

## Training issues in ultrasound and the benefits of an International Fellowship

### *Doing an International Ultrasound Fellowship*

Musculoskeletal Ultrasound (MSUS) is arguably one of the most exciting and important developments in clinical rheumatology over the last few years, and it has an important role in the early arthritis clinic (EAC) and disease monitoring [1].

MSUS has been shown to be useful in detecting early synovitis. This is the main rationale for its use in the EACs [2], with its potential for earlier detection of inflammatory arthritis and providing the opportunity for subsequent disease-modifying treatment, which could positively alter the prognosis of the disease [3–5].

Many EACs in the UK are trying to incorporate US into their clinics. It is recommended that each unit should have an US lead who is adequately trained in this procedure and can teach and train others [2].

Many rheumatologists in the UK, however, do not feel suitably trained (or accredited) to perform US safely [6] and are trying to gain experience and accreditation in this modality through attending courses organized by either the British Society for Rheumatology or the EULAR [1, 7]. Nevertheless, an important consideration is that attending courses is simply not enough training to become an autonomous US practitioner [8]. One needs to be scanning on a regular basis, initially under the supervision of someone suitably trained [preferably an experienced rheumatologist in US or a musculoskeletal (MSK) radiologist] [7, 8]. Given the time constraints of radiologists and the priority given to radiology trainees, this can prove to be difficult and can also be very time-consuming.

A way to overcome some of these issues would be to incorporate MSUS into the specialty rheumatology curriculum. Colleagues in Europe (e.g. in Spain, Italy and Germany) have included MSUS training as part of their training curriculum for residents, and have seen a wide uptake of MSUS in rheumatological practice [9]. In the UK, there have been ongoing talks about the importance of MSUS integration into the specialty trainee curriculum, but it has still not happened. This may be due in part to an already overcrowded curriculum, especially with dual accreditation in general internal medicine (GIM), and time constraints for both trainees and consultants alike.

Few centres in the UK can offer training opportunities in MSUS. Given the long history and wider uptake of MSUS in European countries [10], a possible solution is to undertake a training fellowship, which can last from 1 week to

6 months, in one of these US centres to learn from very experienced MSUS practitioners.

I undertook an US fellowship for a period of 3 months. To the best of my knowledge, this is the first US training fellowship for longer than a few weeks in an international centre carried out by a UK rheumatologist. The Belfast group described their experiences of going to Italy under Prof. W. Grassi and team, but that was for 1 week [7].

Prior to the fellowship, I had to organize out-of-programme time with the deanery, funding, a hosting centre and a willing supervisor, all of which took nearly 2 years. This process was made easier by EULAR, who identified a wide network of Imaging Centres that provide both training and research opportunities for rheumatologists and/or trainees in rheumatology ([www.eular.org](http://www.eular.org)).

My objectives were to, in 3 months, become an autonomous practitioner in the use of MSUS in rheumatology and to carry out a cutting-edge research project in US. This US fellowship was undertaken in Madrid, Spain, under Dr Esperanza Naredo. The popular Ultrasound School of the Spanish Society of Rheumatology, chaired by Dr Naredo and established in 1996, has successfully taught several rheumatologists in MSUS from all over the world, including from Portugal, Latin America, the USA, Canada, North Africa and Malaysia, as well as Spain [10]. Spending an intensive 3 months here allowed me to develop competency, proficiency and independence in MSUS through learning from leading pioneers and experienced tutors.

The Spanish experience involved daily scanning, typically 7–8 h/day, on a range of conditions and patients referred to the MSUS Unit, led by a MSUS expert senior rheumatologist and under the supervision of at least one EULAR/European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB) qualified practitioner, with recording of performance in a logbook [8].

A basic EULAR US course was a prerequisite for attendance in the unit, and scanning on normal subjects was initially encouraged to develop a good grasp of both normal anatomy, sono-anatomy, expected US protocols and familiarity with the machine [8, 9]. Thereafter, US fellows were expected to retain images recorded from US scanning sessions, which were then assessed and reviewed by an experienced colleague. Recording, and satisfactory assessment, of >300 supervised scans on a wide range of joints and disease pathologies, led importantly to EFSUMB Level 1 status (independent status as an

US practitioner) and the pre-course work necessary for the EULAR Competency Assessment in MSUS [8].

Other forms of learning in US included observing experienced scanners performing US examinations, formal teaching, a weekly journal club where fellows discussed interesting US-related topics, and reading sessions of US and anatomy texts.

In a relatively short space of time, I managed to achieve my objectives and am now an accredited (EFSUMB) US practitioner. This was only made possible for me by attending the Spanish School of Ultrasound, and although challenging, it has been a career-changing experience as a UK rheumatologist. I now plan to use this to help improve the quality of US services both locally and nationally, and to encourage widespread training and research in this modality in the UK. This opportunity also allowed me to create exciting working relationships with our European rheumatologist colleagues, potentially enhancing collaborative training/exchange and research projects in the future.

There is still a long way to go for the UK to integrate MSUS successfully into our training curriculum. The British Society for Rheumatology special interest group is currently working on ways to integrate US into the specialty curriculum and working groups, but this will take time to be fully realized. I hope my fellowship example could be used as a framework for developing potential US training fellowships in the UK. In the meantime, undertaking an US training fellowship in Europe offers an invaluable insight into how MSUS is being incorporated into rheumatological practices in other countries, and an opportunity to benefit from new ways of MSUS teaching and to understand how training is being standardized. Such crucial knowledge and skills can then be brought back to the UK to help train the next generation of rheumatologists to perform MSUS to the required standard and create future leaders in US.

Furthermore, this unique, challenging and exciting experience could be the start of a successful career in the vital field of MSUS and make trained practitioners almost indispensable to any rheumatology department.

## Acknowledgements

I would like to thank Dr Chandini Rao, Training Programme Director, for supporting my application for out-of-programme training. I would also like to thank Dr Esperanza Naredo for overall supervision of the fellowship and Dr Iustina Janta, Dr Juan Carlos Nieto Gonzales, Dr Cristina Estrach and Dr Robert Thompson for helping develop my competency and proficiency in MSUS.

*Funding:* Funding for this fellowship was received by EULAR, John Glyn and the Dickinson Trust.

*Disclosure statement:* Q.A. received funding to complete an Ultrasound fellowship from EULAR, the John Glyn Bursary and the Dickinson Trust.

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Revised version accepted 11 April 2017

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