During the 16th EFORT Congress, a presentation on irrigation and debridement for the treatment of hip and knee periprosthetic joint infections was highlighted. The study, conducted by Georgios K. Triantafyllopoulos, MD, at the 16th EFORT Congress, found that irrigation and debridement can be a viable option for selected patients with periprosthetic joint infections.

Intervals of more than 20 days between the first and second procedures showed lower odds of success. Irrigation and debridement for the treatment of hip and knee periprosthetic joint infections is a reasonable option for selected patients and should be performed within a short interval for these patients, according to study results presented here.

"Irrigation and debridement for early postoperative and hematogenous infections is related to unfavourable outcomes in patients with obesity for total hip arthroplasty, thyroid disease for total knee arthroplasty, duration of symptoms of more than 5 days for both and infection with methicillin-resistant Staphylococci for both," Triantafyllopoulos said.

In a retrospective study, Triantafyllopoulos and colleagues reviewed the clinical characteristics of patients who were diagnosed with early postoperative or hematogenous hip and knee periprosthetic joint infections (PJIs) and were treated with single or multiple irrigation and debridement procedures between January 2000 and December 2013. The researchers identified 154 patients with PJIs (60 hips and 94 knees). The mean patient age was 64.3 years.

For patients with hip PJI, the success rate of irrigation and debridement was 70%. Researchers found obesity (BMI=30) correlated with failure. Patients who had MRSA infections had 96% lower odds of success compared with patients who had non-Staphylococcal gram positive, gram negative bacteria or negative cultures. Patients with duration of symptoms greater than 5 days had 95.2% lower odds of success. The probability of implant retention decreased by 15.7% for each additional day of symptoms.

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Orthopaedic surgeons should develop specific skills to correctly diagnose traumatic massive rotator cuff tears and ensure these injuries are not missed. Patients who are treated early enough stand the best chances of pain relief and recovery of an acceptable range of motion, according to a presenter at the 16th EFORT Congress.

"The recommendations could be that if you see the patient early, and the patient is active, and you diagnose the patient well, there is no need to wait for the nerve recovery," Przemyslaw Lubiatowski, MD, of Poznan, Poland, said during a special session organised by the European Society for Surgery of the Shoulder and Elbow.

A late diagnosis — one performed 3 weeks or more post-injury — could prove disabling for a patient, he said.

Degenerative vs traumatic tears

According to Lubiatowski, one of the problems in diagnosing massive rotator cuff tears is that degenerative tears often present with symptoms that are similar to those of traumatic tears. The condition may be mistaken for a rotator cuff tear or other shoulder pathology, leading to delayed diagnosis and treatment.

"The key is to be aware that there are degenerative tears that can look like traumatic tears," Lubiatowski said. "It’s important to differentiate between the two to ensure optimal patient outcomes.

Diagnose traumatic rotator cuff tears within 3 weeks without waiting for nerve recovery for best patient outcomes

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(Continued on page 6)
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Investigators report high morbidity in elderly patients after hip fracture fixation

Six months after hip fracture fixation, 17% of elderly patients could walk independently and 12% could climb stairs.

Delayed presentation among elderly patients with hip fractures may negatively affect their ability to walk and increase their rates of morbidity and length of hospital stay postoperatively, according to results of a retrospective study.

David W. Manning, MD, and colleagues analysed the effects of delayed surgery on elderly patients with hip fractures and found these patients see the most benefits from treatment when surgery is undertaken right away.

“The most unique finding we identified was delay in presentation to surgical care not only lengthened hospital stay on the front end, as one would imagine, but it added hospital time on the back end. It actually significantly lengthened the time from surgery to discharge,” Manning told EFORT Congress Daily News. “Unnecessary delay for surgery is associated with trends for increasing morbidity, and decreasing value for the care of the hip fracture patients. Delay of care should be avoided whenever possible. Ideally surgery for hip fracture occurs within 48 hours.”

Wait and discharge times correlated

The retrospective study Manning and colleagues conducted is among the top papers scheduled to be presented at the 16th EFORT Congress. They used the 2011 American College of Surgeons – National Surgical Quality Improvement Program (ACS-NSQIP) to collect data from more than 258 hospitals in 43 U.S. states.

The investigators created triads of less than 24 hours to surgical intervention, 24 hours to 48 hours to surgery, and greater than 48 hours until surgery and matched patients within them by surgery type, gender, age and American Society of Anesthesiologists class.

In the database there were 2,904 subjects with 968 fractures in each triad. When researchers analysed the time to discharge and delay to surgery for each patient they found a significant correlation between wait-time that was greater than 48 hours and an increased time from surgery to discharge (P < 0.001), according to results of the study.

