

INUS Neuro-Urology News

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INUS Annual Congress Recap

Dr. Blayne Welk INUS Vice-President
Dr. Glenn Werneburg Early Career Officer



At the International Neuro-Urology Society (INUS) Annual Congress, President Dr. Thomas Kessler, and the scientific committee (Dr. Jorge Moreno-Palacios, and Dr. Apostolos Apostolidis), in partnership with the local organisers (Dr. Charalampos Konstantinidis and Dr. Michael Samarinas) were honored to host researchers and clinicians from around the world in Athens, Greece, from June 8-10, 2023.

There were about 200 conference participants this year from 35 nations. The 68 conference faculty joined from 23 nations.

The scientific program started with multidisciplinary workshops (urodynamics, neuromodulation, neurosciences, translational research, and pediatrics) bringing together groups with a shared interest in these topics. A workshop specifically for urologic nurses was also hosted, covering topics including intermittent catheterization and counseling approaches to recurrent urinary tract infections. The Congress main program included three keynote lectures. The first keynote, deliv-

ered by Dr. Lori Birder, examined the role of purine nucleoside phosphorylase (PNPase) in age-related changes and detrusor underactivity, and the results of preclinical studies demonstrating the changes can be prevented by 8-aminoguanine. Second, Dr. Andrei Krassioukov (physical medicine and rehabilitation specialist) discussed the detailed impact of autonomic dysreflexia on people with spinal cord injury, and how to optimally manage this condition. In the third keynote lecture, Dr. Karl-Dietrich Sievert reviewed clinical targets and unmet needs in neuromodulation in the neurologic population.

INUS also hosted its first Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) lecture at the Annual Congress. This was delivered by Dr. David Ginsberg, who discussed the significant economic burden of treatment and rehabilitation for neurogenic lower urinary tract dysfunction, and its associated bladder drainage assistance.

INUS Calendar

INUS at ICS 2023

Toronto, Canada

September 27-29, 2023

INUS lecture 6/28 6:05PM: The Unusual Suspects - Diagnosis and Management of Less Common Causes of Neurogenic Lower Urinary Tract Dysfunction

INUS Course at EAUN Meeting

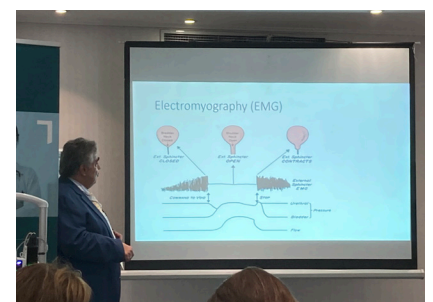
Paris, France

April 6-8, 2024

INUS Annual Congress 2025

Switzerland

January, 2025



Dr. Charalampos Konstantinidis presenting at the urodynamics workshop at the 2023 INUS Annual Congress

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Other partner societies were also invited to participate in the program. These included the Turkish Association of Urology (Dr. Taahra, “Which urodynamic parameters matter in the neurogenic population”), the International Continence Society (Dr. Konstantinidis, “Highlights on neurogenic incontinence and sexual dysfunction”), the Pan-Arab Continence Society (Dr. al Mousa, “Bladder augmentation and renal transplant in the neurogenic population”), the Iranian Urology Association (“Challenges in the treatment of neuro-urological sexual dysfunction in women in the Islamic world”), the Société Internationale d’Urologie (Dr. Principe, “Management of urethral and stoma complications in neuro-urological patients”) and the Urodynamic, Neurourology & Female Urology (UNUFU) section of the Hellenic Urological Association lecture (Dr. Apostolidis, “QoL, decision-making for treatment and treatment adherence in patients with multiple sclerosis/NLUTD”). All of these societal partnerships helped bring together global experts, and contribute to the rich and specialised neuro-urology program.

