

AOSpine Newsletter Issue 21

May 2019

CONTENTS

Editorial 2

FEATURE STORY

Dr Fengzeng JIAN—Blazing a trail 3

HIGHLIGHTS

Final Program of the Global Spine Congress 5

AOSpine Members-only Sessions at Global Spine Congress 6

Member Representative shortlisted Candidates 7

Global Spine Journal new special focus issue 8

Discovery and Innovation Award winners 9

Women in spine networking event at GSC 13

AO Surgery Reference for metastatic spine tumor 14

AOSpine defines research priorities and Core Outcome Set for DCM 16

Educator of the year winners 17

Latin America Education success stories 18

German Ochoa traveling fellowship winner 20

AOFoundation Davos Courses 2019 21

MEET THE AOSPINE MEMBER

Meet Said Sa22



Jeffrey C. Wang
Chairperson, Global Spine Congress

Welcome

Editorial

Dear Reader,

In just a few days, from May 15–18, 2019, the worldwide spine surgeon community will come together in Toronto, Canada for the Global Spine Congress (GSC).

The GSC—the only truly international spine congress of its kind—is one of the biggest gatherings, drawing thousands of spine surgeons from all over the world. The congress provides an outstanding forum to exchange ideas, network with fellow spine professionals, and to learn about the latest research, techniques, and technologies in spine surgery.

In this issue of the newsletter, we will focus on this unique event, its program as well as the AOSpine activities it offers, such as the members-only sessions, the member representative election, or the “Women in Spine” event. At the GSC, AOSpine will also present awards to our esteemed faculty. We are proud to announce the winners of the international and regional educators of the year 2018 here.

The Global Spine Journal, AOSpine’s official scientific journal, will launch another Special Focus Issue just in time for the GSC: “AOSpine Knowledge Forums: Driving

Research, Discovery, and Innovation in Spine”. If you happen to be at the GSC, please visit us at the AOSpine booth to pick up your free printed copy. For all of you who won’t be present at the GSC, the Global Spine Journal is open access journals.sagepub.com and if you have opted-in, you will receive every new issue via e-mail.

This edition of the newsletter also features an interview with my colleague Fengzheng Jian from China. In the interview he shares his motivations to become a neurosurgeon and tells what the biggest challenges are for spine surgeons in China.

Furthermore, we are proud to present the eleven winners of the AOSpine 2019 Discovery and Innovation Award and their winning study proposals in this issue of the newsletter. All winners have been invited as Associate Members to the AOSpine Knowledge Forum (KF) which relates to their study’s pathology and to get involved with AOSpine research.

But there are more opportunities to get involved with research. AOSpine Knowledge Forum Spinal Cord Injury is conducting an international, multi-disciplinary consensus process to improve the efficiency of research into degenerative cervical myelopathy

(DCM) globally. We are recruiting as many people as possible who are involved in DCM to complete surveys and to disseminate the survey to other organizations, hospitals, and personal contacts for greater impact.

Additionally, I would like to introduce the new Surgery Reference module in this newsletter. The AOSpine Knowledge Forum Tumor treatment recommendations and classifications for metastatic spine tumor have been adopted and implemented into the AO Surgery Reference. The new module organizes concepts in a way that helps spine surgeons think systemically about their treatment indications and options. With this tool, clinical outcomes for spine tumor patients are expected to improve substantially.

Last but not least, learn more about the latest success stories in education in Latin America, as well as about our member Said Sadiqi.

We hope that you will find this issue of the newsletter interesting. Don’t miss the opportunity to join us at the GSC 2019, and we look forward to welcoming you to Toronto!

With best wishes,

Jeffrey C. Wang
Chairperson, Global Spine Congress



Blazing a trail

Dr Fengzeng JIAN explains how his grandfather's example inspired him to lead the development of spine neurosurgery in China.

Is this where you thought you would end up? If you had it to do all over again, would you still become a spine surgeon?

Since I made my decision to become a spine surgeon, I have never changed my mind. After finishing my resident training, what I was most interested in was the skull base and vascular surgery—in other words, brain surgery—even though I was trained in Italy and most of my daily work then was about spine. There were no truly independent spine neurosurgeons in China 15 years ago, only someone operating on spinal cord tumors. No one would consider that spine surgery was part of neurosurgery at that time, and no neurosurgeon would choose spine as his/her subspecialty. After becoming a spinal neurosurgeon, I thought I could do spine surgery not only myself, I should call upon many other neurosurgeons doing it together. I learned from many other countries, that neurosurgery is not brain surgery, and spine surgery is not orthopedic surgery. Neurosurgery should not be absent in spine surgery in China. So, from the early beginning of 2005, I began to hold hands-on courses about spine internal fixation and microsurgical technique, aimed at both neurosurgeons and orthopedic surgeons. Now the situation has changed, there are more and more young neurosurgeons in China choosing spine as their subspecialty, especially in the Department of Neurosurgery in Xuanwu Hospital, Capital Medical University, which is one of the biggest neurosurgical centers in China, spine accounts for nearly half of the total number of surgeries. So nowadays, I

would absolutely choose spine as my professional career.

I like a challenge, trying new things, and as I said, there was no true spinal neurosurgeon in China 15 years ago. Because I was trained in Europe, and I knew the situation of spine in Europe and the US, I had a great expectation of spine in China for the future.

Why did you choose spine surgery and not something else?

I chose spine for two reasons. Firstly, as one of the biggest centers of neurosurgery, Xuanwu Hospital has very strict discipline for the division of subspecialty in neurosurgery—one cannot choose both brain and spine as his/her subspecialty. Secondly, I like a challenge, trying new things, and as I said, there was no true spinal neurosurgeon in China 15 years ago. Because I was trained in Europe, and I knew the situation of spine in Europe and the US, I had a great expectation of spine in China for the future. There is a saying in Chinese, 'give up, and then gain', so I finally decided to give up brain surgery, and choose spine as my subspecialty.

There is a saying in Chinese, 'give up, and then gain', so I finally decided to give up brain surgery, and choose spine as my subspecialty.

What achievement are you most proud of?

