Investigate painful THA to determine if infection, aseptic loosening, other problems are the cause

Today’s techniques to diagnose a hip that is painful following primary total hip arthroplasty are markedly better than those previously available and can provide orthopaedic surgeons with more accurate tools to help their patients who face this problem, according to presenters at a symposium 1 June, moderated by Fares S. Haddad, BSc, MCh (Orth), FRCS (Orth), FRCS (Ed).

“If you are faced with a painful arthroplasty, think infection because it is likely infected and the diagnosis is not easy,” Haddad said.

A significant number of organisms are only identified postoperatively, he said.

“In any busy unit worldwide, there will still be cases where we do not pick up an organism and have to do revision surgery without having an organism, so we need better technology,” according to Haddad.

He noted he usually uses a blood test to test a painful hip after total hip arthroplasty (THA), however, a blood test biomarker is close to becoming available.

Although it is a costly technique to diagnose infected THAs, the alpha-defensin test has a high accuracy when used as a lab test, not for bedside care, Haddad said.

It checks for alpha defensin, a protein produced by neutrophils, and can be used in combination with a C-reactive protein algorithm, he said.

“We now have fantastic modern diagnostics both genetic and fast-computing. The future will be with next-generation sequencing where we will send samples up to a cloud. It will analyse against reference values and it will be able to tell you in a few hours what organism you have and what its sensitivity is likely to be. That is probably going to be the biggest advance in infection,” Haddad said.

Carsten Perka, MD, reviewed the advantages of getting a thorough patient history and assessing the patient’s gait, as well as always including infection as a possible cause of pain after THA as well as aseptic loosening.

Perka emphasized the value of imaging a failed THA.

“The standard at my institution is an [anteroposterior] AP view of the pelvis and an AP view of the affected hip,” he said.

A main purpose of imaging is to assess any implant migration.

For that, Perka said, “The gold standard for studies is still the [radiostereometric analysis] RSA.”

The downside of RSA imaging is it can only be used prospectively, he said.

Moussa Hamadouche, MD, PhD, reviewed when impingement, subluxation and instability may be the cause of unexplained post-THA pain.

Recurrent THA dislocation is a common indication for revision surgery in his practice.

“Instability remains a major complication.”

(Post-THA pain continued on page 7)
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Despite complication risks, allograft reconstruction can manage defects

A case series showed bone defects in children after tumoural resections can be managed effectively with allograft reconstruction. An allograft reconstruction for skeletally immature paediatric patients with malignant bone tumours may have a high rate of complications, but can effectively manage big bone defects and provide bone stock for future procedures, according to the results of a retrospective study.

In total, 14 of 18 patients treated with allograft developed some kind of complication, but two patients died prior to the final follow-up of the study and most displayed positive clinical outcomes, Alfonso Vaquero-Picado, MD, said in an interview.

“We can say that allograft reconstruction for resections of malignant tumours of long bone in children under 10 years old is a reliable technique, with good disease control and high rates of success, even if the complication rate is elevated,” Vaquero-Picado said.

High complication rate

Vaquero-Picado and colleagues included 18 patients with malignant bone tumours treated between 1994 and 2002 in their retrospective study. Only patients younger than 10 years old with primary malignant bone tumours of long bones, such as the femur, tibia or humerus, were included.

The median age at diagnosis was 7.6 years, and the retrospective study included 12 boys and six girls. Jorge de las Heras-Sotos, MD, the senior author of the study, performed wide resections in all cases. De las Heras-Sotos was chief of the paediatric musculoskeletal tumours unit at Hospital Universitario La Paz during the study period.

“The point with these patients is they have a long period of growth after the resection, so reconstruction with a conventional prosthesis is not a good option. There is no small prosthesis for a sarcoma affecting the hip of a 2-year-old child, and it would be necessary to change it several times until the end of growth and after that,” he said.

In all, 14 patients developed a complication after surgery. Three patients developed an infection, one developed a local recurrence, two developed graft fractures, three developed graft resorptions, two developed degenerative osteoarthritis, six developed pseudoarthrosis and two developed problems of soft tissue coverage, Vaquero-Picado said.

