would all probably reduce the quality of the results and challenge the final conclusion that the usefulness of the ultrasound was limited.

In the EULAR recommendations on the use of imaging in large cell vasculitis (LCV) it is stated that ultrasound should be performed by a specialist trained in using the equipment, operational procedures and appropriate adjustments. They also comment upon the fact that reliability can improve with specific training and that scientific societies need to promote training programmes, particularly in LCV sonography. I know that the Spanish Rheumatology Society had a training programme for implementation of these recommendations during the first quarter of 2019 and I imagine that this initiative will also be adopted by other scientific societies.

However, I wish to offer my thanks and underline the authors' interest in bringing this technique to their patients. Also to encourage them to continue, in the secure knowledge that it will be useful for them. This is the path we began in 2004 and our results then were only 15% higher than those of the authors, with sensitivities and specificities of approximately 70%. Since then we periodically review our results comparing the diagnostic classification in keeping with the biopsy, ACR classification criteria and ultrasound criteria. This, together with improvement in the quality of the equipment, have led to a sensitivity of 91.6% and specificity of 95.83%[3] in our centre.

I would finally like to point out that the debate on whether to use ultrasound or biopsy in GCA diagnosis is coming to an end. EULAR recommendations conclude that both are valid and their use depends on their availability and the training practised in each centre.[2] In the next GCA ACR/EULAR classification criteria, presented in the last ACR 2018 Congress, ultrasound appears to be of the same value (5 points) as biopsy, with 6 points being the number required to confirm classification after fulfilling entry criteria.

References

1. González Porto SA, Silva Díaz MT, Reguera Arias A, Pombo Otero J, González Rodríguez A, Valero Gasalla J, et al. Estudio comparativo de la ecografía Doppler frente a la biopsia de arteria temporal en el diagnóstico de la arteritis de células gigantes. Reumatol Clin. 2018, http://dx.doi.org/10.1016/j.reuma.2018.08.007, pii:S1699-258X(18)30187.
2. Dejaco C, Ramiro S, Duftner C, Besson FJ, Bley TA, Blockmans D, et al. EULAR recommendations for the use of imaging in large vessel vasculitis in clinical practice. Ann Rheum Dis. 2018;77:636–43.
3. Aranda-Valera IC, García Carazo S, Monjo Henry I, de Miguel Mendieta E. Diagnostic validity of Doppler ultrasound in giant cell arteritis. Clin Exp Rheumatol. 2017;103 Suppl. 35:S123–7.

Eugenio de Miguel*, Irene Monjo

Servicio de Reumatología, Hospital Universitario La Paz, Madrid, Spain

* Corresponding author.
E-mail address: eugenio.demiguel@gmail.com (E. de Miguel).

https://doi.org/10.1016/j.reumae.2018.11.011

Reply☆

Respuesta

Dear Editor,

We read Dr. de Miguel's response to our work attentively, and we would like to thank him for his remarks, and comment on certain question to clarify the conclusions of the same.

We share the aim of improving the care of patients with a strong suspicion of giant cell arteritis. In our case, motivated by the large number of temporal artery biopsy requests received by the plastic surgery department in our hospital, and to improve our professional competency, we decided to undertake a prospective comparative study to analyse the sensitivity and specificity of Doppler ultrasound scan vs biopsy.[1] For this all of the patients were included for whom a temporal artery biopsy was requested due to the suspicion of vasculitis from February 2015 to July 2016.

The ultrasound scan studies were performed by a professional in the rheumatology department who had been trained in the technique, and we made maximum use of the resources that were available to us when we commenced the study. At the time, the available papers referred to equipment with transducers of at least 8 mHz to 10 mHz,[2,3] so that we used the departmental ultrasound scanner (Mindray® Z6 with a lineal 7L4P transducer). We also adjusted the colour frequency parameters and PRF to achieve the best quality image.

The recently published EULAR recommendations on the use of imaging tests in large vessel vasculitis[4] show the parameters and specific equipment which achieve higher sensitivity and specificity. These recommendations and the work of the Ultrasound School of the Spanish Society of Rheumatology will be of great help in standardising the methodology which should be used when researching giant cell arteritis and improving its results.

