



## Editorial

### Musculoskeletal Ultrasound in Mexico 10 Years After its Inception<sup>☆</sup>

#### La ecografía musculoesquelética en México a 10 años de su inicio

Mario Chávez-López,<sup>a,\*</sup> Carlos Pineda<sup>b</sup>, on behalf of the Escuela de Ultrasonido del Colegio Mexicano de Reumatología (ECOMER [Cristina Hernández-Díaz, Lucio Ventura, and Carlos Moya])

<sup>a</sup> Centenario Hospital Miguel Hidalgo, Aguascalientes, Mexico

<sup>b</sup> Instituto Nacional de Rehabilitación, México D.F., Mexico

Musculoskeletal Sonography or ultrasound is currently one of the most useful tools in the daily practice of rheumatologists. Its benefit in the diagnosis, treatment and monitoring of progress and response to treatment of patients with rheumatic diseases has been confirmed by two studies. Since the last quarter of the twentieth century, concern emerged among rheumatologists in Europe's with regard to the emerging diagnostic technologies applied in rheumatology, particularly musculoskeletal ultrasound.

The Ultrasound School of the Mexican College of Rheumatology (ECOMER) originated with the twenty-first century, specifically in 2001, when reports on the application of this imaging technique in the field of rheumatology began to appear. It was during the XXIX Mexican Congress of Rheumatology held in the city of Mazatlan, Sinaloa, where Dr. Esperanza Naredo, today director of the ultrasound school of the Spanish Society of Rheumatology, gave a lecture on musculoskeletal ultrasound in rheumatology. Many who were there were astonished by the usefulness of this imaging technique which promised to be one of the most important complementary tools in the clinical practice of rheumatologist, a previously cherished dream by some colleagues. The interest and impact generated by the new diagnostic tool were such that Dr. Naredo was asked to repeat the conference a day later so a greater number of colleagues could hear it.

Later that same year, Dr. Carlos Pineda, a rheumatologist, expert in the area of imaging, and Dr. Mario Chavez, a rheumatologist with just two years of clinical practice, were trained simultaneously, although in different cities in the months of September and December. Dr. J. Antonio Bouffard, then a radiologist at Henry Ford Hospital and who is currently in the Detroit Medical Center in Detroit, US, and is a renowned expert and pioneer in the area, was responsible for the formation of Dr. Pineda; in addition, one of his most prominent disciples, Dr. Naredo, a pioneering rheumatologist in the application of technology to our field, addressed Dr. Chavez's

training in 2001 and later Dr. Carlos Moya's in 2002, in the city of Madrid, Spain.

After returning from their training, doctors Pineda and Chavez successfully organized the first introductory course in musculoskeletal ultrasound in rheumatology in the city of Merida, Yucatan, in February 2002 under the aegis of the XXX Mexican Congress of Rheumatology, which generated the same enthusiasm among several Mexican rheumatologists who continued the learning curve of ultrasound, enhanced their knowledge and developed their skills in courses in Madrid, by the Spanish School of Ultrasound. The first course in Merida followed those held in the framework of the Mexican Congress of Rheumatology in 2003 in Monterrey, in Guadalajara in 2004, in Villahermosa in 2005, the first theoretical-practical crash course in Acapulco in 2006, and so on, with ultrasound courses becoming a pre-congress tradition, with events in Veracruz in 2008, Leon in 2009, Morelia 2010, Cancun 2011 and San Luis Potosi in 2012.

In 2003, during a meeting in Cancun, doctors Pineda, Moya and Chavez, in response to the interest generated among Mexican rheumatologists, were given the task of forming the goals, mission and vision of ECOMER and delineating the ECOMER statutes, and shortly afterwards, that same year, obtained official recognition as a study group from the Mexican College of Rheumatology.

In 2004 in the city of Aguascalientes, Mexico, the first instructor course in musculoskeletal ultrasound was held by Mexicans rheumatologists who had been trained in musculoskeletal ultrasound, training Laura Gonzalez and Ivan Gamez of Guadalajara, Jose Uribe from Coahuila, Ricardo Gomez Angulo and Homero Benavides of Villahermosa, Lucio Ventura and Angélica Pérez Ruiz from Mexico City, Cristina Hernandez and Sergio Arroyo from the state of Mexico State.

The close links between academics established friendly relations with the various groups that are spearheading this area and have allowed ECOMER to interact with research and development of human resources with different schools like those in Spain, the US and Italy, the latter represented by Dr. Emilio Filippucci, Dr. Marwin Gutierrez and Dr. Walter Grassi. Several of our members are active members of the PANLAR Imaging ultrasound group in the area as well as in areas of OMERACT concerning musculoskeletal ultrasound.

<sup>☆</sup> Please, cite this article as: Chávez-López M, Pineda C. La ecografía musculoesquelética en México a 10 años de su inicio. Reumatol Clin. 2012;8:304–5.

\* Corresponding author.

E-mail address: [drmariochavez@yahoo.com](mailto:drmariochavez@yahoo.com) (M. Chávez-López).

Since 2005, ECOMER has a website ([www.ecomer.org.mx](http://www.ecomer.org.mx)) aimed at disseminating and promoting musculoskeletal ultrasound among those interested in this area of knowledge; the site is visited by several specialists related to bones and joints, such as orthopedists, chiropractors, rehabilitation specialists, sports doctors, radiologists and of course, fellow rheumatologists.