I'm proud of two things. One is the establishment of a spine team in neurosurgery in Xuanwu Hospital, which is one of the biggest spine centers in China, among both neurosurgery

and orthopedics. Currently, our spine team has eight staff, not including several other residents in training, there are 68 inpatient beds, and we expect to operate on more than 3'000 cases this year. The other thing I'm proud of is to have trained many spine neurosurgeons by holding a variety of courses in China, and constructing the fellow program in Xuanwu Hospital. Xuanwu Hospital has held nearly 30 hands-on courses about internal fixation and microsurgery of spine in China since 2005. I initiated the 'annual national meeting of spinal neurosurgery' in 2011, and in 2013 I organized a lecture group to train spinal neurosurgeons in China, with nearly 20 courses having now been held. Over the last four years, more than 20 fellows, both from neurosurgery and orthopedics, have received training in our hospital.

Who has had the greatest influence on your career? Who was the most inspiring person in your life and why?

My grandfather influenced me most in my life. Even though he was illiterate, he loved knowledge and he bought a lot of Chinese classical books when he was young. My father then went on to become the first teacher in our village, and my two brothers also entered universities. About 40 years ago, no more than one tenth of the young generation could pass the entry examination for university in China. My grandfather worked diligently and did every simple things into perfection. He always kept our house in order, tidy and clean, even though we were not rich at that time.

After choosing spine as my subspecialty, I thought it's the responsibility of our generation to develop spine subspecialty in neurosurgery, and in the specialty of spine, neurosurgeons could not be absent.

After choosing spine as my subspecialty, I thought it's the responsibility of our generation to develop spine subspecialty in neurosurgery, and in the specialty of spine, neurosurgeons could not be absent. It's easier said than done, especially in the beginning. Professor Feng Ling, ex-chairman of the Department of Neurosurgery in Xuanwu Hospital, Capital Medical University, gave me a lot of support. Her support was like a battery booster whenever I needed to rev up my courage or soothe my sagging spirit.

How does a typical work day look for you? How many surgeries do you perform, and what is your most frequent operation?

I have two or three operating days each week, and average two or three operations on each of those days. Cervical spondylopathy, craniocervical junction deformity and spinal tumors are the most frequent surgeries I do. I visit outpatients one day a week and also have one day a week to discuss clinical and basic scientific study with our students.

What do you consider your biggest learning as a surgeon?

That not every disease can be treated surgically.

Working as a spine surgeon/neurosurgeon in China, is there anything particular in spine surgery to China and how has spinal surgery developed in China and in the rest of Asia in the past few years?

More and more neurosurgeons are learning internal fixation, and the number of spinal neurosurgeons is growing rapidly—several centers of spinal neurosurgery have been established in mainland China. At the same time, orthopedic surgeons are learning microscopic technique. In this respect, colleagues from Korean and Chinese Taiwan set us a good example.

What is currently the biggest challenge in your specialty and how do you see it developing in the next 5 years?

Functional recovery of spinal cord after surgery is a big concern, such as in cervical myelopathy and spine trauma. We, as surgeons, can do excellent surgery, but the experience of patients is not good. I'm not sure whether we could resolve this problem in the next five, 10 or 20 years, but we have to work hard on that.

What is the biggest change you have seen in spinal surgery over your career?

Minimally invasive surgical technique, degenerative lumbar deformity correction and complex cervical deformity.

Outside of your own research, what has been the most interesting paper that you have seen in the past twelve months?

The most interesting paper I have read recently was about brain-spine interface modulation for recovery of motor function of lower limbs after spinal cord injury. Even though I do not think electrical modulation will be the final resolution of spinal cord injury, it will change our thoughts on how to treat spinal cord injury.

What was the best advice you were ever given, and what advice would you give to a young spinal surgeon today? What are the biggest challenges they are facing today?

Professor Qi Pang from Shandong University taught me, if you want to dialogue equally with a great man, you should become great yourself first, not by flattering him. I advise young spine surgeons to learn the knowledge first, and operate on patients by brain, rather than only by hands. Nowadays, knowledge and new technique are emerging rapidly, but at the same time, many disputes also exist, especially when many so-called new techniques have a business background.

How do you inspire and mentor your fellows? In your opinion what makes a good leader—what is most important apart from the surgical knowledge?

As a good leader, you yourself should first have a clear goal or a dream about the future, for example, to make a big center of spine both clinically and scientifically. Of course you should act towards that goal and set a good example to your fellows. Apart from the surgical technique, one should also know very well the injury brought by the surgery. Additionally, communication with patients and relatives is very important.

How did you get involved with AOSpine, and what does being a member mean to you?

I became a member when AOSpine China contacted me about 10 years ago. AOSpine is an independent society which aims to encourage academic exchange and training, and it attracts many outstanding spine surgeons.

BIOGRAPHY

Dr Fengzeng JIAN was born in August 1967, in Shandong province, China. Graduating from Shandong University medical school in 1990, Dr Fengzeng spent seven years working as a neurosurgeon in Beijing Hospital. From 1997 to 2003, Dr Fengzeng undertook resident training as a specialist of neurosurgery in Policlinico Umberto I, University of Rome 'La Sapienza', Italy. As of 2004, Dr Fengzeng is working as associated professor, professor and director of spine in the Department of Neurosurgery, Xuanwu Hospital, Capital Medical University, Beijing. In 2014, Dr Fengzeng became vice chair of the Department of Neurosurgery, Xuanwu Hospital. Dr Fengzeng holds several professional positions, including President of Spine Committee of the Chinese Association of Neurological Surgery, executive member of Asia Pacific Cervical Spine Society and member of the spine committee, World Federation of Neurological Surgery (WFNS).



The final program for the Global Spine Congress (GSC) 2019 is now available—register today

Last chance to register for the Global Spine Congress (GSC) in Toronto. With just a few days to go, there is still time to participate in our exciting and unique scientific program.

Join us from May 15 – 18 and enjoy four full days of parallel sessions covering more than 30 topics, showcasing the very latest research, innovative techniques and cutting-edge technologies in spine surgery.

