mortality rates.

Results

In our cohort of two hundred and eighty nine patients we found a 27% mortality in those patients who had intramedullary fixation for their fractured neck of femur in comparison to 10% for all other methods of fixation.

Conclusion

We therefore advocate that patient's presenting with an unstable intertrochanteric fractured neck of femur have an increased mortality rate compared to other fracture types.



Knee OCD lesions fixed by the AO Hook system; A four year clinical follow-up.

Pengas IP, Kokkinakis M, Myers P, Arbuthnot JE, McNicholas MJ

Introduction

Osteochondritis Dissecans (OCD) is a term used to describe the separation of an articular cartilage subchondral bone segment from the remaining articular surface. Most commonly occurs in the knee, with the medial femoral condyle (MFC) being the most frequently affected site.

The prevalence of OCD is estimated at 15-30 cases per 100,000. Males are affected 3 times more often and 30-40% of cases are bilateral with the average age at presentation between 10-20 years old.

Operative intervention is recommended for stable OCD lesions that failed non-operative management and for all unstable lesions. With the internal fixation of isolated, salvageable, unstable OCD lesions representing the ideal initial mode of surgical treatment.

We present the clinical follow up results at 4 years after internal fixation of such lesions using the AO hook system on seven knee joints.

Materials & Methods

Seven knees with unstable osteochondritis dissecans (OCD) lesions were treated with the AO hook fixation system (four adolescent and two adult patients). Clinical assessment was augmented by outcome scoring with the International Knee Documentation Committee (IKDC), Knee Osteoarthritis Outcome Score (KOOS) and Lysholm evaluation systems.

All 6 patients were male, with the OCD lesions identified in their medial femoral condyle (MFC). Four had open physes at the time of operation (13-18 years of age) and the remaining 2 had closed physes (31 and 32 years of age).

Four out of 6 patients had acute onset of symptoms after a twisting sporting injury and one due to activities of daily living (ADL); all complained of mechanical symptoms.

Results

We demonstrated excellent clinical results in 5 knees, 4 years after fixation of unstable OCD lesions in all adolescent patients using the AO hook fixation system. The remaining two treated adult patients continued to have moderate symptoms at 4 years. At 4 years all 3 scoring systems utilised demonstrated improvement when compared to the pre-operative status. The average Lysholm knee score was improved from 50 to 91, KOOS scores from 53 to 91 and IKDC scores from 39 to 90. Second-look arthroscopies when removing the AO hooks, demonstrated integrity of the articular surface in all but one of the cases, that failed due to delamination of the articular cartilage surface of the lesion at three months

Conclusion

We support early fixation of unstable OCD lesions, particularly in adolescents, as it demonstrates relief of symptoms and improved clinical outcome. Our study demonstrates that the AO hook fixation system offers a comparable alternative method of surgical intervention to other existing methods.

Have advances in TKR kinematics led to an improvement in function?

The 20:20 study.

Crone DM, Heidari N, Mula VR, Loeffler MD, Scott G, Freeman MAR

Aim

To identify a functional difference between two TKR designs to ascertain whether advancement in kinematics has led to an improvement in outcome. The Freeman-Samuelson Mk 3 arthroplasty (a 'roller in trough' design) and the Medial Rotation Knee arthroplasty (a medial pivot design) were compared.

Methods

20 patients in each group were identified from theatre records. The 20 F-S knee arthroplasties were performed at Colchester General Hospital and the 20 MRK arthroplasties were performed at The Royal London Hospital during 2008. All 40 patients were telephoned and asked how the knee was performing, specifically being asked 'Are you aware in any way of your knee in everyday life and if so, in what way?' Demographic information was also collected.

Results

Of the 20 F-S arthroplasties, 13 were female and 7 male (mean age 70.7 and 71 years respectively). 2 of the patients had co-existent spinal pathology but all patients felt that their pre-operative disability was primarily caused by their knee. All 20 patients underwent TKR for osteoarthritis. 6 of the patients interviewed (30%) felt that they had forgotten about their knee replacement and had little or no functional limitations. Of the 20 MRK arthroplasties 13 were female and 7 male (mean age 78.5 and 69.1 years respectively). 2 of the patients had co-existent spinal pathology but, as with the F-S group, all patients felt that the pre-operative disability was predominately due to the knee. 17 of the patients underwent TKR for osteoarthritis and the other 3 patients had a diagnosis of inflammatory arthropathy. 13 of the patients interviewed (65%) felt they had forgotten about their knee replacement and had little or no functional limitation. There was no correlation in either group between the age of the patient and the functional result.