The Congress program also included a series of non-society lectures and panel discussions. For the first time, a session dedicated to pediatric neurogenic lower urinary tract dysfunction (NLUTD) was included. Dr. Stacy Tanaka discussed the workup and management of neurogenic incontinence in adolescent patients and children. This was followed by an engaging panel moderated by Dr. Anastasios Karatzaz wherein challenging cases were discussed. Panelists Dr. Stuart Bauer, Dr. Carlos Estrada, Dr. Giovanni Mosiello, and Dr. Christian Sager joined Dr. Tanaka. A session focusing on sexual dysfunction in spinal cord injury and other neurogenic pathology included a panel moderated by Dr. Desiree Vrijens with panelists Dr. Nikolaus Sofkitis, Dr. Bertil Blok, Dr. Razvan Bardan, Dr. Claire Hentzen, and Dr. Charalampos Konstantinidis. The lecture by Dr. John Stoffel on the value and utility of the

post-void residual volume in individuals with NLUTD who do not catheterize was another Congress highlight. He discussed approaches to risk stratification and careful assessment of symptomatology in the clinical decision-making of those with elevated post-void residual volumes. Neurologist Dr. Jalesh Panicker discussed recent research and advances in understanding of central micturition control, and medical physicist Dr. Gergely David discussed novel MRI techniques used to investigate pathophysiological mechanisms of spinal cord injury and its relationship to NLUTD. Dr. Blayne Welk moderated the Balloon Debate: “Clinical Conundrums in Neuro-Urology”. The balloon debate’s premise is that each Panelist presents and supports his or her response to a clinical case question regarding workup or management. The audience then votes for the favorite response, and the Panelist with the fewest votes leaves the balloon during each round. The process continues until the balloon contains only the winner. There was robust audience engagement during the session, with multiple votes for all Panelists: Drs. Emmanuel Braschi, Giulio Del Popolo, Michael Samarinas, and John Stoffel.

Forty-five posters were presented. The poster sessions provided a venue for selected abstract submitters to present their latest work at the Congress. The work ranged from basic science, including a study of a novel reporter-bacteriophage bioluminescent assay to detect bacterial UTIs as presented by Dr. Lorenz Leitner, to clinical studies including the validation of the irritable bowel syndrome quality of life questionnaire in the spinal cord injury population, presented by Dr. David Ginsberg.

On the last day of the Congress, the Swiss Continence Foundation selected its 2023 Awardee. The Swiss Continence Foundation seeks to support and advance the research and education within Neuro-Urology and functional urology to improve quality of care and life

of those afflicted with neuro-urological conditions. Its award, totalling 10,000 Swiss Francs (approximately \$11,200 USD), is awarded annually to the top contribution by a young Neuro-Urology talent. The Swiss Continence Foundation assembled an independent Jury consisting of Drs. Martina Liechti, Andrea Sartori, John Stoffel, Jalesh Panicker, and Glenn Werneburg to select a winner. Dr. Ulrich Mehnert Vice-Chairman of the Foundation Board, was the jury moderator. The curriculum vitae, a submitted abstract, as well as a research presentation and responses to inquiries of the Jury and the general audience were used to select the Awardee. The winner of the 2023 Swiss Continence Foundation Award was Dr. Claire Hentzen for work on pelvic neurophysiology in the assessment of Tarlov cysts and their relationship with symptoms.



Dr. Claire Hentzen (center) was the recipient of the Swiss Continence Foundation Award. She is pictured with Dr. Thomas Kessler (left, INUS President and Chairman of the Swiss Continence Foundation Board) and Dr. Ulrich Mehnert (right, Vice-Chairman of the Swiss Continence Foundation Board).

The next INUS Annual Congress location was announced. For its 10th anniversary, the INUS Annual Congress will take place at the location where it was established: Switzerland. The INUS Board welcomes all Members and those with neuro-urological interest to attend in January 2025.