Sessions and events at the GSC provide you with a range of opportunities including face-to-face networking with more than 2,000 spine professionals from around the world, career development and access to the world's best research and clinical experts.

Here is a look at some of the activities taking place at the GSC in Toronto:

Members-only sessions that give you knowledge on day-to-day practicalities such as How to Become a Good Leader and How to Evaluate New Technologies

First ever leadership symposium—“Leadership in the Spine

World”—will take place at the opening of the meeting

Best papers sessions that will transform the way we look at spine care

Collaborative international spine society sessions on global topics led by top clinicians and researchers

AOSpine symposium on the latest advances, clinical impact and future direction of the Knowledge Forums—a great opportunity for networking with Key Opinion Leaders in the field of spine care

AOSpine **Member Assembly**

Pre-courses available from May 13 – 16—**Hands-on pre-course cadaver workshops** on robotics, navigation, minimally invasive surgery, image guidance and endoscopic surgery. You can book these courses for an additional fee

Exhibition hall which brings together over 60 companies displaying the latest innovations in spine surgery. This gives you the unique opportunity to interact

with the many vendors offering these tools and services. Attendees can also learn about the latest advancements in sports care by visiting our exclusive theater on the floor, which will discuss augmented reality in spine surgery, virtual reality in medicine, along with technological advancements in spinal cord stimulation

Download the final program to learn more and register for the 8th annual Global Spine Congress in Toronto. AOSpine members receive a USD 150 discount on the registration fee. Special rates are also available for residents, students, fellows, and delegates from low income countries. For more information visit our official GSC 2019 website.

Don't forget to download the GSC Congress App to stay up-to-date with all activities happening during the GSC in Toronto.

We look forward to seeing you in Toronto!



AOSpine Members-only Sessions at Global Spine Congress

Join the AOSpine members-only sessions on Wednesday May 15, 2019.

Time: 17.00 – 17.45

How to evaluate new technologies

Moderator:

Maarten Spruit, Emiliano Vialle

Speakers:

Hani Mhaidli, Asdrubal Falavigna

Where is the line between pioneering ‘early adopter’ and cautious latecomer? This session will focus on the key considerations that surgeons should keep in mind before taking the plunge with new technologies, and how to avoid pitfalls.

How to brand yourself

Moderator:

Guvinder Deol

Speakers:

Lali Sekhon, Yong Hai, Mohammed el-Sharkawi

Over 1 billion names are googled every single day. As a surgeon it's very likely someone has looked you up. What people find out about you online and offline determines how you are perceived by patients and business partners. In this session you will learn tips and tricks about how to brand yourself

Time: 17.45 – 18.30

How to be a good leader

Moderator:

Jaime Segura

Speakers:

Mohamed Abdel-Wanis, Juan Emmerich, Ted Choma

“What you do is the proof of what you believe”. This session will focus on key leadership skills and how they are developed and implemented, through an interactive panel discussion format.

‘The Good, The Bad and The Ugly. The case that taught me the most’

Moderator:

Harry Gebhard

Speakers:

Michael Fehlings and many high-profile speakers

During this members-only session moderated by the Fellows Alumni Steering Committee many high-profile speakers will present one case for discussion: ‘The case that taught me the most’. Join the audience to see how the most experienced surgeons handle extreme cases and interact with them and your peers to further develop your skills as a spinal surgeon.

AOSpine Members Assembly

Join S Rajasekaran, Norman Chutkan, Bryan Ashman, Dino Samartzis, Jeffrey Wang, Darrel Brodke and Yan Wang at the **AOSpine Member Assembly on Wednesday, May 15, 2019 at 18:45 just after the Members-only sessions. This is an excellent opportunity to learn more about AOSpine governance, education and research activities, other AOSpine initiatives, and to network with the world's most outstanding spine surgeon community.**

We look forward to seeing you there!

Please note

Livestreaming of the members-only sessions as well as the members assembly is available and free of costs for all AOSpine members. An invitation to join will be sent to all AOSpine members in a separate e-mail.



AOSpine Member Representative Presentation of shortlisted candidates

The Nomination Committee has approved the following candidates to enter the democratic election process

Your vote counts!

The Member Representative will be democratically elected by all voting members of AOSpine who attend the Global Spine Congress 2019 in Toronto. All (present) AOSpine Voting Members* will have one vote, to be cast anonymously via the electronic AO voting system. You will receive an email invitation to vote at the beginning of the congress. If you need support to cast your vote, please come to the AOSpine members lounge.

The winning candidate will need to get the majority of the votes. In case none of the members wins in the first voting round, a second round with the top two candidates will be run.

Meet the candidates

Please find below the list of the shortlisted Member Representative Candidates. Click here to view their CVs and motivational letters.

The Member Representative will serve for two years: One year with member elect status (guest without voting rights), and one year as a full member of the AOSpine International Board with voting rights. All candidates have already demonstrated their commitment to AOSpine and have been continuous members of the organization for a minimum of 4 years. They are passionate about developing AOSpine and willing to devote a significant amount of time and travel to this function without fiscal reimbursement. To view the Member Representative responsibilities and required experience, click here. (see job description attachment)

Register now for the Global Spine Congress

*How to become an AOSpine Voting Member:

You automatically qualify as an AOSpine Voting Member if you have been a paying member for a minimum of three years

You can become an AOSpine Voting Member if you sign up as a member until April 30, 2019 for 3 or 5 years

Additionally, you need to be registered for the Global Spine Congress 2019 in Toronto, and have picked up your badge

Access your membership profile or become an AOSpine member now at www.aospine.org/membership



New Special Focus Issue and Global Spine Journal Award Winners



Global Spine Journal (GSJ) is excited to be a part of the upcoming Global Spine Congress in Toronto from May 15th–18th. GSJ will have its own area in the AOSpine booth. Please stop by the booth Thursday, Friday, and Saturday to meet Managing Editor Danielle Lieberman as well as SAGE Publications Publishing Editor Natalie Gerson on Thursday.

There will be a lot of materials for you to pick up at the booth including Issues 1 and 2 of this year as well as special issues, including Cervical, Infection, Trauma, and Knowledge Forum. There will also be many pocket cards to pick up for all of our special issues for those of you that do not want paper copies.