Alfonso Vaquero-Picado

Provides good bone stock

Reoperations were needed on the same or contralateral side of 16 of the 18 patients and were done for leg-length discrepancy, pseudoarthrosis and other reasons, Vaquero-Picado said.

“We have seen that the rates of incorporation of the allograft in children is superior to those communicated for allografts in adults. It is important, as it provides a solid, functional and reproducible reconstruction and it gives a good bone stock for future procedures, with an excellent rate of survivorship for allograft and patients. This is encouraging data,” he said.

Despite the high rate of complications, most patients can be effectively treated with small, simple procedures, Vaquero-Picado said.

Reference:


Source info:

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Disclosure:

Vaquero-Picado reports no relevant financial disclosures.
Top research submissions awarded at EFORT Congress

During the 17th annual EFORT Congress in Geneva, the EFORT Award Committee honoured the top abstract submissions with a series of awards, including the Free Paper Awards, Jacques Duparc Awards, Allied Professions Award and Trauma Award.

“A congress is always as good as its presentations are,” said Nina Nürnberg, corporate governance and HR manager, EFORT. “In this regard, the EFORT Congress can rely on the experts all over Europe and even worldwide. We would like to take the opportunity to thank all the nominated submitters and the winners for their hard work on their abstracts and their commitment to the orthopaedic and traumatology community.”

Free Paper Awards

The Free Paper Awards recognize the three best-rated free paper submissions. The winning submissions receive a certificate during the congress and a monetary prize of €3,000 for gold, €2,000 for silver and €1,000 for bronze. The winning papers for 2016 are:

**GOLD**

Till Lerch, Switzerland, and colleagues

**Paper Title:** Cumulative 30-Year Follow-Up After Bernese Periacetabular Osteotomy

**SILVER**

Ted Enevist, Sweden, and colleagues

**Paper Title:** Low Back Surgery Prior To Total Hip Replacement Is Associated With Worse Patient-Reported Outcomes

**BRONZE**

Raffaele Vitiello, Italy, and colleagues

**Paper Title:** Focus On Diabetic Foot Neuroarthropathy: Autoimmunity And Charcot Disease.

Allied Professions Award

The Allied Professions Award is given to the best-rated allied profession paper. The winner receives an award stipend of €500 and a certificate during the congress. This year, the winner is:

**Paula Kelly-Pettersson, Sweden, and colleagues**

**Paper Title:** Waiting Time To Surgery Is Correlated With An Increased Risk Of Serious Adverse Events During Hospital Stay In Hip Fracture Patients: A Single Cohort Study Of 577 Hip Fractures

Trauma Award

The Trauma Award represents the best-scored abstract submitted on trauma, with the winner receiving a grant of €1,000 and a certificate. The winner this year is:

**Richard Holleyman, United Kingdom, and colleagues**

**Paper Title:** Risk Factors For The Development Of Deep Infection Following Hip Fracture Surgery: Analysis Of 2,822 Consecutive Patients

Jacques Duparc Awards

The 10 best-rated poster abstracts submitted to the EFORT Congress receive the Jacques Duparc Award, which includes a grant of €1,000 and a certificate. The 2016 winners are:

**Dimosthenis Andreou, Germany, and colleagues**

**Paper Title:** Proximal Humerus Replacement With The Mutars System Following Resection Of Primary Or Secondary Bone Tumours — A Systematic Analysis Of The Reasons For Prosthetic Failure

**Deepak Shivarathre, United Kingdom, and colleagues**

**Paper Title:** Long Term Results Following Large Diameter Metal-On-Metal Total Hip Arthroplasty — Increasing Failure Rates After 6 Years

**Christopher Jantzen, Denmark, and colleagues**

**Paper Title:** Temporal Trends In Hip Fracture Incidence, Mortality And Co-Morbidity — A Study On The Danish Population From 1996-2012