The PANLAR ultrasound study group was established in 2002 and is counted as one of the most productive and participatory in the organization. In Latin America PANLAR has conducted courses in ultrasound sponsored by Argentina, Bolivia, Brazil, Colombia, Cuba, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Chile, Mexico, Nicaragua, Peru and with the active participation Venezuela<sup>1</sup> as well as having an advisory ultrasound study group embedded in the Mexican College of Rheumatology.

Among ECOMER's efforts, publications such as guidelines for training and practice of musculoskeletal ultrasound in the Americas<sup>2</sup> and the first interobserver ultrasound exercise performed by Mexicans rheumatologists, "The Mexican experience",<sup>3</sup> and recently the publication of inter- and intraobserver variability in the sonographic assessment of joint inflammation and erosion in rheumatoid arthritis patients,<sup>4</sup> have been produced.

In addition, educational activities led by our school have included a tutorial called itinerant rheumatologists ECOTOUR in which 98 members of the Mexican College of Rheumatology from eight Mexican states received education and training tutorials, with several currently counted as instructors, as well as three tutorial courses in Mexico City and Aguascalientes per year, including one with practices in university-provided cadavers. Approximately 1200 rheumatologists from 17 countries in the Americas have participated in musculoskeletal ultrasound courses where ECOMER members have served as teachers or organizers.

Academically, teaching has led to an ECOMER Diploma endorsed by the National Autonomous University of Mexico (UNAM), lasting 12 months and lasting a little over 1200 h with practice of the technique applied exclusively to the musculoskeletal system.

The boom in rheumatology ultrasound is also reflected in the publication of a manual of ultrasound, which is intended as a guide for rheumatologists and other specialists who are trained or interested in musculoskeletal ultrasound; the work covers fundamental aspects as the physical principles of ultrasound, the knowledge of the elements of an ultrasound machine to obtain optimal images, review of articular and periarticular structures, a systematic review of the anatomical regions, the utility power Doppler, sonographic findings in various diseases in which the ultrasound has proven useful both for diagnosis and for monitoring, plus the role of ultrasound in rarer diseases such as vasculitis, salivary gland disease,

traumatic injury and, last but not least, the use of ultrasound to guide puncture-infiltration. The book is edited by Dr. Lucio Ventura and in April 2012 it will be published in a second edition, enlarged and revised,<sup>5</sup> involving a larger number of partners from several countries.

However, some ECOMER targets are pending; rheumatologists of some European nations have already included in their university curriculum a section devoted to musculoskeletal ultrasound during the residency training years. In our country, at the end of 2011 that was achieved through the joint efforts of distinguished members of the Mexican College of Rheumatology and the UNAM graduate Division, including ultrasound teaching in the rheumatology curriculum. The challenge now will be to ensure that all training centers in Mexico have the equipment and trained personnel for proper teaching of musculoskeletal ultrasound.

ECOMER is one of the most consistent and fastest growing study groups in the Mexican College of Rheumatology. The experience gained so far and the goals achieved only commit us to work harder, to stick together, to go further and get more rheumatologists to approach and become part of this group. The San Luis Potosi ultrasound course in February 2012 marks the first decade of the group's work; however, there is much more to do, so on this day we reiterate our commitment to continue implementing the objectives and achieving the group's goals, to realize "the dream of a rheumatologist"<sup>6</sup> incorporating ultrasound into our daily work, a technique that allows us to more fully evaluate our rheumatic patients.

## References

1. Pineda C. Training and education in rheumatology ultrasound: Latin American and Caribbean experience. In: Wakefield RJ, D'Agostino MA, editors. *Essential applications of musculoskeletal ultrasound in rheumatology*. Philadelphia: Saunders Elsevier; 2010. p. 348–51.
2. Pineda C, Reginato AM, Flores V, Aliste M, Alva M, Aragón-Laínez RA, et al., Pan-American League of Associations for Rheumatology (PANLAR) Ultrasound Study Group. Pan-American League of Associations for Rheumatology (PANLAR) recommendations and guidelines for musculoskeletal ultrasound training in the Americas for rheumatologists. *J Clin Rheumatol*. 2010;16:113–8.
3. Pineda C, Filippucci E, Chávez-López M, Hernández-Díaz C, Moya C, Ventura L, et al. Ultrasound in rheumatology: the Mexican experience. *Clin Exp Rheumatol*. 2008;26:929–32.
4. Chávez-López MA, Hernández-Díaz C, Moya C, Pineda C, Ventura-Ríos L, Möller I, et al. Inter- and intra-observer agreement of high-resolution ultrasonography and power Doppler in assessment of joint inflammation and bone erosions in patients with rheumatoid arthritis. *Rheumatol Int*. 2012. <http://dx.doi.org/10.1007/s00296-011-2297-9>.
5. Ventura-Ríos L, editor. *Manual de ecografía musculoesquelética*. 1st ed. Buenos Aires: Médica Panamericana; 2010.
6. Canoso JJ. Ultrasound imaging: a rheumatologist's dream. *J Rheumatol*. 2000;27:2063–4.