Interview with the Expert

Sacral Tarlov Cysts: Neurophysiology and Pelvic Symptoms

Dr. Claire Hentzen, MD (FR)

Physical Medicine and Rehabilitation
Department of Neuro-Urology, Tenon Hospital, Paris, France

 @claire_hentzen

Glenn Werneburg, MD, PhD

Editor, Neuro-Urology News; INUS Early Career Officer

 @gwerneburg



In this month's Interview with the Expert, we highlight Dr. Claire Hentzen and her work on Sacral Tarlov cysts, for which she won this year's Swiss Continence Foundation Award. Below is the interview, edited for length and clarity.

Glenn Werneburg: What is known about the sacral Tarlov cysts as relevant to urology?

Claire Hentzen: The literature was scarce on this topic. The majority of the papers report results of cyst surgery with improvement of urinary symptoms. However, there was no description of the type of symptoms, i.e. storage or voiding symptoms, no systematic assessment before and after surgery. In the only study focused on bladder symptoms, the absence of a control group is a major pitfall. One study described abnormalities in the pelvic muscles related to Tarlov cysts using needle electromyography, but the criteria for abnormalities are debatable.

GW: Describe the design of the current study. What was your hypothesis?

CH: This study was a retrospective study including all patients with Tarlov cysts, referred for pelvic neurophysiology because of symptoms such as pelvic pain or bladder, bowel, or sexual dysfunction. Our hypothesis was first that Tarlov cysts may affect sacral nerve function, and that pelvic neurophysiology would be a useful tool to detect such a dysfunction. Secondly, we hypothesized that voiding dysfunction would be associated with sacral nerve root injury.

GW: What were the main findings of

the current study? What are its implications?

CH: The study showed abnormal neurophysiology findings in more than 50% of the patients, and thus a real impact of the cysts on nerve function. We did not find a correlation with the size of the cysts, except an association between bilateral abnormalities on pelvic neurophysiology and a higher cumulated size of the cysts. A negative association existed between neurophysiology abnormalities and overactive bladder and stress incontinence, and surprisingly no link was found with voiding dysfunction. This is probably related to confounding factors and a possible lack of power.

GW: What is the clinical significance of the finding of the negative association between neurophysiology abnormalities and occurrence of urgency urinary incontinence, detrusor overactivity, and stress urinary incontinence?

CH: This finding is important in understanding bladder symptoms in this population, mainly composed of women in their 50s. Coming back to pathophysiology, a lesion on the sacral nerve root may lead to voiding dysfunction, but presumably not to overactive bladder or detrusor overactivity. Thus, the result of the study is consistent with this hypothesis and may help in patient management. Indeed, some patients are convinced that all their symptoms are related to the cyst(s) and are looking for spine surgery. However, the physician should propose appropriate management of OAB and not focus on the cysts, as it is unlikely that these cysts are responsible for overactive blad-

der symptoms or stress incontinence.

GW: What were the limitations of the study? Do you expect that males would have similar findings? What are the next steps?

CH: As a retrospective study, we faced limitations due to the design, especially with a low number of urodynamics, and the absence of a control population. It was also difficult to consider all the confounding factors such as medication, obesity, menopause. We excluded male patients because only a few men underwent pelvic neurophysiology, probably because Tarlov cysts are more common in women (for unknown reasons). We expect a similar rate of sacral nerve injury in males, but the findings on bladder symptoms might differ. In the general population, the rate of OAB is lower in men than in women, and prostate hyperplasia might affect the findings on voiding dysfunction.

This work is an opening for further studies. In patients with Tarlov cysts, we would like to assess the benefit of surgery on pelvic symptoms and assess if neurophysiology could be a predictor of the result. The benefit of surgery on voiding difficulties remains uncertain. Moreover, we are looking at patients with midline sacral meningeal cysts, a different type of sacral cysts, which might have a more important impact on nerve root function, and thus on pelvic symptoms. This study also highlights the usefulness of pelvic neurophysiology in our day-to-day assessment to seek sacral nerve lesions in patients with uncommon presentations or radiological findings.