**Kyoung H. Koh, South Korea, and colleagues**

**Paper Title:** How Many Scans Do Novices Need To Reach Competency In Ultrasound Imaging In Detecting Rotator Cuff Pathologies

**Scott Evans, United Kingdom, and colleagues**

**Paper Title:** Reconstruction Of The Distal Tibia Following Resection Of Aggressive Bone Lesions Using A Custom-Made Megaprostheses

**Chul-Hyun Cho, South Korea, and colleagues**

**Paper Title:** Proper Site Of Steroid Injection For The Treatment Of Idiopathic Frozen Shoulder: A Randomized Controlled Trial

**Philippe Hernigou, France, and Charles H. Flouzat Lachaniette, France**

**Paper Title:** Hip Dislocation Prevention In Obese Patients: Dual Mobility Liner And Constrained Liners Versus Preoperative Bariatric Surgery

**Alfonso Vaquero-Picado, Spain, and Eugenio Ferrer-Santacreu, Spain**

**Paper Title:** Enhanced Biocompatibility Of Co-Cr Alloy By Titanium Powder Coating Using 3D Metal Printing

**Lazaros Poultsides, United States, and colleagues**

**Paper Title:** Peri-Operative Outcomes Following Same-Day Bilateral Total Hip Arthroplasty: Does Approach Matter?

EFORT committee selects new board members

Elections for the 2016/2017 EFORT board members took place during the General Assembly on 31 May 2016.

The new 2nd Vice President of EFORT is Assistant Prof. Dr. Per Kjaersgaard-Andersen, of Denmark. Kjaersgaard-Andersen most recently served as EFORT Secretary General. His term of office as 2nd Vice President will be from 4 June 2016 to 2 June 2017; this will be followed by a year serving as 1st Vice President. Kjaersgaard-Andersen will then serve as President of EFORT from June 2018 until June 2019. Kjaersgaard-Andersen is the Chief Medical Editor of Orthopaedics Today Europe.

**Per Kjaersgaard-Andersen**

Mr. David Limb of the United Kingdom has been elected to Secretary General. Limb’s background includes serving as Honourary Secretary of the British Orthopaedic Association, and member of the EFORT Education Committee.

Members at Large for the next term include the re-elected Prof. Dr. Leszek Romanowski, of Poland, who has served in this role since June 2014.

New EFORT Finance Committee members are Prof. Dr. Karsten Dreinhöfer of Germany and Prof. Dr. Jacek Kaczmarszyk of Poland. Dreinhöfer, medical director and head of the Department of Orthopaedics and Traumatology, Medical Park Humboldthäule, Berlin, has previously held the office of 12th EFORT Congress President. Kaczmarszyk is a member of the Board for the Polish Orthopaedic and Traumatology Society and vice president of the Polish Spine Society. In addition, Prof. Dr. Benn Duus of Denmark has been re-elected to a 2nd term. He will serve in this office for an additional 3 years.

DGOU, the German Society for Orthopaedics and Trauma, is a scientific specialist society with approximately 10,700 members, headquartered in Berlin. DGOU is a new national member society, the only German society that is a member of EFORT.
The European Union is spearheading many initiatives to help improve the quality of orthopaedic care and overall public health.

**Horizon 2020**

Horizon 2020 is the largest European programme supporting research and innovation, with nearly €80 billion of funding available. The programme’s goals are to ensure Europe produces world-class science, to remove barriers to innovation and to stimulate growth and jobs across Europe. The Horizon 2020 plan outlines important subjects that must be addressed, including chronic health conditions, personalised health care and musculoskeletal conditions. Because the EU recognises musculoskeletal conditions as an area of research and innovation to pursue presents opportunities to receive increased EU funding for orthopaedics and traumatology. EFORT encourages its members to participate in this programme in order to bring greater benefit to patients.

**European Innovation Partnership on Active and Healthy Ageing**

EFORT continues its partnership with the European Innovation Partnership on Active and Healthy Ageing, which is aimed at increasing healthy life years and improving disease prevention, integrated care, active and healthy ageing and strengthening primary care. The goal of this partnership is to add two years to the average healthy lifespan by 2020. Important upcoming events related to the programme include eHealth Week, Amsterdam, 8-10 June 2016, and the European Summit on Innovation for Health and Active Ageing, Brussels, 6-8 December 2016.