GSJ's latest special issue will be available for the first time at Global Spine Congress. This issue comes from the AOSpine Knowledge Forums. AOSpine's Knowledge Forums are pathology-based study groups focusing on degeneration, deformity, spinal cord injury, trauma, and tumor. The focus issue is titled: "AOSpine Knowledge Forums: Driving Research, Discovery, and Innovation in Spine". This issue is led by AOSpine Research Chair and GSJ Deputy Editor Dino Samartzis, he has said of this issue, "Each of the five groups has contributed two articles that range from reviews of pressing issues and presenting key concepts that spine surgeons should know, to bringing to the forefront some key findings from their multicenter studies. This work is a glowing example that even though eight years has passed since the AOSpine Knowledge Forums began, their research, and activities continue to remain in 'motion', always striving to impact patient care and alter the tempo of the spine field by the combustion of the creation and transmission of knowledge globally."

You will be able to pick up copies of this issue as well as pocket cards at the booth with a QR code to access this issue.

GSJ will also be hosting a 2 part session at GSC: "Spine Research, a Strategy for Success". This will be available to anyone in attendance. Part A is "Creating a Successful Spine Research Program" and will be held on Thursday, May 16th from 3:30 pm

– 5:00 pm and Part B is "Getting Published" and will be held on Friday, May 17th from 10:30 am – 12:00 pm. Both parts will be held in Room 713 and they are available to anyone in attendance at GSC.

GSJ is also proud to announce the 2018 Best Paper and Best Reviewer Award Winners.

The Best Papers are:

"Degenerative Lumbar Spine Disease: Estimating Global Incidence and Worldwide Volume" by: Vijay M Ravindra, MD, MSPH, Steven S Senglaub, MS, Abbas Rattani, MBe, Michael C Dewan, MD, MSCI, Roger Härtl, MD, Erica Bisson, MD, MPH, Kee B Park, MD, Mark G Shrime, MD, MPH, PhD

"Adjacent Segment Disease After Posterior Lumbar Interbody Fusion: A Case Series of 1000 Patients" by: Shinya Okuda, MD, PhD, Tomoya Yamashita, MD, Tomiya Matsumoto, MD, PhD, Yukitaka Nagamoto, MD, PhD, Tsuyoshi Sugiura, MD, PhD, Yoshifumi Takahashi, MD, Takafumi Maeno, MD, PhD, Motoki Iwasaki, MD, PhD

The best reviewers are:

Emre Yilmaz, MD
Chi Heon Kim, MD

The awards will be presented at GSC at the awards ceremony on Thursday, May 16th from 6pm during the welcome reception.

You can also follow GSJ on social media to get the most up-to-date news and article posts. Follow us on Facebook: www.facebook.com/globalspinejournal and on Twitter @globalspinej.



Eleven winners of the AOSpine 2019 Discovery and Innovation Awards join the AOSpine Knowledge Forums

AOSpine is proud to present the winners of the AOSpine 2019 Discovery and Innovation Award and their winning study proposals.

The eleven winning young scientists and their study proposals were selected out of 83 received applications in a blinded review process. The initiative encourages young AOSpine members to perform high-quality, clinically-relevant spine research and to get involved.

The winners have been invited as Associate Members to the AOSpine Knowledge Forum (KF) which relates to their study's pathology. Most of them will participate in their first KF meeting in Toronto, Canada, during the Global Spine Congress (GSC) in May 2019.

Congratulations to:

AOSpine Knowledge Forum Tumor welcomes Marco Palanca, Ankit Mehta, and Hanqiang Ouyang



Ankit Mehta
Department of Neurosurgery,
University of Illinois at Chicago,
Chicago, IL, USA

"Determining Efficacy and Toxicity of Magnetically Guided Nanoparticles for Intramedullary Spinal Tumors"

Ankit I Mehta says intramedullary spinal cord tumor management has been a significant clinical challenge to the spinal oncology community, primarily, due to difficulty of drug delivery, invasive nature of tumors, and failure of radiation therapy. "Our lab has developed a novel platform where chemotherapeutic magnetic nanoparticles

are localized to an intramedullary spinal cord tumor in an in vivo rat model."

Mehta's proposal aims to determine both the efficacy and toxicity of this platform in comparison to other modes of chemotherapeutic delivery. He thanks AOSpine for their support in the endeavor and hopes the platform will induce an increased amount of tumor cell death and reduce both central nervous system and systemic toxicity.



Hanqiang Ouyang
Orthopedic Department, Peking
University Third Hospital, Beijing,
China

"Exploration and clinical application of new indicators for prognosis evaluation of solitary plasmacytoma of bone"

Hanqiang Ouyang was overjoyed to hear of the award and hopes the KF membership will help him create contacts to spinal tumor specialist all over the world. Ouyang's project is on the Solitary Plasmacytoma of Bone (SPB), which is a single isolated plasma cell tumor. "About two-thirds of patients with SPB eventually progress to Multiple Myeloma (MM)," Ouyang says. "We speculate that some cases of SPB may essentially involve relatively inert malignant tumors, which are different from those observed in MM. Other cases of SPB are solitary early manifestations of MM."

"The ability to predict if SPB patients will progress to MM earlier in the single isolated stage would provide guidance for early diagnosis, rational treatment, and prognosis assessment on the genomics level," Ouyang states, hoping his findings will support personalized precision medicine for SPB patients in the future.



Marco Palanca
Alma Mater Studiorum—Università di Bologna, Bologna, Italy

“Stabilize or Not to Stabilize: biomechanics-based guidelines in case of indeterminate SINS”

Palanca’s study aims to define how to identify spine metastases cases that need stabilization, in cases specifically classified as “indeterminate” by the Spinal Instability Neoplastic Score (SINS). “For many cancer types, there is growing expectation of survival,” Palanca explains. “For these patients, the focus is their quality of life. The management of complications becomes extremely important, among them the correct management of vertebral metastases with respect to pain and risk of fracture.”

Palanca says, receiving the award “is another brick in the bridge between engineering and clinical environments”. While this is an opportunity to learn from the best spinal surgeons in the world, it also allows him to share his views with the spine community.