Conclusions

There appears to be a significant difference in functional outcome between the two total knee arthroplasties which is independent of the age of the patient. The medial rotation knee may have functional benefit due to its improved kinematics and increased stability in flexion.

Poster Presentations

Clinical outcome and structural integrity after arthroscopic rotator cuff repair: results at 4 years

Borbas P, Boldin C, Schaffler G, Seibert FJ

Atraumatic Bilateral Patellar Tendon Rupture: A diagnostic challenge
A Case Report & Review of the Literature

Bridgens A, Heidari N, Bucknill TM

Correction of posttraumatic supracondylar axial deviations

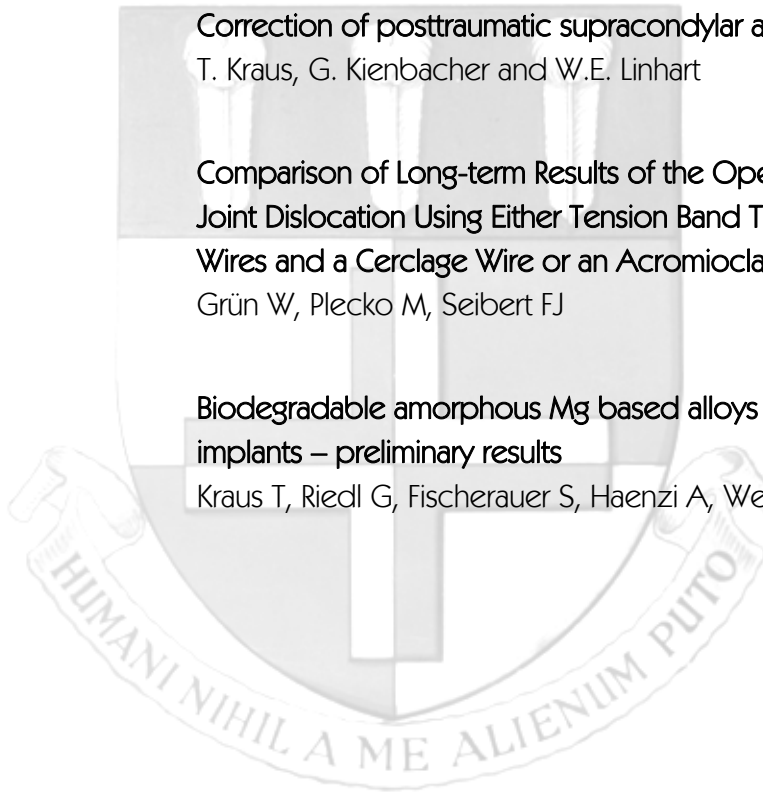
T. Kraus, G. Kienbacher and W.E. Linhart

Comparison of Long-term Results of the Operative Stabilization of Acromioclavicular Joint Dislocation Using Either Tension Band Technique with Two Unthreaded Kirschner Wires and a Cerclage Wire or an Acromioclavicular Hook Plate

Grün W, Plecko M, Seibert FJ

Biodegradable amorphous Mg based alloys - a new approach to biodegradable implants – preliminary results

Kraus T, Riedl G, Fischerauer S, Haenzi A, Wessel V, Löffler J, Weinberg AM



Clinical outcome and structural integrity after arthroscopic rotator cuff repair: results at 4 years

Borbás P¹; Boldin C¹; Schaffler G²; Seibert FJ¹

¹ Department of Traumatology, Medical University Graz

² Department of Radiology, Medical University Graz

Introduction

The good clinical results after arthroscopic rotator cuff repair are already reported in the literature. Only little is known about the mid-term and long-term studies focusing on the clinical results and on the control of the structural integrity of the reconstructed tendon with the use of magnetic resonance imaging.

The aim of this retrospective study was to reveal mid-term results of arthroscopic rotator cuff repair.

