
In Touch With EKA

ESSKA - European Knee Associates Spring Newsletter

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Message From the Chairman

Nanne Kort

EKA Chairman

I hope that this message finds you in good health and spirit.

I imagine that in your part of the world also, it has recently felt like it is unrealistic that our world turns upside down.

We are thinking of you! To all people who are now dealing with Covid-19, who are themselves ill or who care for their loved ones. We are also thinking of everyone who is now alone at home, awaiting what is to come. We think of all our colleagues in the hospitals who work so hard and see things

they would rather not see. But we also think of our clients who now have to wait with knee osteoarthritis or for knee surgery; we would like to help everyone immediately. However, the reality is that we all have to take measures to slow down the Covid-19 virus and protect our clients. In the coming period, we will no longer carry out operations, and our outpatient appointments will be made by telephone as much as possible. Some of us are even directly involved in the treatment of Covid-19 clients.

Those on the front lines are most at risk, not merely of catching the virus, but of getting its most severe form (Bloomberg opinion 24 march 2020). So be careful and take in mind the following principles when you need or are going to operate until the situation is normalised again:

- If possible do not perform elective operations on Covid-19 clients
- Acute operations if possible, under local or regional anaesthesia
- In the case of intubation, consider intubation in the department, HME filter on the system is adequate protection
- Disadvantage intubation in case of Covid-19; probably not possible to wear in the short term
- Do not rinse with Pulsavac, heavy aerosolisation
- Consider delaying final osteosynthesis with plaster or fix-ex.

For the consultations take in mind the following principles until the situation is normalised again:

- Clients are seen as much as possible with the help of a telephone / or video telephone consultation
- Clients are only seen at the clinic if it is medically necessary
- During a face to face consultation client are requested to come alone and if that is not possible with one supervisor/partner

• If we have to “ touch” clients for urgent medical reasons our front office (secretaries) and ourselves need to be protected by surgical masks, lens and aseptic gel hand washing before and after physical contact with the client

• Advise your client not to come to your outward clinic if they (client or potential supervisor/partner) have complaints of a cold or cough. Of course, they also stay at home if they had contact with someone with a corona infection. When in the slightest doubt: move your appointment. Don't put others at unnecessary risk!

The above can be disappointing. Nevertheless, the COVID-19 pandemic has caused an unexpected (inter)national emergency, and there are consequences for your profession but also your private life as in many countries, there is a lockdown.

There is also a consequence for our EKA and ESSKA activities.

Our Biannual ESKSA congress in Milan 2020 will take place in May 2021. An official email will be sent out with the ins and outs by de ESSKA HQ. For now, all the face to face meetings of EKA in 2020 are suspended until further notice. We recognise that these are unsettling times and whether you are traveling now or in the future, we want you to know that your safety and wellbeing are our priority.

EKA Activities at the 2021 ESSKA Congress in Milan

Michael T. Hirschmann

Scientific Chairman, EKA Vice Chairman

Dear EKA members, dear EKA friends,

It is with great pleasure that ESSKA invites you to Italy to participate in the 19th edition of the ESSKA Congress. As you all know, the congress in May was postponed due to the coronavirus outbreak and will now be held from 11-14 May 2021 in Milan. Milan has been recognized as one of the best cities in the world in which to live and one of the most important international travel destinations.

We are now at the doorstep of the ESSKA congress 2021 in Milan. Together with my team mates Elizaveta Kon and Kristian Samuelsson I was responsible for the scientific content of the ESSKA congress, but also for the EKA program. For the first time ever, every one of you was asked for scientific input, proposals and ideas. We have received an overwhelming number of submissions for instructional course lectures (ICLs) as well as symposia. This is fantastic and shows that EKA is a lively section of ESSKA. Thank you very much for your precious program input. For the first time we have opened the symposia submission system to the members, positioning you at the core of the congress program. Our aim was to get nearly every EKA member involved in the EKA program at this ESSKA congress. EKA has a specifically assigned room

throughout the entire congress, in which a full day EKA congress program is running every day. The days start with ICLs covering basic educational topics from osteotomy over partial to total and revision total knee arthroplasty. The ICL sessions will be more interactive and educational in Milan thanks to more interaction and the introduction of the new format of surgical videos.

A highlight lecture will be given by Michael Mont from USA about state of the art total knee arthroplasty. Keynote lectures are given by Philipp Niemeyer about stem cell therapy for treatment of OA, by Arun Mullaaji about deformity correction in TKA, by Peter Aldinger about state of the art UKA and by Stephen Howell about TKA alignment more important than robotics. In addition, we will have combined sessions with the American Hip and Knee Society (AHKS).