**New Registries**

The Network of Orthopaedic Registries of Europe (NORE) is a standing committee of EFORT. NORE focuses on medical device surveillance and arthroplasty outcomes in order to support improvements in patient care, with special focus on orthopaedic implants. The goals of NORE are to project the importance of using registry data in daily practice to all orthopaedic surgeons who attend the annual EFORT meeting. Valuable registry data range from nomenclature and specifications for various implants, through data analysis and reporting techniques, to new methodology for evaluating performance of medical devices. The International Society of Arthroplasty Registers (ISAR) targets registry researchers. It aims to promote and provide advice on emerging registries, compare data within EU registries, create a platform to discuss registry-related issues, provide means and techniques for data analysis and facilitate communication with EU health care policy makers on issues related to implant performance. EFORT members are encouraged to learn more by visiting www.efort.org/nore and www.isarhome.org.

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Congress format designed to enhance attendee interaction

Attendees of the 17th EFORT Annual Congress 2016 in Geneva will experience a programme that has been formatted to foster interaction, both with symposia and instructional lectures given by distinguished experts from all across Europe.

According to Enric Cáceres, MD, PhD, FRC, 2015/2016 EFORT president and chair of the Autonomous University of Barcelona, the congress has been divided into four activity categories: invited sessions; accepted abstracts, free papers, clinical cases and posters; European subspecialty sessions; and industry symposia.

“Invited sessions consist of different events, such as instructional lectures, debate forums, evidence-based medicine sessions, symposia and interactive exchange cases,” Cáceres said, while free papers sessions “are selected from more than 3,000 abstracts coming from the different countries of Europe, Asia, Middle East and Africa.”

Cáceres noted that for the European subspecialty sessions, the majority of the 17 European subspecialty societies will have their own session, while the industry symposia will take place at lunch on all three days of the congress.

Honorary lectures

During each day of EFORT 2016, a distinguished expert in the field of orthopaedics will present one of the three honorary lectures in the Geneva Auditorium.

On Wednesday, 01 June, from 14:45 to 15:30, Werner Müller, MD, former head of the orthopaedic clinic at KantonsSpital Bruderholz, BaselSlandschaft, Switzerland, delivered the Swiss orthopaedics’ Maurice Edmond Müller Honorary Lecture on the evolution, function and history of the knee.

On Thursday, 02 June, from 12:45 to 13:15, Richard Wallensten, MD, PhD, associate professor of orthopaedics, Karolinska University Hospital, Stockholm, will tackle the training programme for becoming a specialist in orthopaedic surgery in Europe, as well as the current needs of the programme. Attendees of his Erwin Morscher Honourary Lecture, Wallensten said, will learn “more about current problems for the trainees and their mentors, and perhaps have some ideas on how to improve the situation for their own trainees.”

Rounding out the three presentations will be the Michael Freeman Honorary Lecture on Friday, 03 June, from 12:45 to 13:15. For the lecture, Martin Krismör, MD, professor and chairman of the department of orthopaedics, Innsbruck Medical University, Austria, will address the migration of hip implants.

Compelling sessions

Cáceres also highlighted several timely topics that will be covered during the congress, including the obese patient; innovation and sustainability; clinical judgement in the aged spine; periperaoperative management in total knee replacement; and whether to replace or repair bones and joints. The latter, he said, could be one of the main topics of the congress. Other sessions of note include computer-assisted shoulder surgery; early care achieves lifetime mobility; cemented or cementless; new approach, new components, new problems; and implants and biomaterials: is new safe?

Regarding the sessions on new approaches, Cáceres said that prosthesis-associated pathology is a major determinant of quality of life and prognosis for patients who receive implants placed in many anatomic sites. “Implant retrieval and evaluation played a critical role in the evolution of medical devices through development and clinical use,” he said. “The use of implants needs to be evaluated before being placed in clinical cases. Animal models following in vivo function, and biomechanical evaluation is essential. New does not mean better or safe without all these considerations.”