Materials and Methods

A series of 22 patients was included in the retrospective study. All patients had isolated full-thickness rupture of the supraspinatus tendon which was repaired arthroscopically by using resorbable suture-anchors in the time between February 2005 and August 2006 at the Department of Traumatology of the University Hospital Graz. The operations were performed by the same team of surgeons. The average follow-up time was 43 (36-50) months after the initial surgery. The evaluation consisted of a standardized history and physical examination, including the UCLA score, the Constant and Murley score, the simple shoulder test (SST) and the shoulder index of the American Shoulder and Elbow Surgeons (ASES) as well as the evaluation of the maximum abduction in comparison with the preoperative state. Further a magnetic resonance imaging of the operated shoulder was performed.

The postoperative cuff integrity was evaluated by the MR images and was classified in 5 subunits: Type 1, sufficient thickness with homogeneously low intensity. Type 2, sufficient thickness with partial high intensity. Type 3, insufficient thickness without discontinuity. Type 4, presence of a minor discontinuity. Type 5, presence of a major discontinuity in at least 2 slices, suggesting a medium-to-large full-thickness tear.

Results

Recurrent full-thickness tears were seen in 5 of the 22 patients, classified as type 4 or 5 in MRI at an average of 3.6 years postoperatively. The exact MRI evaluation revealed 3 shoulders with type 1, 9 with type 2, 5 with type 3, 2 with type 4 and 3 with type 5. At the time of follow-up the average UCLA score showed 33.2 (25-35). The average Constant and Murley score was 86.5 (38-100), the SST showed an average score of 11.3 (8-12) and the average ASES scale was 91.4 (40-100) points.

Conclusion

The mid-term results after arthroscopic rotator cuff repair confirm a sophisticated therapeutically minimal-invasive concept that is outstanding because of its' patient satisfaction. We can further notice good clinical and morphological mid-term results.

Atraumatic Bilateral Patellar Tendon Rupture: A diagnostic challenge

A Case Report & Review of the Literature

Bridgens A, Heidari N, Bucknill TM
Royal London Hospital

Introduction

It is well recognised within the literature that spontaneous bilateral patella tendon rupture is a rare entity particularly in the absence of any concomitant disease. Despite this it still proves to be a diagnostic challenge.

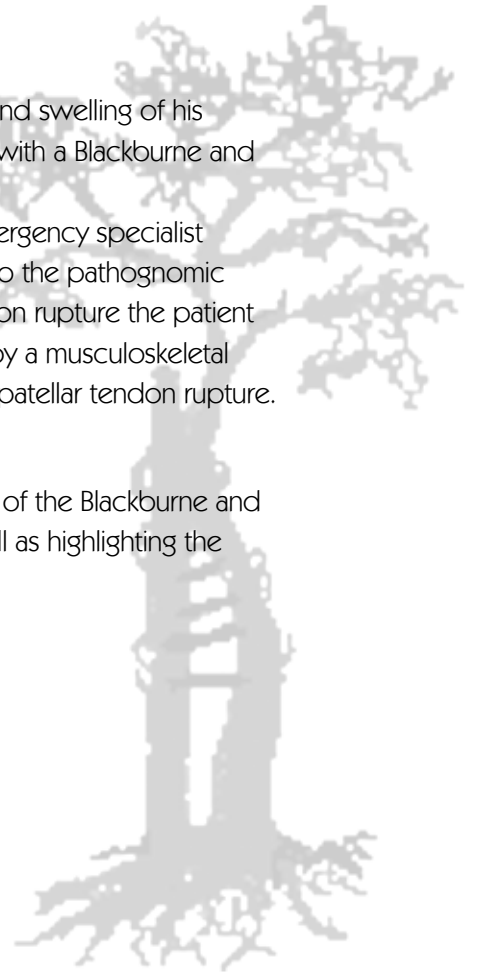
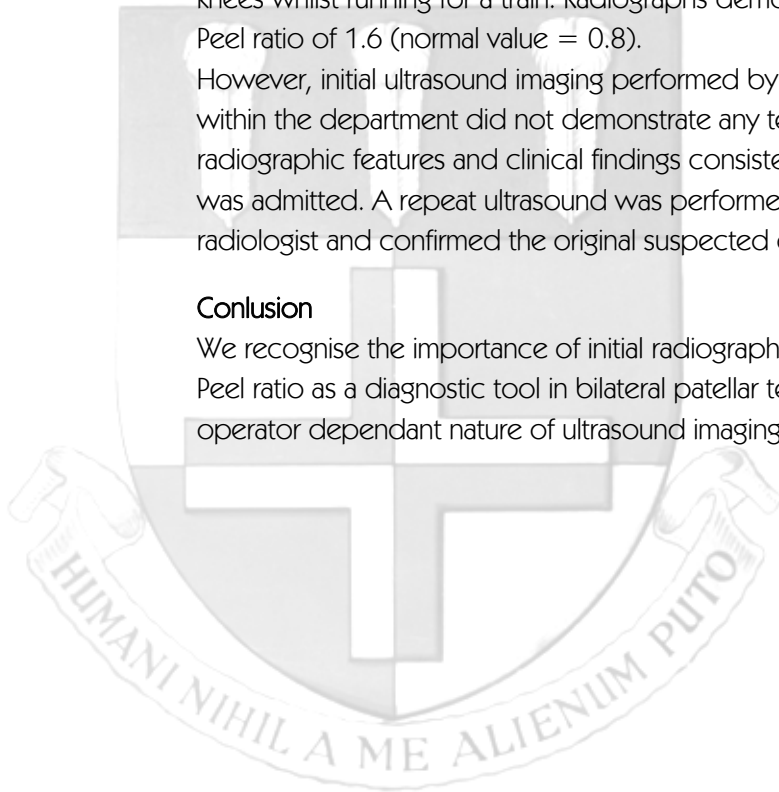
Case Report