Financing

This research received no specific support from public or private sector agencies or not-for-profit bodies.

References

1. González Porto SA, Silva Díaz MT, Reguera Arias A, Pombo Otero J, González Rodríguez A, Valero Gasalla J, et al. A comparative study of doppler ultrasound against temporary artery biopsy in the diagnosis of giant cell arteritis. Reumatol Clin. 2018, http://dx.doi.org/10.1016/j.reuma.2018.08.007.
2. Schmidt WA, Gromnica-Ihle E. What is the best approach to diagnosing large-vessel vasculitis? Best Pract Res Clin Rheumatol. 2005;19(2):223–42.
3. Schmidt WA, Kraft HE, Vorpahl K, Völker L, Gromnica-Ihle EJ. Color duplex ultrasonography in the diagnosis of temporal arteritis. N Engl J Med. 1997;337:1336–42.
4. Dejaco C, Ramiro S, Duftner C, Besson FL, Bley TA, Blockmans D, et al. EULAR recommendations for the use of imaging in large vessel vasculitis in clinical practice. Ann Rheum Dis. 2018;77:636–43.

Sara Alicia González Porto[a,*], María Teresa Silva Díaz[b], Ana Reguera Arias[c], Jorge Pombo Otero[c], Alba González Rodríguez[d], Javier Valero Gasalla[d], Francisco Javier de Toro Santos[b]

☆ Please cite this article as: González Porto SA, Silva Díaz MT, Reguera Arias A, Pombo Otero J, González Rodríguez A, Valero Gasalla J, et al. Respuesta. Reumatol Clin. 2020;16:511–512.

[a] Servicio de Cirugía Plástica, Hospital POVISA, Vigo, Pontevedra, Spain
[b] Servicio de Reumatología, Complexo Hospitalario Universitario de A Coruña, A Coruña, Spain
[c] Servicio de Anatomía Patológica, Complexo Hospitalario Universitario de A Coruña, A Coruña, Spain
[d] Servicio de Cirugía Plástica, Complexo Hospitalario Universitario de A Coruña, A Coruña, Spain

* Corresponding author.
E-mail address: sarali.gonzalezporto@gmail.com
(S.A. González Porto).

https://doi.org/10.1016/j.reumae.2019.01.002

Ultrasound evaluation in gouty patients with persistent clinical activity despite uricaemia within the objective required by "treat to target"☆

Evaluación ecográfica en pacientes gotosos con actividad clínica persistente a pesar de uricemia dentro de objetivo requerido por «treat to target»

Dear Editor,

Gout is the most prevalent arthritis worldwide. It is caused by monosodium urate (MSU) crystal deposits in articular and extra-articular structures, due to the increased levels of uric acid in serum in excess of saturation levels.[1] The gold standard diagnostic technique for gout continues to be the detection of MSU crystals in synovial fluid[2] although in the latest ACR/EULAR diagnostic classification criteria dual-energy computed tomography (DECT) has been included along with ultrasonography as accepted diagnostic techniques.[3,4] These provide more precise information regarding the course of the disease, since on many occasions the extent of MSU deposits is greater than expected, affecting clinically non-apparent joints.[5]

The aim of our study was to use ultrasound to assess the effects on joints in those patients included in the study whose disease was badly controlled clinically despite hyperuricaemia treatment. To do so, the level of crystal deposits and ultrasound compromise were studied, together with the uricaemia level. This was an observational cross-sectional study with 115 patients diagnosed with gout in keeping with the ACR[6] criteria of a multi hospital group which took place between December 2013 and May 2017. The ultrasound test was performed according to the Peiteado et al.[7] protocol which determined the number of joints with signs of gout (double contour sign, aggregates and/or tophi) and signs of acute activity through Doppler indication. Variables such as age, sex, high blood pressure, diabetes, chronic kidney disease and the evolution of the disease over time were also included.