AOSpine Knowledge Forum Deformity welcomes Joseph Baker and Tim O’Connor



Joseph Baker
Department of Orthopaedic Surgery, Waikato Hospital, Hamilton, New Zealand

“Principal component analysis of the pelvis—atomic contributors to the pelvic incidence and application to surgical planning”

Joe Baker is delighted to receive support from AOSpine and hopes this will develop into future partnerships. “It is an exciting time for our unit as we try to grow the academic program in Waikato Hospital,” Baker says.

Baker’s study will explore the relationship of the pelvic and spinal geometry and increase the ability to individualize planning in spinal surgery. “I am looking forward to being involved in the AOSpine Knowledge Forum and hope to develop relationships with others.”



Tim O’Connor
University at Buffalo Neurosurgery, Buffalo, NY, USA

“Tension Parameters in Junctional Tethers for Proximal Junctional Kyphosis”

Tim O’Connor and his project team look forward to using the award to push the envelope and develop new tools to make a lasting impact on patient care. “It’s an honor for us, and we were excited and humbled when we first received the acceptance letter. I look forward to contributing to the AOSpine Knowledge Forum and collaborating with leaders in our field.”

The objective of O’Connor’s study is to determine optimal tension parameters in junctional tethers, with the goal of using this knowledge to develop a better tether device in the future. Tethering devices have been shown to significantly decrease the occurrence of PJK following multilevel posterior spinal fusion to correct adult spinal deformity. Currently, there are no studies evaluating the optimal tension parameters when to use tethers to reduce PJK.

AOSpine Knowledge Forum SCI welcomes Benjamin Davies and Ryan O’Hare Doig



Benjamin Davies
Division of Neurosurgery, University of Cambridge, Cambridge, UK

“Investigating the biological basis for disability in degenerative cervical myelopathy: can PET-MRI directly quantify myelination in vivo?”

Benjamin Davies is delighted to be given this opportunity by AOSpine. “I think myelopathy is a major unmet research need and the opportunity to be amongst the pioneers in this field, on the AOSpine KF SCI, is an honor.”

Davies says the care and research of degenerative cervical myelopathy (DCM) is hindered by our current assessments. His study will look at the feasibility of a PET radioligand to directly image the disease process in the spinal cord. Such a technique could help refine diagnostic imaging and offer a signal to test regenerative therapies.



Ryan O'Hare Doig

Neil Sachse Centre for Spinal Cord Research, South Australian Health and Medical Research Institute, Adelaide, SA, Australia

"Modulation of inflammatory responses using neural crest derived dental pulp stem cells following acute spinal cord injury"

Ryan O'Hare Doig believes stem cell-based transplantation therapy holds great promise for a multi-faceted therapeutic approach to spinal cord injury, but bench-to bedside translation is limited by our understanding of stem cell transplants behavior in the non-conductive environment of the spinal cord. "During the acute phase of injury, infiltrating inflammatory cells release a number of mediators which likely play a pivotal in stem cell survival. Therefore, neuroinflammation has a clear role in the future of regenerative medicine."

With AOSpine's support, O'Hare Doig proposes an idea of 'priming' or, pre-exposing stem cells to autologous inflammatory cells of the injured patient ex vivo, prior to re-engraftment in vivo. "We believe this will promote greater stem cell survival, proliferation and differentiation, in turn driving significant neurological recovery."

AOSpine Knowledge Forum Trauma welcomes Martin Holas



Martin Holas

Department of Trauma Surgery, Teaching Hospital F. D. Roosevelt Banská Bystrica, Banská Bystrica, Slovakia

"Does erector spinae plane block decrease amount of analgesia needed after mini-invasive posterior transpedicular stabilization in patient with vertebral body fracture. Are there any per or postoperative complications?"

Martin Holas' study aims to confirm or refuse efficiency of Erector Spinae Plane (ESP) block during mini-invasive posterior transpedicular stabilization. "In the early hours after surgery, these operations are accompanied with high dosage of analgesics to treat pain. We hypothesis that ESP block will reduce the dosage of analgesics. If confirmed, this would help improve patient care without raising the complication rate."

Holas expects his exposure to the AOSpine Knowledge Forum Trauma will bring him new experiences, new knowledge, and new professional contacts. "It will also allow me to do my part in growing the knowledge."

AOSpine Knowledge Forum Degenerative welcomes Arun Kumar Viswanadha, Kyle Sheldrick, and Carla Cunha



Carla Cunha

i3S—Instituto de Investigação e Inovação em Saúde, Porto, Portugal

"McDISC Macrophage therapy for intervertebral disc herniation"

Carla Cunha is happy about the award, which will allow her team at i3S to validate an in vivo proof of principle of intervertebral disc hernia regression. "McDISC is proposed as a clinically relevant immunomodulatory therapy that aims at boosting the physiological mechanisms of hernia spontaneous regression," Cunha says, and hopes this will result in a significant advance in spine care.



Kyle Sheldrick

Faculty of Medicine, University of New South Wales, Kogarah, NSW, Australia

"Decay Variance: A Novel MRI Tool for Quantifying Intervertebral Disc Degeneration in Low Back Pain"

Kyle Sheldrick says the AOSpine DIA grant is filling a big gap in funding schemes—his biggest barrier was always the leap from animals to humans. "We simply cannot get government grants for human work without preliminary human data, and the AOSpine grant will hopefully let us generate the first-in-human data."

The study will act as proof of concept to show feasibility of their technique to assess back pain. "If the results are positive, this will allow us to leverage this seed funding into large government grants, using our technique for long term prognostication, treatment selection, and disease classification in large cohorts."



Arun Kumar Viswanadha

Mallika Spine Centre, Guntur, Andhra Pradesh, India

"Do prophylactic antibiotics reach the operative site adequately?—A quantitative analysis of serum and wound concentrations of systemic and local prophylactic antibiotics in spine surgery"

Arun Kumar Viswanadha is happy to receive funding for his project and to have an opportunity to share knowledge. "I am looking forward to this once-in-a-lifetime opportunity at this early stage of my career. I hope this will tremendously transform my research career."