We report the case of a 42 year old male with sudden onset of pain and swelling of his knees whilst running for a train. Radiographs demonstrated patella alta with a Blackburne and Peel ratio of 1.6 (normal value = 0.8).

However, initial ultrasound imaging performed by an accident and emergency specialist within the department did not demonstrate any tendon rupture. Due to the pathognomic radiographic features and clinical findings consistent with patellar tendon rupture the patient was admitted. A repeat ultrasound was performed, on this occasion by a musculoskeletal radiologist and confirmed the original suspected diagnosis of bilateral patellar tendon rupture.

Conclusion

We recognise the importance of initial radiographs and the calculation of the Blackburne and Peel ratio as a diagnostic tool in bilateral patellar tendon rupture as well as highlighting the operator dependant nature of ultrasound imaging.



Correction of posttraumatic supracondylar axial deviations

T. Kraus, G. Kienbacher and W.E. Linhart

Paediatric Orthopaedic Unit, Department of Paediatric Surgery, Medical University of Graz, Austria

Introduction

Cubitus varus and valgus are known complications following supracondylar fractures as a consequence of inadequate conservative or operative treatment. In most cases cubitus varus contrary to cubitus valgus is characterized by an internal rotation, varus tilt and extension of the distal fragment. Aim of the study was to evaluate a three-dimensional open correction of the distal humerus without wedge resection with particular regard to subjective parameters, range of motion and cosmetics.

Materials and methods

Between 1998 and 2006 ten children were operated for posttraumatic supracondylar axial deviations and resulting cosmetic or functional impairment (seven cubitus varus, three cubitus valgus). The indications for this treatment were cosmetics, psychological problems and restriction of joint motion. Correction was achieved by means of three planar reorientation of the distal end of the humerus. An external fixation was used for stabilisation. Physiotherapy was started immediately postoperatively. The follow-up examination was performed between 1 and 9 years (average 7.4) after the operation and included subjective, clinical and radiological criteria.

Results

According to our grading system, six patients showed excellent (deviation of axis less than 5°, limitation of flexion/extension less than 10°, normal function of the hand), three a good result (deviation of axis less than 10°, limitation of flexion/extension less than 20°, normal function of the hand). One patient with cubitus valgus and extension deficit of 50° showed a poor result after treatment. The correction improved the extension deficit into 20°, but it brought a limitation of flexion on 120°. All patients were able to participate in sports after five months. Two pin-tract infections and one reversible sensitive irritation of the ulna nerve were observed.

Discussion

The advantage of this operative technique is the possibility to correct axial deviations of the distal humerus in three plans without wedge resection. This approach is easier than traditional supracondylar corrective osteotomies. External fixation has drawbacks such as the need for pin-site care, pin-tract infection, inconvenience, but by means of the stable fixation early postoperative motion is possible.

