



Highlights of the annual scientific meeting of the 25th congress of the European Society of Musculoskeletal Radiology (ESSR) 2018, Amsterdam, The Netherlands

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Introduction

The 25th Annual Congress of the European Society of Musculoskeletal Radiology (ESSR) was held in Amsterdam, The Netherlands, at the NH Krasnapolsky, from 13–16 June 2018. The ESSR celebrated “25 years of excellence in musculoskeletal imaging”, promoting educational and research activities. This has been an important milestone for the society, which has an increasing amount of members, almost 1800 until today from around the globe (www.essr.org). This year's theme was “Muscle and Nerve”, a topic of increasing interest in musculoskeletal imaging. New developments in both ultrasound and magnetic resonance imaging providing highly detailed anatomy have become available. Consequently, this meeting focused on essential knowledge of muscle and nerve anatomy, optimizing imaging techniques and interpreting pathology.

Program “Muscle and Nerve”

Delegates had the opportunity to refresh their knowledge and get updated on the latest advances in musculoskeletal radiology. Two ultrasound workshops days were available either for starters dedicated to the shoulder, a “Resident Day” or for more experienced colleagues, a “Masterclass Day”, on nerves. The following 2-day refresher course started with a plenary session on this year's theme, followed by two parallel sessions. These included subcommittee-organized sessions and scientific paper sessions concentrating on muscle and nerve in addition to all other aspects of musculoskeletal radiology. In

addition, educational and scientific posters were displayed. The multidisciplinary approach of our profession was highlighted by the contribution of clinicians in a webinar with rheumatologists from the European League Against Rheumatism (EULAR), a workshop on the early detection of spondyloarthritis as well as a combined session on “What the clinician needs to know”. In a technology session and a lunch meeting, low-dose and whole-body CT was addressed. Finally, skills were tested in the famous quiz with prizes at the end of the meeting. For the first time, the meeting was completely digital, with a congress app (ESSR2018), available in the Apple and Google Play stores, including speaker profiles and presentation slides, the possibility to make your personal schedule, give speaker feedback, and communicate with other delegates.

Congress Numbers

Registrations

A new record in participation figures was reached with 973 delegates (+15% increase to 2017). US Workshops were fully booked with a maximum of 100 registrations for the Resident Day and 112 registrations for the Masterclass Day. An additional 27 registrants were accepted to attend the lectures only. Worth to mention is the special attention that was given to an even active contribution of male and female musculoskeletal radiologists, both in presenting and moderating in this ESSR meeting. A 1:1 male:female ratio in moderators was achieved in each session.

Abstract/Poster Submission

Forty papers were accepted for oral presentation and in addition 95 educational posters and 68 scientific posters were

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available in the ESSR ESOR database. These can be browsed online <http://posterng.netkey.at/essr/viewing/>.

Two posters were awarded. The first on normal and abnormal MR imaging findings in the intrinsic muscles of the hand, by B. Kislinger, representing a combined Swiss and American group [1]. The other on MRI characteristics of onychomatricoma, by S. Eminian and co-workers, a Swiss/French collaboration [2]. All abstracts for the scientific papers were published in the June 2018 edition of *Skeletal Radiology* [3].

Highlights included the awarding of Honorary Membership of Prof. Juerg Hodler from Zurich, Switzerland and Prof. Anne Grethe Jurik from Aarhus, Denmark.

Ultrasound

In order to accommodate both beginners in performing ultrasound and more advanced delegates, 2 days of hands-on workshops were introduced and organized. This was done by the ultrasound subcommittee, chaired by Dr. Luca Sconfienza. A maximum of four delegates and one tutor with a model for each ultrasound machine facilitated intense exposure to personal hands-on training. Collaboration with our industrial partners is greatly appreciated, since a large amount of machines were needed. On Wednesday 13 June, the “Resident Day” was introduced: a half-day workshop on ultrasound imaging of the shoulder including residents, musculoskeletal fellows, and young radiologists, learning basic ultrasound skills. On Thursday 14 June, there was a full-day workshop “Master Class on Nerves” aiming at radiologists with ultrasound experience. The theory lectures, live demonstrations, and pathology cases were interchanged by practice hands-on in small groups. Both days received positive feedback and the contribution of all experienced ESSR tutors participating in these courses is gratefully appreciated. Delegates unable to get a ticket for these workshops could attend the lunch symposium on Friday, 15 June “Masterclass Ultrasound -theory and live demo US of nerves” given by an international team of musculoskeletal radiologists: C. Martinoli, M. van Holsbeek, EG. McNally, and J. Jacobson. In the main refresher course, ultrasound of nerve entrapment and secondary pathology was discussed and those interested in ultrasound-guided interventions were able to learn indications and practical tips in a focused session.

Hybrid session

EULAR meets ESSR in Amsterdam: A unique opportunity to virtually meet—and learn. That is what EULAR wrote in her newsletter, paying attention to this event and illustrating its importance to both medical fields. Below an adapted version of this letter, clearly stating the goals and milestones of this session.