One hundred and fifteen patients (112 men and 3 women) with a mean age of 57 ± 13 years and a mean disease evolution of 14 ± 10 years took part. All of them had poor clinical disease control with single joint compromise. Ultrasound compromise observed was: 47 patients (40.86%) with Doppler presence, 90 with aggregates and/or tophi (78.26%) and 53 with double contour sign (42.08%). The uricaemia mean was 7.4 mg/dl. Out of the 115 patients studied, 94 presented with levels of uric acid above 6 mg/dl, of which an extensive joint compromise was observed in 76.59%. The remaining 21 patients presented with uric acid levels below 6 mg/dl, of whom 18 had extensive ultrasound compromise (85.71%). The correlation between uricaemia and ultrasound compromise was not statistically significant (OR = .3; .6–1.1) As a result, in this study we observed that the patients with uricaemia which was within the therapeutic objective (<6 mg/dl) presented with a greater degree of ultrasound compromise than was expected.

Once gout has been diagnosed, follow-up is usually clinical and analytical, aimed at maintaining urate levels within the recommended objective in national and international guidelines. However, even reaching optimum uricaemia levels, MSU crystal deposits may continue to be present in the joint.[8] For this reason we could consider ultrasound as a key tool in the follow-up of those patients whose uricaemia levels fall within therapeutic objective levels, but where clinical activity is still persistent. This technique allows us to correctly determine the extent of the deposits and joint compromise in the gout, which may support the decision to change or intensify treatment, to promote crystals dissolution and disappearance of subclinical inflammation.[9,10] It is also an accessible and innocuous technique for quick, non-invasive assessment of the magnitude and extension of the disease, leading to further information than standard physical examination.

References

1. Kuo CF, Grainge MJ, Zhang W, Doherty M. Global epidemiology of gout: prevalence, incidence and risk factors. Nat Rev Rheumatol. 2015;11:649–62.
2. Ottaviani S, Gill G, Auburn A, Palazzo E, Meyer O, Dieudé P. Ultrasound in gout: a useful tool for following urate-lowering therapy. Joint Bone Spine. 2015;82:42–4.
3. Villaverde V, Rosario MP, Loza E, Pérez F. Revisión sistemática sobre el valor de la ecografía y la resonancia magnética nuclear musculoesqueléticas en la evaluación de la respuesta al tratamiento en la gota. Reumatol Clin. 2014;10:160–3.
4. Dalbeth N, House M, Aati O, Tan P, Franklin C, Horne A, et al. Urate cristal deposition in asymptomatic hyperuricaemia and symptomatic gout: a dual energy CT study. Ann Rheum Dis. 2015;74:908–11.
5. Chowalloor P, Keen HI. A systematic review of ultrasonography in gout and asymptomatic hyperuricaemia. Ann Rheum Dis. 2013;72:638–45.
6. Wallace SL, Robinson H, Masi AT, Decker JL, McCarty DJ, Yü TF. Preliminary criteria for the classification of the acute arthritis of primary gout. Arthritis Reum. 1997;20:895–900.
7. Peiteado D, de Miguel E, Villalba A, Ordóñez MC, Castillo C, Martín-Mola E. Value of a short four-joint ultrasound test for gout diagnosis: a pilot study. Clin Exp Rheumatol. 2012;30:830–7.
8. Das S, Goswami R, Ghosh A, Lahiri D, Basu K. Temporal evolution of urate crystal deposition over articular cartilage after successful urate-lowering therapy in patients with gout: an ultrasonographic perspective. Mod Rheumatol. 2017;27:518–23.
9. Wall GC, Koenigsfeld CF, Hegge KA, Bottenberg MM. Adherence to treatment guidelines in two primary care populations with gout. Rheumatol Int. 2010;30:749–53.

☆ Please cite this article as: Navarro MN, Aranda EC, Alarcón JC, Lefebvre PG. Evaluación ecográfica en pacientes gotosos con actividad clínica persistente a pesar de uricemia dentro de objetivo requerido por «*treat to target*». Reumatol Clin. 2020;16:512-513.