HIGHLIGHTS

Arun Kumar's study is designed to find which antibiotic—prophylactic systemic or the intra-wound vancomycin—lasts longer at adequate concentrations in the surgical wound and contributes more to preventing infection. "Prophylactic systemic antibiotic administration before spine surgery has been a standard protocol across the globe. Despite preoperative systemic antibiotic administration, the infection rates following spine surgery remains significant," Arun explains.



AOSpine to host “Women in Spine” Networking Breakfast

AOSpine is inviting all female surgeons that are attending the Global Spine Congress to the inaugural “Women in Spine” Networking Breakfast to celebrate extraordinary women in spine from around the globe.

Date:

Friday May 17, 2019

Time:

07:00 am – 08:30 am

Location:

Room 802, Metro Toronto Convention Centre (MTCC)

Speakers



Serena S Hu, MD | Professor and Vice Chair, Chief, Spine Service Department of Orthopedic Surgery Stanford University, USA



Christina L Goldstein, MD | Assistant Professor, University of Missouri, Department of Orthopaedic Surgery, USA



Yu-Mi Ryang, MD | Head of Department, Department of Neurosurgery, Helios Klinikum Berlin-Buch, Germany

As space is limited, please let us know if you'll be able to join us by confirming your attendance to Dorene Winter. We look forward to seeing you there!

Supported by the AOSpine International Community Development Commission



Coming soon—AO Surgery Reference for Metastatic Spine Tumor—a tool to help you make the right treatment decision

The AOSpine Knowledge Forum Tumor treatment recommendations and classifications for metastatic spine tumor have been adopted and implemented into the AO Surgery Reference. The new module organizes concepts in a way that helps spine surgeons think systemically about their treatment indications and options. With this tool, clinical outcomes for spine tumor patients are expected to substantially improve.

“We’ve come a long way in finding out which patients benefit from surgery, defining clear treatment indications, surgical strategy recommendations, and studying treatment outcomes,” author Ilya Laufer explains. Another important component has been the development of scoring systems such as SINS (Spine Instability Neoplastic Score), that facilitates diagnosis and referral patterns for patients with spinal instability.

With several AOSpine Knowledge Forum Tumor members, Laufer has arranged the information in a way that will help surgeons make the right decisions, make it easier to come up with a surgical plan, and to know exactly what techniques to use for each individual case.

“The AO Surgery Reference for Metastatic Spine Tumor is the only tool of its kind guiding decision-making and access to recommended surgical techniques at a moment’s notice—accessible anytime, anywhere on hand-held devices.”

Coauthor J J Verlaan thinks the biggest advantage for spine surgeons caring for these patients is having access to concepts that have been tested and are backed by scientific evidence of effectiveness and safety. “For every patient with spinal metastases there are so many variables that may influence outcome. Some form of standardization and a more methodological approach were urgently needed.”

Latest information at your fingertips

Verlaan remembers that only ten to fifteen years ago metastasized cancer was an almost certain death sentence. “As a result, doctors typically were not interested in investing much beyond best supportive care. But with systemic therapies, things have changed dramatically for the better; maintaining ambulation and quality of life have become the primary focus of physicians caring for these patients.”

More data-driven outcome measures and recommendations will come out of the AOSpine Knowledge Forum Tumor prospective studies and new knowledge will be added to the AO Surgery Reference as it becomes available. The user will always have the latest information at their fingertips.

Spine section Editor Luiz Vialle says the AO Surgery Reference is constantly evolving. “It was only natural that after spine trauma and deformities, we added tumor. I hope we can include the more complex primary tumors next.”

“This module will highlight the key considerations and surgical indications, when it comes to the evaluation of the metastatic spine tumor patient.”

Vialle reveals there is a new AO Surgery Reference Platform in development, more user-friendly and allowing

faster access to what the surgeon is looking for. “We are addressing the spine community’s needs by providing quick, up-to-date information on clinical and radiological evaluations, classifications, and decision-making processes, including a guide for performing the most common procedures.”

“This module will highlight the key considerations and surgical indications, when it comes to the evaluation of the metastatic spine tumor patient.”

A unique learning tool

Surgeons have a wide range of experience and variable access to decision-making instruments. In a newfangled way, AO Surgery Reference formalizes and popularizes surgical information and makes it accessible for clinicians across the world. It also makes it easier for those who are in training to learn how to take care of these patients.

“I’ve noticed many residents and fellows use the AO Surgery Reference routinely when it comes to trauma,” Laufer says. “I think spinal oncology has reached a point where we—like trauma—have a lot more clarity about how to take care of patients with spinal tumors.”

“The clinical outcome may improve substantially when you follow a rational path in deciding which treatment is going to benefit your patient.”

“Clarifying indications is key,” Laufer stresses. “In the modern age of hand-held devices, having something like this in the palm of a trainee’s hand is important. The easier the access, the better it will be known, and the more it will be used.”

Verlaan warns that such tools should not replace interaction with patients. “One should talk long and hard with patients to understand their wishes and goals before starting any treatment.”

“The clinical outcome may improve substantially when you follow a rational path in deciding which treatment is going to benefit your patient.”



AOSpine to define top 10 research priorities and Core Outcome Set for DCM—your chance to be involved



AOSpine Knowledge Forum Spinal Cord Injury is conducting an international, multi-disciplinary consensus process to improve the efficiency of research into degenerative cervical myelopathy (DCM) globally. We are recruiting as many people as possible who are involved in DCM to complete surveys and to disseminate the survey to other organisations, hospitals, and personal contacts for greater impact.

The two-part study—AOSpine Research Objectives and Common Data Elements for Degenerative Cervical Myelopathy (RECODE-DCM)—is being conducted in partnership with the University of Cambridge, UK. In the first part, in collaboration with the James Lind Alliance (JLA) and the National Institute for Health Research (NIHR), we bring together patients, family members, researchers, and healthcare professionals, such as primary care providers, physiotherapists, and surgeons, in a so-called Priority Setting Partnership (PSP). Their task is to identify the top 10 uncertainties or most important research questions in the field.