Delay to surgery at issue

“As the value proposition permeates through all of medicine, including geriatric fracture care, it is pretty clear that from our study the value of surgical care for hip fracture goes down with unnecessary delay to surgical care by increasing associated costs of hospital stay without any benefit in surgical quality,” Manning said in the interview.

Overall, complications do not increase with early surgical intervention in a co-morbidity-adjusted population of elderly hip fractures, according to the study data. Furthermore, adjusted and unadjusted models used showed there was no correlation between overall 30-day mortality rates (P = 0.316) or readmission rates (P = 0.593) with wait times.

Reference:

Source info:
David W. Manning, MD, can be reached at Department of Orthopaedic Surgery, Northwestern University Feinberg School of Medicine, 303 E. Chicago Ave., Chicago, IL 60611 USA; email: dmanning@nmff.org.

Disclosure:
Manning reports no relevant financial disclosures.

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EFORT Award Winners Highlight Top Science at Congress

The planning committee behind the 16th EFORT Congress believes that “a congress is always as good as its presentations.” With that in mind, each year the EFORT Award Committee reviews all of its high-quality papers and poster submissions and selects the top submissions for a series of awards.

Free Paper Awards

The EFORT Award Committee selects the three best presentations to receive the EFORT Free Paper Award. Recipients of this award receive a certificate to commemorate their selection as well as a financial reward: €3,000 for gold; €2,000 for silver, and €1,000 for bronze. This year’s winners are:

GOLD
Philippe Hernigou, MD, PhD

*Paper Title:* Ceramic-Ceramic Versus Morbidity and A Biphasic Apatite/Sulphate Bone Substitute, Cerament Induces Bone In A Skeletal Muscle Cell Line

*Research Description:* This research focuses on tissue-engineered biomaterials and their performance in regenerating bone. The researchers are developing innovative ceramic and polymeric platforms for delivery of bone active proteins and drugs that can modulate and enhance bone healing. At EFORT, Raina and colleagues are reporting on the oseointeractive potential of a novel biphasic ceramic material (Cerament). Their study shows that the material can guide mesenchymal cells towards osteogenic lineages in a local environment with native bone active proteins. This leads to significant bone regeneration without having to use bone anabolic agents. The clinical translation is illustrated explaining a mode of action.

“As a young researcher in the beginning of my research path I am honoured to get the EFORT award. On behalf of all co-authors, I can convey that we are encouraged and will continue to work on regenerating bone and cartilage in our lab in Lund, Sweden.”

SILVER
Martijn Te Stroet, MD, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

*Paper Title:* Acetabular Revision With Bone Impaction Grafting And A Cemented Polyethylene Cup; Comparison Of The Kaplan–Meier Analysis To The Competing Risk Analysis in 62 Revisions After 25 to 30 Years Follow-Up

*Research Description:* Bone impaction grafting (BIG) is an attractive biological method of reconstruction since it can restore bone loss. This study reports the outcome of 62 acetabular BIG revisions combined with a cemented polyethylene cup after 25 to 30 years follow-up. After this long follow-up the commonly used Kaplan–Meier (KM) analysis introduces an amount of bias by ignoring the competing events (i.e., death). Therefore, the researchers additionally performed a competing risk (CR) analysis.

Acetabular BIG revisions provide acceptable clinical results at over 25 years, with 72.1% survival for the endpoint revision for aseptic loosening at 27 years. The KM analysis overestimates the probability of revision surgery severely due to ignoring competing risks, with an 92.5% overestimation of failure for aseptic loosening with KM compared to CR at 27 years. CR analysis is a suitable alternative.

“I never had expected that I should receive this award. It is a great honour, and I am very happy to receive at this moment, when I am finishing the last pieces of my PhD project.”

BRONZE
Deepak Bushan Raina, Lund University, Sweden

*Paper Title:* A Biphasic Apatite/Sulphate Bone Substitute, Cerament Induces Bone In A Skeletal Muscle Cell Line

*Research Description:* This research focuses on tissue-engineered biomaterials and their performance in regenerating bone. The researchers are developing innovative ceramic and polymeric platforms for delivery of bone active proteins and drugs that can modulate and enhance bone healing. At EFORT, Raina and colleagues are reporting on the oseointeractive potential of a novel biphasic ceramic material (Cerament). Their study shows that the material can guide mesenchymal cells towards osteogenic lineages in a local environment with native bone active proteins. This leads to significant bone regeneration without having to use bone anabolic agents. The clinical translation is illustrated explaining a mode of action.