Comparison of Long-term Results of the Operative Stabilization of Acromioclavicular Joint Dislocation Using Either Tension Band Technique with Two Unthreaded Kirschner Wires and a Cerclage Wire or an Acromioclavicular Hook Plate

Grün W, Plecko M, Seibert FJ. Hospital for Trauma Surgery, Graz

Background

Dislocation of the acromioclavicular joint is a common injury, especially among young and/or active people. Mild lesions are usually treated conservatively, whereas surgical treatment is indicated for high-grade dislocations. Surgical methods can be grossly divided into extra- and transarticular fixation techniques, depending on whether or not the implant directly crosses the joint. Tension band technique with two unthreaded Kirschner wires and a cerclage wire represents the classic transarticular technique, whereas stabilization with a hook plate is one of the most frequently used extraarticular techniques. The purpose of this study was to compare the long-term results of the two mentioned surgical procedures and to demonstrate the advantage of one method.

Hypothesis

We hypothesized that transarticular fixation would promote the onset of AC joint osteoarthritis and therefore lead to a worse clinical and subjective outcome.

Methods

We followed up on 64 patients who were operated on for AC joint dislocation with one of the two mentioned surgical techniques between 1999 and 2005 at the Hospital for Trauma Surgery, Graz. The radiographic examination consisted of anteroposterior AC and axillary radiographs for each shoulder as well as bilateral AP stress radiographs. The clinical follow-up consisted of a detailed anamnesis in addition to the evaluation of the Constant score, UCLA score, and the DASH outcome measure.

Results

We could not detect a statistically significant difference concerning the occurrence of posttraumatic AC joint osteoarthritis between the two groups ($P = .26$). There were no significant differences concerning the score results (Constant score: $P = .06$; UCLA score: $P = .05$; DASH score: $P = .45$), the occurrence of shoulder pain ($P = .60$), and the satisfaction of the patients ($P = .36$) between the two groups. The total length of hospitalization ($P = .01$) as well as the occurrence of loosening or breakage of the implants ($P < .01$) differed on a highly significant level.

Conclusions

We could demonstrate that transarticular stabilization with two Kirschner wires and a cerclage wire tension band, compared to surgical treatment with a hook plate, does not increasingly promote the onset of osteoarthritis of the operated AC joint and does not provide a worse clinical or worse subjective outcome. Though we could detect a significantly lower incidence of breakage or loosening of the implants in the hook plate group, the higher costs and effort needed for the hook plate technique don't seem to be justified by better clinical results or greater patient satisfaction.

Biodegradable amorphous Mg based alloys - a new approach to biodegradable implants – preliminary results

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Background/Aims:

Corrosion, causes material properties to degrade and is an undesirable phenomenon in engineering applications. In the field of biomedical applications, implants which “biocorrode” are of considerable interest. Deploying them instead of permanent implants makes implant-removal surgery unnecessary, hence avoiding a second general anaesthetic and associated unintended iatrogenic complications.

Magnesium is a more attractive biodegradable material than biodegradable polymers, because of its high strength and biocompatibility. Mg-based alloys have shown extended solubility and offer interesting possibilities for altering corrosion behaviour. Moreover an amorphous structure of Mg alloys have been shown to be two to three times stronger than their crystalline counterparts. The aim of this project is to investigate in a rat model several different amorphous Mg alloys for their behaviour during implantation and their solution in the bone by determining the bone-implant-interface.

Methods

31 male Sprague Dawley rats were obtained at a weight of 120g after approval of the veterinary board. under general anaesthesia a mid-diaphyseal transcortical hole was drilled. Different types of amorphous Mg- pins (1.6mm diameter, 8mm length) were press fit to the drill hole. OPs were performed bilaterally. Animals were euthanized after 3months. At euthanasia blood was drawn for differential blood counts. A microfocus CT (μ CT) and a nanofocus (nCT) was used at 1., 5., 7., 9., 11.,15., 18.d,1m, 2m and 3m for determination of the bone-implant contact (BIC) and the bone volume per free space (BV/TV). Biomechanical push-out-testing will be used to determine the maximum push-out-force (Fmax) and the maximum shear strength (Smax). Micro slices will be performed to investigate the interface histologically.