“This is a great opportunity to get your voice heard in health research and help improve patient care,” says Ellen Sarewitz, DCM Patient Representative from the UK. She encourages everyone who is affected by or has experience of DCM to participate.

“By carrying out more effective and efficient research, we hope to increase our understanding of DCM and improve the lives of people with DCM.”

The objective of the second part of the study is to define the actual Core Outcome Set (COS). With the broad range of stakeholders included in the process, the aim is to develop a COS with 10 or fewer outcomes including measurable outcomes such as the level of pain or a measure of grip strength. At least one of the outcomes should be in the core areas of adverse events, life impact, and pathophysiological manifestations.

Comparing apples with apples

Standardised Core Outcome Sets are agreed minimum sets of outcomes or outcome measures, and they allow comparisons to be made between different studies. They are used in clinical efficacy studies of health interventions, to find out how successful treatments are in achieving their aims.

“A COS tells us ‘what’ we should measure and report in trials in a specific area. Otherwise you are always comparing apples with oranges,” Principal Investigator Mark Kotter explains. “The AOSpine RECODE-DCM study will look specifically at DCM care. But first we must find out what is most important to the various stakeholders and the people affected by DCM.”

“It is important to listen to all experts—those living with the condition, and those working to understand or treat it—to produce meaningful recommendations.”

Both the PSP and the COS are developed using the established Delphi process, which starts with rounds of online surveys based on systematic reviews, qualitative interviews and patient input. At the end of the process the stakeholders gather for a final consensus meeting to agree on the result.



Patient Representative
Ellen Sarewitz hopes more efficient research will improve the lives of people with DCM.



Principal Investigator
Mike Kotter says RECODE-DCM aims to shape the way future DCM research is carried out.



AOSpine International Educator of the Year award and Regional Educator Award winners

Since 2004 AOSpine have presented various educational awards to our esteemed faculty and we are proud to announce the winners of the International and Regional Educators of the Year 2018.

The AOSpine International Educator of the Year Award distinguishes a long standing and highly respected member of the AOSpine Community who has demonstrated sustained and significant contribution to educational excellence on an international level.



International Educator Award Winner 2018

Emiliano Vialle



Regional Educator Award Winner 2018 Asia Pacific

Yasutsugu Yukawa

The AOSpine Regional Educator of the Year Awards are bestowed on eminently appreciated members of the AOSpine Community in his/her region who have demonstrated continual and meaningful contributions to improving patient care through AOSpine education.



Regional Educator Award Winner 2018 North America

David Gloystein



Regional Educator Award Winner 2018 Europe and Southern Africa

Christoph Mehren



Regional Educator Award Winner 2018 Latin America

Fernando Alvarado Gomez



Regional Educator Award Winner 2018 Middle East and Northern Africa

Abdulaziz Al Mutair

All awards will be presented during the Welcome Reception for the Global Spine Congress 2019 in Toronto on Thursday 16th May at 6pm.



Tenth edition of the Advanced Level Live Tissue Course

We recently celebrated the completion of another edition of this successful event

The Advanced Level Live Tissue Course—Avoiding Complications in Anterior Approaches and Complex Procedures, took place in Curitiba (BR), March 15–16, 2019. The two-day, hands-on course offered participants a chance to experience the common anterior approaches to the thoracic and lumbar spine and to perform an osteotomy of the posterior elements of the spine in a live-tissue environment. They also learned the principles in the avoidance and management of common complications and received an update on intersomatic arthrodesis.

This was a special edition because we celebrated the tenth edition of the course. Carefully selected faculty worked together to offer a very successful supervised live-tissue training throughout the course. The chairperson is Luiz Vialle (BR) and the educational advisor is Emiliano Vialle (BR).

We are pleased to share some numbers about the ten editions of this course:

- First edition: March 17–29, 2008, took place in Curitiba (BR). Subsequent editions took place March 26–28, 2009; April 22–24, 2010; April 15–16, 2011; March 22–23, 2013; March 28–29, 2014; April 1–2, 2016; March 10–11, 2017; and March 16–17, 2018
- Participants: 400 were trained
- Faculty: 90 (faculty, table instructor and faculty assistant) were involved

We are grateful for the support, commitment and hard work of the course directors and faculty group that allowed us to continuously deliver a high-level live tissue course. We also thank all the participants for their significant contributions and interest; without them, we would not have been able to consistently offer such an important educational event.

First Advanced Level Specimen Course—Cervical Spine by AOSpine Latin America

The specimen course was conducted April 26–27 in Palm Beach (US)

The first edition of the Advanced Level Specimen Course—Cervical Spine took place April 26–27, 2018, in Palm Beach (US). The aim of this course is to give participants a foundation of practical skills on commonly performed tasks regarding cervical spine.

The scientific program allowed the participants to:

- Understand the importance of soft tissue dissection and retractor placement in cervical spine approach.
- Identify the anatomical landmarks for an adequate spinal canal decompression during the anterior approach.

HIGHLIGHTS

- Recognize the risk factors for dysphagia, dysphonia, and C5 palsy.
- Define the anatomical parameters to dissect the vertebral artery and how to prevent and manage its injury.
- Identify the anatomical landmarks and perform the placement of the cervical plate screw, C1 and C2 screw; and cervical lateral mass screw.
- Understand the limitations and benefits of laminoplasty and how to adequately perform the laminoplasty technique.

Theoretical sessions were provided online prior to the course in order to focus primarily on practical experience during the course. According to Asdrubal Falavigna (BR), course chairperson, “the pre-course activities helped to reinforce prior knowledge at the same time as it gave the necessary information to allow the participant to get the utmost from the information that he/she received during the training. By doing this, we increase the time for interaction during the course.”

The face-to-face course had an intensive hands-on session utilizing human anatomical specimens. Participants engaged in surgical techniques and strategies for a range of cervical spinal procedures.

“The course provided high-quality education through a dynamic and interactive format focusing on research and education to advance the management of cervical spine disorders on a global basis using our principles of evidence-based medicine and proven care,” said Falavigna.