The ESSR met the European League Against Rheumatism (EULAR): both congresses were being held in Amsterdam, with overlapping days. This unique opportunity presented the chance to organize a joint session on one of many areas of mutual interest to both EULAR and ESSR delegates: The role of MR imaging in rheumatic diseases and its clinical implications. A joint session has therefore been organized to discuss this topic with EULAR and ESSR delegates on Friday, 15 June. EULAR delegates were invited to participate in the joint session at the RAI congress center, while ESSR delegates could participate in the congress center of the Krasnapolsky Hotel. The joint session was live-streamed from the EULAR venue to the ESSR delegates and vice-versa, enabling real-time interaction and debate.

Common objectives

Joint session convenor and EULAR Chair of Standing Committee on Musculoskeletal Imaging, Dr. Lene Terslev, says, “The objective of the joint session is for radiologists and rheumatologists to exchange knowledge on how the MRI exam is used in patients with rheumatoid arthritis and spondyloarthritis within different specialties.

“In the session, both radiologists and rheumatologists will talk on different aspects of the diseases. There will also be opportunity for an exchange of information to take place regarding which perspectives of MRI are important in daily clinical practice, and which information is important in the ordering and reporting of the MRI examination seen from both the radiology, as well as the clinical side, in rheumatology.”

Best outcomes for patient care

The shared session strengthens the collaboration between the two specialties and improves the understanding of potential different needs in the handling of these diseases in daily clinical practice. ESSR congress president and radiologist Dr. Monique Reijnierse: “This unique joint session has been designed to enable delegates at both congresses to gain insight into rheumatology practice, show MR imaging in early and established rheumatoid arthritis and spondyloarthritis, and to learn the role of MR imaging in rheumatic diseases. The fields of both rheumatology and radiology are rapidly changing with new treatment options and new imaging techniques. Knowledge of these developments is essential for good clinical and research practice. This is an interactive session and your input is highly appreciated”.

The session allowed for the audience to contribute to the exchange of information in an interactive, ‘Q&A’-style

format, and provided an opportunity to enhance understanding and collaboration between the specialties for improved patient care. The moderators were J. Sieper and M. Reijnierse, the two radiologists were A. Grainger and I. Eshed, and the two rheumatologists M. Østergaard, M. Boesen, contributing in this interesting new initiative.

MRI workshop on spondyloarthritis (SpA) This workshop is an adventure in experiential learning, organized by radiologists W. Rennie, R. Lambert, and rheumatologist W. Maksimowicz.

A group of approximately 30 pre-registered participants engaged in a case-based interactive workshop by using their own laptop or iPad under the guidance of two experienced moderators. The spectrum of MRI features observed in SpA, the advantages of MRI compared to other imaging modalities and the preferred terminology and the language of MRI in SpA, as well as the unmet needs of rheumatologists were discussed. The experienced and easy-accessible tutors, the excellent software, and available Internet made this workshop an outstanding experience.

Whole-body CT imaging

During a lunch symposium, the current use of computed tomography (CT) in musculoskeletal imaging was addressed. Improvements in CT, including developments in detectors, reconstruction algorithms, automatic exposure control and sliding collimators have led to CT dose reduction. The terminology of low- and ultra-low-dose CT was explained: low-dose CT is about still about 2–10 times higher than the dose in radiography. Ultra-low-dose CT achieves the same dose as radiography. Indications and image quality were highlighted in lectures including trauma and oncology (focusing on multiple myeloma). In addition, dual-energy CT was discussed, used in rheumatology, with the main indication being gout.

Muscle and nerve imaging

The opening session of the refresher course addressed an overview of muscle and nerve anatomy and imaging, using ultrasound and MR imaging. Loss of muscle quality, seen as muscle atrophy and fatty infiltration, is of importance, whether this is restricted to a single muscle secondary to e.g., a muscle tear or nerve entrapment, or more generalized secondary to e.g., neurologic disease. The effect of sarcopenia in the healthy elderly individual or chronically ill patient is clinically significant and highlighted. Radiologists might play an important role in identifying sarcopenia on CT and MR imaging in an aging population. In several sessions, different subcategories of muscle and nerve pathology were addressed in more detail. In “Imaging of nerves – how I do it” the brachial and lumbar

plexus were discussed, as well as peripheral nerve imaging using different modalities and nerve pathology, including entrapment. Attention was paid to sports-related muscle and nerve injury, the muscle-tendon-entheseal unit and traumatic lesions around joints, as well as muscle variations and disease. In the arthritis subcommittee session, different aspects and causes of (dermato) myositis were discussed. These highlights of the muscle and nerve topics are published in ten articles in a special issue of *Seminars in Musculoskeletal Radiology* [4–14], and is worth reading.

Finally, the essential collaboration between radiologist and clinician was illustrated in “guidelines in a case-based session”, in which a clinical team of a radiologist and clinician addressed oncology fast-track [15], cartilage imaging, sports imaging, and shoulder imaging.

Conclusions

Muscle and nerve imaging is of the highest interest with new developments in ultrasound, CT, and MR imaging and important clinical implications. Radiologists are in the lead to diagnose pathology and collaborate with clinicians, in order to get the best for their patients. I trust ESSR 2018 delegates were challenged by either starting or advancing imaging of muscles and nerves. This basic and advanced knowledge will guide them in optimizing patient care. With almost 1000 congress delegates, the ESSR 2018 reached a new record in participation figures, and is aiming to continue to build on these impressive numbers in future congresses. The ESSR 2019 topic is ‘The hip’ and this will take place 26–29 June in Lisbon, Portugal.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflicts of interest.

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