EFORT by the numbers

This year at EFORT, there will be approximately 5,000 delegates in attendance, Cáceres said. In addition, 3,015 abstracts were received, from which 876 were accepted as free papers, 990 as posters, 81 as clinical cases and 16 as nurse abstracts, for a total of 1,763 accepted abstracts.

Disclosure

Cáceres and Wallensten report no relevant financial disclosures.

Patients showed improved pain, functional outcome after total ankle replacement

Patients with end-stage ankle arthritis had early improvement in their quality of life after ankle replacement with the Infinity prosthesis.

Since its launch in 2014, a low-profile fixed-bearing prosthesis that is implanted under fluoroscopic guidance has produced positive outcome data. According to results of a recent clinical study of the implant led by Ian Sharpe, FRCS (TrEdOrth), in Exeter, United Kingdom, patients who underwent the procedure have required no revision procedures to date.

Furthermore, none of the 25 patients who underwent total ankle replacement with the Infinity Total Ankle Replacement System (Wright Medical Technology Inc.) prosthesis experienced radiographic loosening during a mean follow-up of 12 months postoperatively, according to Andrew King, MBChb, MRCS.

“The system is offering pretty good, encouraging early results after 1 year of mean follow up. I think the alignment shows that we are achieving very accurate correction of deformity and anatomical alignment of the prosthesis,” King said.

“The guide that the prosthesis uses allows you to make your bone cuts accurately with a minimally invasive dissection. The wounds seem to heal fast, and we have not had any wound breakdowns. That allows us to get the ankle moving quickly, allows weight-bearing faster and the alignment is so good that the anatomical axis helps patients get back to decent levels of activity quickly,” King, an orthopaedic trainee at the Royal Devon and Exeter Hospital, in Exeter, told Orthopaedics Today Europe.

Positive patient reported outcomes

According to King, the indication for total ankle replacement in these patients was either osteoarthritis or inflammatory arthritis. The patients were prospectively followed for a mean of 12 months postoperatively.

Based on direct patient questioning and patient assessments done using the Manchester-Oxford Foot Questionnaire, the investigators reported all the patients had excellent outcomes.

Functional improvements

According to King, the Infinity prosthesis allowed patients to regain mobility more rapidly than what has been reported with earlier designs of total ankle prostheses.

“The radiological guide for the Infinity leads to accurate clinical alignment and patients can get moving faster,” he said.

Low learning curve

King noted the fluoroscopic navigation used to implant the prosthesis allowed for excellent alignment of all prostheses during implantation. It also helped surgeons restore anatomical alignment by using a reproducible and quickly assimilated technique.

He said the radiation exposure is minimal during the procedure, despite it being fluoroscopically guided. In addition, the learning curve for prosthesis implantation is fairly short, King said.

“The time required to perform the operation accurately falls quickly, and the fluoroscopic guidance use reduces, resulting in low levels of radiation exposure required for the procedure,” he said.

“The system is very logical and is a very reproducible technique that surgeons can pick up quickly and produce reliable results,” King said

The results of the study are early, but highly encouraging, according to King and colleagues. They noted the long-term results will be followed up easily because patients in this study are being monitored via the United Kingdom National Joint Registry for England, Wales, Northern Ireland and the Isle of Man.

Reference


Source Info

Andrew King, MBChb, MRCS, can be reached at Royal Devon and Exeter Hospital, Barrack Rd., Exeter, Devon EX2 5DW, United Kingdom; email: andrewking3@nhs.net.

Disclosure

King reports no relevant financial disclosures.
Study finds bearing type did not affect patient-reported THA outcomes

Claus Varnum, MD, PhD, is scheduled to present results of the study in a patient-reported outcomes session today at 11:30, in the Florence room at the 17th EFORT Annual Congress in Geneva.