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Allied Professions Award

The EFORT Allied Professions Award committee has selected the best presentation to receive the EFORT Allied Professions Award. The winner is given a certificate during the Congress and receives a €500 stipend. This year’s winner is:

Charlotte Trolldborg, Research Nurse, Denmark

*Paper Title:* Time to Definitive Fixation of Hip Fractures: A Look At Outcomes Based Upon Delay

*Research Description:* Since 2002, patients having a total hip replacement (THR) at Vejle Hospital, Denmark, have followed a fast-track concept. Patients were informed of an expected length of stay (LOS) between 2 and 4 days. Organisational changes in 2013 resulted in a reduction of number of beds at the ward and this called for new interventions to meet this challenge. Data from the hospital’s local database showed no difference between patients discharged at day 1 and day 2 after surgery regarding gender, age, civil status, ASA or BMI. This inspired the researchers to change their expectation to LOS from 2 to 4 days till 1 day and investigate the effect on LOS and patient satisfaction. They found that it is possible to reduce LOS after THR by changing the preoperative information about expected LOS while at the same time maintaining high patient satisfaction.

“I am honoured and pleased with the attention that the award leads to. The award is recognition of a well-functioning interdisciplinary team at the Orthopaedic Department at Vejle Hospital. A department that has a culture for investigating interventions scientifically with awareness for patients’ safety and satisfaction.”

Trauma Award

The EFORT Trauma Award is selected from the 30 best scored poster and 20 best scored free paper abstracts submitted to the Congress. The recipient receives a certificate of achievement and a grant of €1,000. This year’s winner is:

Nikolaos A. Stavropoulos, MD, PhD, and colleagues

*Paper Title:* Time to definitive fixation of hip fractures: a look at outcomes based upon delay

*Research Description:* Morbidity and mortality after hip fracture in the elderly is often influenced by non-modifiable comorbidities. Time-to-surgery is a modifiable factor that may play a role in postoperative morbidity. This retrospective study investigates outcomes and complications in elderly hip fracture surgery as a function of time-to-surgery. Time-to-surgery of greater than 48 hours is associated with an increased total length of stay, including an increase in surgery-to-discharge time, without medical benefit. This project highlights the fact that early surgery for hip fractures is not associated with increased complications and that early surgery minimises costly hospital stays.

“Receiving the award is a great honour. I want to mention that the recognition belongs to my co-authors and predominately to our senior author, the head of the adult reconstruction division of the orthopaedic surgery department, Northwestern University, Feinberg School of Medicine at Chicago, Professor David W. Mancing, MD.”

Jacques Duparc Awards

Each year the 10 best-rated poster abstracts submitted to the Congress are highlighted with the Jacques Duparc Award, in honour of the Federation’s first president. Each recipient receives a grant of €1,000. This year’s winners are:

Rajpal Singh Nandra, Health Education West Midlands, and colleagues

*Paper Title:* If your lump is bigger than a golf ball and growing, think sarcoma

*Research Description:* This paper is a retrospective analysis of patients referred to the bone tumour service for assessment of a new soft tissue lump. The study investigated the predictive power of both patient variables and tumour characters when calculating the risk of malignancy. The researchers found that if the tumour is larger than a golf ball and growing, clinicians should think of sarcoma.

“The award recognises the quality of this particular research project, which evolved through the foresight and clinical excellence of the senior authors.”

Chang-Wug Oh, MD, PhD, Kyungpook National University Hospital, Korea, and colleagues

*Paper Title:* Malalignment after minimally invasive plate osteosynthesis in distal femoral fractures

*Research Description:* Minimally invasive plate osteosynthesis (MIPO) is a preferred operative technique for distal femoral fractures with the advantage of bone union, but malalignment is a common complication of MIPO. To evaluate the incidence and causes of malalignment after MIPO in distal femur fractures, the researchers checked the coronal, sagittal, and rotational comparison study using the radiographs and CT scan in 138 patients. They found that alignment in coronal and sagittal planes was satisfactory over 90%. However, the incidence of rotational malalignment was up to 42.3% of unsatisfactory results (over 8°), regardless of fracture pattern, associated injury, or reduction techniques. Intraoperative check is very important to reduce the complications of rotational malalignment.

“I am deeply honoured to receive the Jacques Duparc Award at EFORT 2015. I would like to dedicate this award to my colleagues of our department, with their excellent cooperation. This award provides me encouragement for further success in the scientific work as well as trauma patient care.”