Numerous free paper sessions will add to the scientific content of the congress.

Aside from the scientific program you will have the chance to meet old friends, make new friends and discuss all aspects of the program together and have some fun at the same time!

Looking very much forward to seeing you all in Milan..

<https://esska-congress.org/>

Highlights From the KSSTA Journal

Reha N. Tandogan

Associate Editor, KSSTA Journal; EKA General Secretary

The KSSTA journal continues to be one of the premier journals in orthopedics with an impact factor of 3.2 and ranking in the first 10 top journals. Last year, many high quality articles concerning the degenerative knee were published, and below you will find highlights from several of these excellent papers. Of course, the reader should take a look at the original paper for an in depth understanding of the topics.

Tourniquet is used widely to improve visualization and achieve a dry & clean surface free of blood and debris during total knee arthroplasty (TKA). Interdigitation of cement to cancellous bone is an important factor for the longevity of fixation, especially for the tibial component. Cement penetration is one way of measuring this, although it has been shown that blood at the cement-bone interface might decrease the shear strength of fixation without affecting cement penetration. Jawhar et al., compare cement penetration with and without tourniquet in a prospective randomized Level 1 study in 86 patients in their paper **"Tourniquet application does not affect the periprosthetic bone cement penetration in total knee arthroplasty"** [1]. Cement is applied manually after pulsed lavage in both groups. The authors find a cumulative cement penetration of 28.5 mm in the tourniquet versus 26.6 mm in the non-tourniquet groups, and this difference is not statistically significant. Early pain scores and need for pain medication is superior in

the non tourniquet group. No difference in total blood loss, soft tissue swelling, surgical time, length of stay, and complication rates are observed between groups. As the authors point out, the ideal amount of cement penetration needed for a stable fixation is unclear, values ranging from 1.5 to 4 mm have been advocated. Two previous studies have reported conflicting results in cement penetration using tourniquet, with one study showing a better intrusion while the other showing no superiority. This paper adds to the growing body of evidence that a tourniquet is not needed to ensure good cement penetration.

The intraoperative use of topical Vancomycin powder has been shown to decrease infection rates in spinal surgery. The efficacy of topical vancomycin in arthroplasty surgery is controversial, a small number of studies (performed mostly in hip arthroplasty) have reported conflicting results. The paper by Hanada et al., titled **"Intrawound vancomycin powder increases post-operative wound complications and does not decrease periprosthetic joint infection in primary total and unicompartmental knee arthroplasties"** compares the efficacy of vancomycin powder with standard surgery in a cohort of 166 consecutive patients [2]. Their results are sobering, the authors report no significant decrease in periprosthetic infection rate, but a significant increase in wound complications and delayed healing with topical vancomycin powder. The authors note that coagulase-negative staphylococcus (CNS) and

methicillin resistant *Staphylococcus aureus* (MRSA) were isolated from the infected patients in the vancomycin group, underlining the inability of the topical antibiotic in preventing infection. Although we should take every step to prevent periprosthetic infection, we should base our decisions on evidence based medicine; sometimes “less is more”

Parkinson’s disease is a common neurological disorder and these patients may need to undergo TKA surgery. In a nationwide database survey of more than 127,000 patients Newman et al. compare the risk of medical and surgical complications in a 1:3 matched cohort of Parkinson disease (PD) vs. non-Parkinson disease patients in their paper titled **“Parkinson’s disease increases the risk of perioperative complications after total knee arthroplasty: a nationwide database study”** [3]. The authors find a 44% higher risk of complications in the PD population compared to non-PD cases after TKA. The higher risk of medical complications such as altered cognitive function, urinary tract infections, pneumonia, need for transfusions and sepsis is statistically significant. However, no significant increase in surgical complications such as wound dehiscence and hematoma and infection are observed. Length of stay is slightly longer and hospitalization costs are increased in PD. In the largest study up to date on PD patients undergoing TKA, the authors conclude that this increased risk of medical complications should not deter surgeons from performing TKA. They also underscore the importance of peri-operative optimization of these high risk patients and the need for close collaboration with neurologists and internists.

The effect of bisphosphonates (BP) on implant survival and aseptic loosening rates following joint replacement is

controversial. Some studies have reported a decrease in aseptic loosening in patients receiving bisphosphonate treatment due its anti-resorptive effects, by preventing osteoclast-mediated periprosthetic bone loss and osteolysis, while others have not demonstrated benefit. In one of the largest population based studies of 387,000 joint replacements followed for 14 years, Ro et al., find a decreased rate of aseptic revision in patients receiving bisphosphonate therapy. In their paper titled **“The use of bisphosphonates after joint arthroplasty is associated with lower implant revision rate”** the rate of TKA revision is 1.4% for BP users and 2.9% for BP non-users [4]. This positive effect was more important in patients undergoing BP therapy for more than 1 year. The authors conclude that bisphosphonates are highly recommended to reduce revision rates in joint replacement. However, given the serious adverse effects of long term BP treatment, the benefits of BP use in non-osteoporotic patients still needs to be clarified.