Investigators found the use of ceramic-on-ceramic (CoC), metal-on-metal (MoM) and metal-on-polyethylene (MoP) bearings did not lead to significantly different patient-reported outcomes after total hip arthroplasty (THA), Varnum said.

“The difference in [hip disability and osteoarthritis outcome score] HOOS symptom scoring for patients with CoC and MoP [bearings] was statistically significant, but so small there is no reason to believe that this difference is clinically relevant. No other differences were found for patients having THA with CoC or MoM bearings compared to patients having MoP THA in relation to pain from the hip joint, activities of daily living and sporting activities, as well as quality of life,” he said in an interview.

Patient data
Varnum and colleagues identified 4,212 patients who underwent THA with CoC, MoM or MoP bearings between 2002 to 2009 from the Danish Hip Arthroplasty Register. None of the patients had a revision of their primary THA surgery listed in the register.

In total, 3,762 of those patients were available for the questionnaire survey, including the EuroQol-5D (EQ-5D), UCLA activity and HOOS scores. The HOOS score included five subscales for pain, other symptoms, activities of daily living, sport and recreation function and hip-related quality of life.

Of those patients, 145 patients were excluded due to confirmed revision surgery after the patient cohort was generated from the register. In all, 3,082 patients responded to the investigators for a follow-up rate of 85%.

Younger patients had CoC or MoP bearings
Varnum and colleagues found CoC bearings were the most used among the study group, as 1,393 patients (45%) received that type of bearing. Their analysis showed 512 patients (17%) received MoM bearings and 1,177 patients (38%) received MoP bearings.

Patients with CoC and MoM bearings were significantly younger (aged 65.7 years, on average) than patients with MoP bearings (aged 67.4 years, on average).

The study data showed patients with CoC bearings also had lower mean HOOS symptom scores compared with patients who had MoP bearings. Varnum noted this indicated more symptoms occurred in patients with a CoC THA, but this difference likely was not clinically relevant.

Disclosures:

Source info:
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Reference:
Varnum reports no relevant financial disclosures.

Algorithms, techniques support success after failed first surgery for athletic-injured joints

Sports medicine specialists should be aware of re-injury prevention techniques and how to best perform any subsequent surgery when athletes injure their knee or shoulder joints after primary treatment, according to findings presented 1 June during a specialty session of the European Federation of National Associations of Orthopaedic Sports Traumatology (EFOST).

Gernot Felmet, MD, and Gian Luigi Canata, MD, discussed techniques for repeat ACL and PCL surgery and treatment of unstable shoulders, respectively.

New reamers, adapters and bone graft techniques are available for ACL and PCL revision, but the initial focus — before ligament replacement — should be closing the defect and restoring lost bone stock, Felmet said.

“If you would like to close the defect and restore the bone stock, you can use, for example, bone from the iliac crest. This is very common, and you also can use some bone chips,” he said.

Young age is an important factor in the risk of recurrent shoulder instability after primary treatment, Canata said.

Regardless of patient age, conservative treatment can help re-establish shoulder balance in these patients. Arthroscopy can be used after the first failed surgery, as well, but completely avoiding recurrence of shoulder instability is nearly impossible, he said.

With arthroscopy, “you just have to select the proper technique,” Canata said.

“Recurrence in this surgery is multifactorial. You must take care of the hyperlaxity and the bone loss. Depending on the pathology, you can select the proper technique. If you select the proper technique, you can expect a good result,” he said.

Henrique Jones

Henrique Jones, MD, EFOST secretary general, said surgeons must help athletes who undergo joint surgery due to an injury be realistic at the outset about what is possible postoperatively regarding function and return to play. Most patients need continuous neuromuscular prevention, he said, as it helps them somewhat overcome the effects of the injury, such as deformation of collagen fibers and in-suit to joint cartilage.

Concerning ACL re-injury, a strategy of prevention should be adopted and used before matches and in all phases of training, Jones said.

“We must always work with neuromuscular rehabilitation after our ACL reconstruction in order to correct all asymmetries and all the discrepancies between flexion and extension,” he said.

Reference:

Canata, Felmet and Jones report no relevant financial disclosures.
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