James P. Waddell, University of Chicago, and colleagues

*Paper Title:* The effect of tranexamic acid on transfusion rates, length of treatment, and hospital stay in trauma patients

*Research Description:* Tranexamic acid (TA) is used, and sometimes inappropriately, to reduce or prevent allogeneic blood transfusion in trauma patients. A large number of studies have looked at the effect of TA on patient outcomes, but very few studies have systematically evaluated the impact on transfusion rates, length of stay and hospital costs. Additionally, there is no consensus on the ideal dose and route of administration of TA. With increasing clinical use, a number of studies have raised concerns about an increased risk of DIC as a potential adverse effect of TA. It is important to identify critical cut-off points to inform the use of TA in trauma patients, as TA is potentially associated with increased risk of mortality and therefore not recommended in low-risk trauma patients.
Hospital Stay In Total Joint Arthroplasty

Research Description: This research was a collaborative program between the department of surgery and the department of anaesthesia around the use of tranexamic acid in a protocol-driven fashion such that all patients undergoing elective joint replacement surgery receive the drug. By using a protocol the researchers were able to ensure that all patients received the drug and, furthermore, demonstrate a significant effect in terms of improved patient outcomes. This is an ongoing program monitored on a regular basis. The take-away message from their research is that the use of this drug is safe, has a positive effect on patient outcomes and hospital costs.

“I am honoured to receive this award. This is a multi-disciplinary team that did this research and I think this was important in the success of the research project.”

Sudsayam Manuwong, MD, Thammasart University Hospital, and colleagues

Paper Title: Periarticular Multimodal Drug Injection Is Better Than Single Anaesthetic Drug In Controlling Pain After TKA: A Double-Blinded RCT

Research Description: Periarticular multimodal drug injection became more popular in the last decade, but some surgeons and anaesthesiologists still question whether clinicians should use multiple or single drug. This study compared these two options using a double-blind, randomised, controlled trial. The researchers found that multimodal drug injections provide better pain control in the first 4 hours postoperation, reduce overall morphine consumption, and extend the duration of first request for analgesic drug for approximately 2 hours. The researchers recommend using multimodal drug injection instead of single anaesthetic drug injection.

“This award encourages us as researchers and clinicians to continue our research studies to improve quality of care for our patients.”

Rahel Bornemann, MD, Universitätsklinikum Bonn, Germany, and colleagues

Paper Title: Temperature Distribution During Radiofrequency Ablation

Research Description: Radiofrequency ablation (RFA) of metastatic lesions has been shown to be effective in bone. However, spine anatomy presents challenges for minimally invasive treatment of vertebral body lesions. Articulating bipolar devices, like the STAR Tumor Ablation System (DFINE), have extensible electrodes for navigation and thermocouples that permit real-time monitoring of the ablation zones to determine a new option to control spinal RFA procedures. The STAR Tumour Ablation System is an innovative bipolar radiofrequency device built for targeted ablation of spinal malignant lesions.

“I’m really very proud to get this award and feel with the research our clinical team made and the results we found out very well accepted from the scientific committee of the EFORT. This keeps me very motivated to invest in further research for our patients besides daily clinical practice.”

Bartolomé Luis Allende, MD, University of Cordoba, Argentina, and colleagues

Paper Title: Femoral Nerve Block Versus Periarticular Injection In Primary Total Knee Arthroplasty

Research Description: This research was a prospective, randomised study comparing spinal anaesthesia plus peripheral nerve block vs. spinal anaesthesia plus local analgesic cocktail in total knee arthroplasty. Both groups reported similar outcomes regarding all variables measured. Spinal anaesthesia plus local analgesics is the researchers’ treatment option for pain control in total knee arthroplasty.

“It is a great honour to receive such an important recognition from the EFORT committee. Prof. Duparc came to our University in Cordoba, Argentina in 1983, and it is very important for us to receive this award.”

(Award winners, continued on page 7)
Short stem prosthesis did not lead to better joint offset during THA

Investigators who studied femoral neck preservation and other factors affected by total hip arthroplasty performed with a short-stem prosthesis vs a full-length uncemented prosthesis found the short-stem design offered no statistically significant differences in biomechanical reconstruction of the hip.

The study, which was selected as a top paper to be presented at the 16th EFORT Congress in Prague, was conducted by orthopaedic surgeon Jakob Van Oldenrijk, MD, MSc, of Amsterdam, and colleagues. They sought to determine if short-stem femoral neck preserving total hip arthroplasty (THA) led to a more favourable biomechanical reconstruction.

However, none of their findings led the investigators to conclude short-stem implants were any better for patients.

“We could not confirm this type of stem could create better joint reconstruction. We did see an increase in femoral offset ratio in both the conventional group and the short-stem group,” Van Oldenrijk told EFORT Congress Daily News.