Finally, during practical exercises, two participants per workstation practiced different surgical procedures on anatomical specimens. Procedures included:

- Upper cervical spine discectomy and reconstruction
- C1–C2 screw fixation and craniocervical fixation
- Lower cervical spine corpectomy and stabilization
- C3–C7 lateral mass screws
- Cervicothoracic approach and spinal canal decompression
- Laminoplasty



Mohamed Abdel-Wanis wins German Ochoa Traveling Fellowship

The AOSpine Education Commission is pleased to announce this year's winner of the German Ochoa Traveling Fellowship as Mohamed Abdel-Wanis from Sohag University in Egypt.



Mohamed currently sits on the AOSpine Middle East and North Africa (MENA) Board as Community Development Officer and has previously been Chair of the Egyptian Council. During his Chairmanship Mohamed and his council organized 18 AOSpine educational events in Egypt.

He has also been awarded: "Best Young Faculty in Middle East" during the AOSpine Davos Courses in 2008 and was named "Regional Educator of the Year" in 2016. In May 2018 Mohamed joined the AOSpine Ambassadors group.

With his award Mohamed plans to visit the Sen Sok IU Hospital in Cambodia in order to:

1. Encourage local spine surgeons to become AOSpine members by explaining the benefits to them
2. Arrange one or two AOSpine Seminars during his visit. The seminars will be used to discuss spine cases with junior surgeons and transfer experience to young spine surgeons
3. Promote research prizes offered by AOSpine
4. With his extensive experience in establishing research planes as well as writing and reviewing papers, he will help young local surgeons in preparing of research planes, as well as submission of their research papers to international journals

5. Encourage the local spine surgeons to attend the AOSpine activities in near-by countries
6. Share during clinical meetings the AOSpine principles in management of different spinal disorders
7. Share his experience in the field of spinal tumors with young spine surgeons
8. Get the chance to learn new techniques from the senior spine surgeons in the local hospital

Mohamed will be visiting Cambodia in September 2019 and we wish him every success in his venture.

German Ochoa was a founding member of AOSpine Latin America and his involvement with AO Education for over 25 years speaks for his passion, immense experience in the academic field and exceptional contribution to bringing AO and AOSpine to the forefront of surgeon education.



AO Foundation Davos Courses 2019

Save the date
December 8–11, 2019

“AOSpine is offering outstanding learning opportunities, **December 8 – 11**, at the AO Foundation Davos Courses 2019. AOSpine’s courses feature a mix of **MISS techniques and insight into the complex cervical spine**. You will also have time to meet and network with spine specialists from all over the world, and to discuss key issues with leading experts in their field. Don’t miss the chance to register from June at www.aodavoscourses.org.

I look forward to welcoming you to Davos!”

Bryan Ashman

AOSEC chairperson and AO Foundation
Davos Courses director



Why did you decide to become a spine surgeon?

Currently, I am resident in training to become an orthopedic surgeon. Next to interest in general orthopedic surgery, I have a special interest in the fascinating world of spine surgery. Spine surgery is a fascinating and developing surgical field. There are amazing challenges in the treatment of patients with spinal conditions, triggered by a diverse patient population and a variety of nonoperative and operative treatment options combined with its technical innovations.

There are amazing challenges in the treatment of patients with spinal conditions, triggered by a diverse patient population and a variety of nonoperative and operative treatment options combined with its technical innovations.

Where did you get trained?

I get trained at the Department of Orthopedic Surgery of the University Medical Center (UMC) Utrecht in the Netherlands. This center also includes a well-established Spine Unit due to an intense multidisciplinary teamwork with specialties such as neurosurgery and trauma surgery. While treating a broad range of spinal pathologies, this contributes significantly to a solid base for me to become a well-trained spine surgeon.

Who inspires you?

There are many people who inspire me in the field of spine care. I am very fortunate to have spine surgeons of the UMC Utrecht as my daily supervisors, especially Prof Cumhuri Oner. He also introduced me to the

AOSpine Knowledge Forum Trauma in which I am presently involved. It is a privilege to work together with a team of inspiring and renowned experts including the steering committee members Prof Alexander R Vaccaro, Prof Marcel F Dvorak, Dr Jens R Chapman, Prof Frank Kandziora, Dr Klaus J Schnake, Prof S Rajasekaran, Prof Lorin Benneker and Dr Emiliano Vialle.

I am very fortunate to have spine surgeons of the UMC Utrecht as my daily supervisors, especially Prof Cumhuri Oner. He also introduced me to the AOSpine Knowledge Forum Trauma in which I am presently involved.

Can you tell a bit in general about spine surgery in the Netherlands?

In the Netherlands, many efforts are being undertaken to work towards the centralization of spinal care. The idea is to have a restricted number of highly-specialized centers for the care of traumatic spine injuries and oncological diseases, in order to provide the best treatments for our patients. On the other hand, currently a major issue in the Netherlands is the waiting period for deformity surgeries. Due to the limited capacity, a waiting period of more than one year is, unfortunately, more often the rule than the exception.

What do you consider the biggest challenges for spine surgeons in the Netherlands?

Like other Western countries, the Netherlands is a highly developed country with increased longevity. It is important to realize that physical and mental weaknesses increase with

age. With the aging of the population, geriatric spine trauma has increased rapidly, as well as spinal tumors and metastatic diseases. The same is the case for spinal degenerative deformities. As mentioned earlier, the increasing waiting periods for surgery make this issue very challenging. Another challenge associated with aging is the increasing incidence of spondylodiscitis, mainly related to the multiple comorbidities of the aging population.

It is a great privilege to be a member of the AOSpine. It is the leading global academic community and the best platform of international education and communication in the field of spine.

How has AOSpine influenced your career?

It is a great privilege to be a member of the AOSpine. It is the leading global academic community and the best platform of international education and communication in the field of spine. I am very grateful to collaborate with the AOSpine Knowledge Forum Trauma in various research projects focusing on outcomes measurement in spine trauma care. I look forward to further collaborations and fruitful interactions with the overall intention to contribute to patient-centered and evidence-based spine (trauma) care.

Biography

Said Sadiqi, MD, PhD
Orthopedic surgery resident with special interest in spine surgery
University Medical Center Utrecht, the Netherlands