GW: What advice do you have for junior INUS members interested in embarking on a career as a clinician-investigator with a neuro-urological focus?

CH: First: sign for it. This specialty is so rewarding, and despite the appearance of being very focused and overspecialized, the diversity in diagnosis, management options, and research area is large.

One of the most important and stimulating parts is collaborating with a multidisciplinary team. Because of their neurological condition and the related disabilities, these patients have to be considered

as a whole, taking into account their disease and disabilities, but also their environment and potential future difficulties. Thus, I believe the merge of neurologists, urologists, PMR specialists, and physio/occupational therapists' points of view, brings the best management for the patients.

In the research area, it is important to consider the pathophysiology first. The understanding of bladder dysfunction in some neurological diseases remains incomplete. You also must be patient as the recruitment of patients can be difficult. The variability of clinical presentations may represent a challenge when

you decide to build a study, and obtaining funding can be challenging. Lastly, learning about experience in other laboratories or departments with different populations, resources or techniques is a great source of inspiration and improvement for practice.

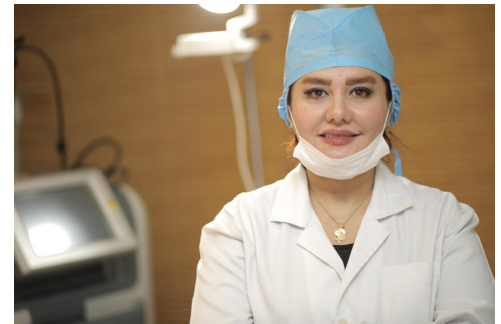
Further reading:

Hentzen, C., Cabrilo, I., Malladi, P., Simeoni, S., Amarenco, G., Zaidman, N., ... & Panicker, J. N. (2023). Sacral Tarlov cysts: Neurophysiology abnormalities and correlation with pelvic sensory and visceral symptoms. *European Journal of Neurology*.

Meet the Board Member

Dr. Mehri Mehrad

INUS Promotion Officer
Head of Neuro-Urology Department
Shohada Tajrish Hospital, Tehran, Iran



Dr. Mehri Mehrad, MD is the Promotion Office of the Board of the International Neuro-Urology Society. She was elected to her current INUS position at the 2023 Annual Congress. She is Consultant Urologist and Neuro-urologist. She is the treasurer of the Iranian Female & Functional Urology Society, the Head of Neuro-urology Department of FNRC, SBMU, Shohada Tajrish Hospital, Tehran, Iran. She also is the Head of Voiding Dysfunction & Urodynamic clinic of Pars Hospital, Tehran, Iran. Drawing from years of experience working in Iran, Kuwait, United Arab Emirates, and Qatar, she founded Mehrad One Day Center, which is a urology pri-

private clinic with more than 16,000 active patients. She has been the organizer of the local INUS Congress in Tehran, Iran in 2016, 2018, and 2021. She has organized joint sessions between INUS and the Iranian Urological Association.

Dr. Mehrad graduated from Iran University of Medical Science, Tehran, Iran, and is board certified from Iran University. She has participated in several training courses in pelvic floor reconstruction, urodynamics, and laser and vaginal reconstruction. She also completed a Fellowship in cosmetic gynecology and was board certified in cosmetic gynecology on 2022. She founded the

female functional urogynecology department in Kuwait in 2012 and the Voiding Dysfunction & Neuro-urology clinic in Pars Hospital in 2010. She also led the International Multidisciplinary Neuro-urology Congress in Iran in 2016.

Dr. Mehrad is interested in social and cultural activities to utilize her knowledge to improve the lives of female patients, particularly those who are suffering from female genital mutilation, female sexual dysfunction, and urinary dysfunction. She is interested in health management and business strategy, as well as in new marketing and branding approaches.

INUS Annual Congress 2023 Photos