Short-stems had same outcomes

The randomised, controlled clinical trial, which is registered at the Dutch Trial Registry, included 142 patients and 142 hips that were randomly selected to receive the short-stem Collum Femoris Preserving THA prosthesis (Waldemar LINK GmbH; Hamburg) or the conventional Zweymüller-type Alloclassic prosthesis (Zimmer Inc.; Warsaw, Ind., USA) straight THA stem. Patients were blinded to the stem they received throughout the 5 years of follow-up.

Researchers measured the femoral offset of the stems, which was the perpendicular distance between the longitudinal femoral axis and the hip joint center of rotation, as well as the offset of the patients’ contralateral hip. They then compared these measurements to confirm that each patient’s anatomy was reconstructed properly.

“We also measured the height of the center of rotation, varus, valgus and leg length discrepancy to see if there were differences between the two groups. We did not find any significant differences. It is always disappointing, but it is also a very relevant finding. If you make a claim, you expect it to be proved, so it is very relevant when it is not,” Van Oldenrijk said.

Functional outcomes of interest

“What we did find, the offset ratio was increased using both of the stems and only decreased in a very small percentage. That is a very relevant finding. Both of the stems were able to recreate the leg length adequately,” Van Oldenrijk said.

The offset was increased in 62% of patients in the short-stem group and in 50% of patients in the conventional group. The offset was decreased in 11% of patients in the short-stem group and in 10% of the conventional group. Neither of these differences, however, were statistically significant, Van Oldenrijk said.

Disclosure:


Source info:

Jakob Van Oldenrijk, MD, MSc, can be reached at Nuffield Orthopaedic Centre, Oxford University Hospitals, Oxford, United Kingdom; email: jakobvanoldenrijk@gmail.com.

Anterior dislocation

Lubiatowski defined the “terrible shoulder triad” and the “unhappy shoulder” as one that is anteriorly dislocated, with a rotator cuff tear and a brachial plexus tear.

“It might be underestimated,” he said, noting the condition does occur based on reports in the literature, and surgeons have to be aware of it.

The axillary nerve is affected in 60% of these patients. Therefore, it is important to diagnose nerve injuries early. Electromyography studies are helpful and will show the level of the lesion and any nerve involvement. They can also be useful for post-accident monitoring of the patient, Lubiatowski said.

For patients whose massive traumatic rotator cuff tears are diagnosed late, once the nerve recovers, a latissimus dorsi transfer may be possible. However, according to Lubiatowski, shoulder the nerve not recover and there is no chance of a nerve revision, then conservative treatment or shoulder arthrodesis are the only treatment options.

“If there is no recovery or prospect for successful nerve revision, and the patient has low demand, then conservative treatment is an option because the options are limited,” Lubiatowski said. “However, if the patient seeks some improvement, then shoulder arthrodesis is also an option.”

He discussed a patient of his who presented late with an irreparable traumatic massive rotator cuff tear and underwent successful shoulder fusion, but said shoulder fusion should be done only in patients with a stable shoulder.

Disclosure:


Source info:

Przemysław Lubiatowski, MD, can be reached at Rehabsport Clinic, Department of Traumatology, Orthopaedics and Hand Surgery, University of Medical Sciences, in Poznan, Poland; email: plubiatowski@rehabsport.pl.

These are

Lubiatowski reports he is a consultant and presenter for Smith & Nephew.
EFFECT OF SCREW LOOSEENING, EFFORTS SHOULD BE MADE TO FIX THE SCREW TO THE ANTERIOR ONE-THIRD REGION OF THE S1 BODY.

It is my honour to win such a great award. I’d like to thank EFORT for recognising the efforts we made with this research.

Saggah Tarek Shalabi, Royal Derby Hospital, United Kingdom, and colleagues

Paper Title: Early Effective Analgesia For Traumatic Rib Fractures: Is Timing A Priority?

Research Description: This research investigates whether the length of time taken to establish effective analgesia has a significant effect on the incidence of pneumonia and length of critical care and hospital stay in patients sustaining rib fractures. The researchers found that the speed to establish effective analgesia (less than 12 hours) resulted in a lower incidence of pneumonia, and shorter critical care and hospital stay when compared to late analgesia. This research showed that the time to establish effective analgesia, rather than the mode, is one of the most essential determinants for prevention of pneumonia and good recovery in rib fracture patients. The researchers recommend “acting early” in this group of patients in order to deliver effective analgesia at the earliest stage.

“It is truly an honour to receive this recognition and award from EFORT. It has motivated me to pursue further research in this field. I would like to dedicate this award to the research team and to all those who supported us during this study.”
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