Results

Of 31 animals 29 survived and could be evaluated. Porosity and break was seen in some alloys was seen during implantation. After sacrifice at 3m beginning biodegradation could be macroscopically observed in all different Mg compositions in all specimens and was confirmed by μ CT/ nCT. Some alloys showed gas formation in some specimens the bone was fractured. Some alloys showed non of these negative events (AM 32.10). Push out is planned and the bone implant contact will be determined.

Conclusion

Mg alloys seem to be a promising material for design of biodegradable implants in trauma surgery. By the present investigation there could be found an amorphous Mg alloy which seems to be a promising material for a new biodegradable material (32.10). The further planned investigations (push out, microslices) have to support these preliminary impressions.

News

Current Trainees:

Haroon Mann, Andrew Flood, Natasha Hossain, Adam Way, Ramon Tahmassebi, Zaher Danawi, Nima Heidari, Jit Mangwani, David Crone, Anish Sanghrajka, Ali Noorani, Nic Wardle, Steve Millington, Hilary Bosman, Wai Yoon, Joanna Thomas, Chetan Jayadev, Claire Middleton, Chloe Critchley, Wisam Al-Hakim, Ed Britton, Shafic Al-Namari, Alasdair Thomas, Sarah McMahon, Mahub Alam, Charlie Jowett

New Appointees:

Sam Heaton, Sherif El-Tawil, Steve Keys, Asif Parkar

Consultant Appointments:

Ken Mannan, Consultant

Trevor Seepaul, Consultant, Queen's Hospital Romford

Simon Matthews, Locum Consultant, Royal Melbourne Hospital, Australia

Joyti Saksena, Consultant, Whittington Hospital

Fellowships:

Adam Way; Spinal Fellowship, Frimley Park

Ramon Thamassebi; Hand Fellowship, Sydney Hand Unit

Anish Sanghrajka; Paediatric Fellowship, Children's Hospital Westmead, Sydney

Nima Heidari; Paediatric Trauma Fellowship, Graz

Ali Noorani; Liverpool Shoulder Unit

Travelling Fellowship Awards:

Ali Noorani - British Elbow and Shoulder Society North American Travelling Fellowship

Nima Heidari - AO Travelling Fellowship

FRCS (Tr & Orth):

Natasha Rahman, Andrew Flood, Nima Heidari, Ramon Thamasebbi, Ali Noorani, David Crone, Jit Mangwani, Sarah McMahon, Nic Wardle, Steven Millington

Marriages:

Jo Thomas

New Arrivals:

From Messrs: Heidari, Matthews, Crone and Ms Natasha Hossain

Delegate List

P Achan
 M Alam
 W Al-Hakim
 S Al-Nammari
 A Al-Sabti
 H Banan
 M Barry
 P Borbas (Graz)
 H Bosman
 J Bradley
 T Bucknill
 P Calder
 S Corbett
 D Crone
 P Culpan
 T Douglas
 S El-Tawil
 A Fazal
 A Flood
 M Freeman
 A Galea
 I Garnham
 A Gibson
 M Glehr (Graz)
 B Goldie
 B Grange
 T Greer
 W Gruen (Graz)
 F Haddad
 S Heaton
 N Heidari
 M Heidari
 T Hester
 A Jaggi
 C Jayadev
 C Jowett
 A Khan
 V Khanduja
 M Lamba
 S Lidder
 M Loeffler

C Maizen
 B Martin
 S Masterson
 J Maul
 T McAuliffe
 D McKenna
 S McMahan
 S Mellor
 S Millington
 D Nawabi
 A Noorani
 H Nordeen
 B Okafor
 S Owen-Johnstone
 A Parkar
 J Parker
 I Pengas
 H Plaha
 N Rahman
 J Saksena
 G Scott
 T Seepaul
 F Seibert (Graz)
 S Shankar
 N Siddiqui
 Z Sivardeen
 P Sloper
 F Strobl
 S Symons
 T Tahmassebi
 K Tanzer (Graz)
 A Thomas
 J Thomas
 J Tuite
 K Vemulapalli
 N Wardle
 A Watson
 A Way
 A Weinberg (Graz)
 A Williams
 W Yoon