References

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Recommendations for Physical Activity After Total Knee Arthroplasty

Michael Liebensteiner

The EKA board is currently conducting an online - survey regarding different physician's strategies of allowing return to sports for their total knee arthroplasty (TKA) patients. This, because standards of recommendations for physical activities for patients who underwent a primary TKA are not available.

Previous publications from the United States did not consider cultural differences between countries and may therefore only show national preferences not applicable for Europe. Excessive or inappropriate physical activity may negatively influence prosthetic wear and may therefore lead to a revision surgery. As the number of younger, more physical active patients is increasing, the quality of advice for the physical activities after TKA should be standardized.

Objective: The aim of the study is to evaluate surgeon's recommendations of return to sport after primary TKA in Europe.

Research Design: An online web based questionnaire was designed and is now submitted to all ESSKA members. The survey consists of the popular sport activities for adults in Europe. The surgeons' recommendations can be classified in subcategories including "allow activity", "allow when the patient is experienced in the activity", "discourage" or "no opinion". In addition, the point of time

in weeks after the surgery will be evaluated for each individual sport activity.

The aim of the study is to create a European consensus on return to sport recommendations based on the results of the online survey.

We especially ask all EKA members to participate in this important project !

You can either log-in at the ESSKA homepage

(Initiatives / Surveys / ESSKA Member Surveys)

There you find the survey entitled

'Recommendations for physical activity after primary total knee arthroplasty'

Or you can directly use the following link:

<https://de.surveymonkey.com/r/TKT2CGN>

Your contribution is highly appreciated !!

ESSKA Speciality Days Report: EKA Activities and Take Home Message

Trifon Totlis

ESSKA Specialty Days was a brand-new meeting concept that took place in Madrid on 8-9 November 2019. Each one of the four sections of ESSKA organized a distinct scientific program under one roof offering the best quality specialized science and also the opportunity for networking in between the biannual ESSKA Congress.

The EKA section program was focused on **"Alignment in Total Knee Arthroplasty"**. The first session included lectures on both the traditional imaging modalities and the modern imaging and analysis techniques for preoperative planning in TKA. The most popular session was the one dealing with the optimal alignment philosophy in TKA. The concept of knee phenotype was initially analyzed. Following this, 4 lectures presented the technique and available results of anatomical, mechanical, kinematic and individualized alignment in TKA. The topic of the next session was the optimal alignment per indication and operative technique in high tibial osteotomy. It included a combination of classical and new techniques and the addition of ligament reconstruction to HTO. The first day ended with a round table about the safe zones for alignment of femoral, tibial and patellar components in TKA. The session included 6 lectures, each one focused on a specific component and plane of alignment. A burning issue was discussed in the second day. How can modern technological advancements assist the surgeon to achieve the correct alignment? The session included 9 lectures which demonstrated the use and outcomes of 2D and 3D pre-operative planning, pressure sensors for soft tissue balancing, customized prostheses, patient specific instruments, computer navigation and

robotics. At the end Dr. Nanne Kort gave the closing lecture on the role of the human orthopaedic surgeon.

There were 3 Free papers sessions in which 16 studies were announced. A total of 75 e-posters were displayed in the monitors. Oral and poster announcements covered a variety of topics ranging from HTO to UKA, TKA and robotics. Dr. Jure Serdar awarded the most viewed E-poster award for the study entitled *"Does the difference between templated and intraoperatively*



achieved posterior tibial slope affect the patient satisfaction after unicompartmental knee replacement? - a pilot study." Dr. Lukas Moser with the study *"Current TKA alignment concepts do not aim to achieve the native coronal alignment of a patient"* won the top rated abstract award.

A hot topic debate was organized by EKA and supported by DePuy Synthes. The hot topic debate was a new interactive concept which opposes two experts and is moderated by a referee. It took place on a stage in the exhibition area. The topic was *"Attune TKR - Mechanical Alignment vs Anatomical Alignment"*. Dr. Michael Hirschmann supported the concept of

anatomical / individualized alignment, whereas Dr. Enrique Gomez-Barrena presented why mechanical alignment is still considered the gold standard. The referee, Dr. Nanne Kort, provoked the speakers to demonstrate their arguments. The audience showed great interest and completely filled the exhibition hall in front of the stage.

Several take-home messages came up from the meeting. Pre-operative planning not only evaluates lower limb deformity, but also provides guidance to the surgeon during the arthroplasty to achieve the desired alignment. It is based on plain radiographs and 2D imaging, but advanced imaging techniques such as CT, MRI, EOS and SPECT are used when additional information is necessary. Restoration of the lower limb mechanical axis is still considered the gold standard for TKA. Based on this philosophy, the same alignment is applied in every patient regardless of individual variations. However, many knee surgeons are increasingly applying alternative alignment methods such as anatomic or kinematic alignment, aiming to restore individual patient alignment. In select patients without significant deformity and bone loss, these methods may improve midterm patient outcomes without an increase in polyethylene wear and loosening rates.

Decision about the optimal alignment in HTO should take into consideration concomitant operations and type of surgical technique used for the osteotomy. Patient-specific saw guides for osteotomy are manufactured based on pre-operative CT.

Although there are no precise cut off points, there are safe zones for implant alignment. Implant malalignment affects soft tissue balancing, compartmental and patellofemoral contact forces, knee kinematics and patellar tracking. The focus should be on preserving the soft tissue envelope aiming for a more natural knee.

Whether the use of new technology in TKA such as pressure sensors, PSI, navigation and robotics, can lead to better clinical outcomes is still under investigation. However, technological advancements are a useful tool in the hands of the orthopaedic surgeon who has the key role and responsibility to properly control those means and achieve the optimal alignment and outcome in TKA.

Overall the 1st ESSKA Specialty Days Congress was a great success. We would like to thank the EKA faculty and highlight speakers for their time and effort in making this event memorable and unforgettable. Special thanks to our members and all those who attended and filled the largest auditorium in the congress centre and contributed to the lively discussions. EKA's mission is to advance the knowledge of degenerative knee pathology and knee arthroplasty, provide a milieu for improving both knowledge and treatment of the arthritic knee, create the best environment for research, promote professional standards, and thereby ensure the best care for patients. We hope to have achieved this in Madrid.



ESSKA - EKA All About Total Knee Arthroplasty Courses

Reha Tandogan

EKA General Secretary



EKA organizes **All About Total Knee Arthroplasty Courses** several times a year in different countries. These courses are aimed at surgeons starting to perform TKA or those who want to improve their skills.



Previous courses have taken place in Istanbul, Lisbon & St. Petersburg. Two courses were planned for 2020, however the Istanbul course was postponed due to the COVID pandemic.

The **Istanbul All About Total Knee Arthroplasty Course** takes place annually in June. Unfortunately, this year's course has been cancelled due to the pandemic.

The course venue is the excellent CASE center of Acibadem University, which is one of the premiere locations in Europe for cadaver courses. First started as a "Basic Knee Arthroplasty Course", the event has evolved into an event that covers all aspects of primary TKA. Now in its 5th year, this is a two-day cadaver course with lectures, saw bone demos, case discussions and cadaver labs; involving 24 delegates, tutored by an expert international and local EKA Faculty. Delegates from more than 30 countries have attended this course in previous years with excellent feedback on the organization and level of education. The course is an excellent opportunity for delegates to interact with the faculty and learn from the experts. The next course will be held in **June 2021**.

The first EKA **All About Total Knee Arthroplasty Course** in the Russian Federation took place in **St. Petersburg** on 25-26 October 2019. The venue was the Vreden Institute of Traumatology & Orthopedics. The course was a great success, with both lectures and hands-on cadaver training. The next course will take place on **20-21 November 2020**.



EKA Survey on the COVID Pandemic and the Practice of Arthroplasty

Nanne Kort
EKA Chairman

Dear friends and colleagues,

The COVID pandemic will have a significant impact on the way we work, not just for this year but probably permanently. We need to better understand how this affects our practice to be able to establish guidelines on various aspects of patient care. We know that individual efforts of hospitals, national health authorities and scientific societies have resulted in different (and sometimes conflicting) standards and regulations for the same problem. We as orthopedic surgeons should take part in this decision making process and one of the best ways to do this is to learn from the experiences of our colleagues battling the virus in the front lines. This will help us to achieve patient/healthcare worker safety without compromising patient care and outcomes.

Please take your time to participate in the survey designed by Michael Liebensteiner on the COVID pandemic and practice of arthroplasty.

<https://www.surveymonkey.com/r/LRTDY3Z>



The Covid19 pandemic is hitting us hard in multiple ways, hurting our families and activities, shattering our concept of free movement and our ways to look at this world. Many of us are directly or indirectly impacted. This "In Touch With EKA" is an update on what we are doing as EKA, keeping your safety on top of our minds.

Stay safe
EKA Board