scenarios derived from the algorithm proposed by Nötzel et al (2): in scenario A, the DECT was performed first followed by ultrasound; in scenario B, ultrasound was performed first followed by DECT. Test performance such as sensitivity, specificity, positive and negative predictive value (PPV, NPV) were calculated for each imaging techniques. Statistical analysis was performed by SAS/STAT software and Macnemar test was used to compare the two scenarios.

Results: 40 consecutive patients were included. 3 patients had a score ≥ 8 from clinical data alone and classified as gout. The remaining 37 patients were included according to the two scenarios. In scenario A, 9/37 patients had a DECT positive with urate deposition leading to the diagnostic of gout with an ACR/EULAR score ≥ 8 . 7/37 patients had a positive DECT without reaching ACR/EULAR threshold (< 8). 21/37 patients had a negative DECT. The ultrasound study of these 28 patients did not find any sign of gout (DC sign). In scenario B, 6/37 patients had a DC sign and an ACR/EULAR score ≥ 8 . 1/37 patient had a DC sign but an ACR/EULAR score < 8 . 30/37 patients had no ultrasound DC sign. DECT in these 31 patients revealed sodium urate deposits in 3/31 patients, leading to a score ≥ 8 . DECT was positive in 7/31 patients with an ACR/EULAR score < 8 . The comparison between the 2 scenarios did not find a significant difference ($p = 0.250$). For the DC sign, sensitivity = 66%, specificity = 96%, PPV = 89% and NPV = 87%. For the presence of DC sign and/or tophus, the values were 91%, 96%, 91%, 96% respectively. For DECT, sensitivity = 100%, specificity = 75%, PPV = 63%, NPV = 100%.

Conclusion: Our results confirm that ultrasound (DC sign alone) and DECT have similar diagnostic performance in gouty arthritis in routine care. It seems clinically relevant to propose the ultrasound as first imaging modality considering both the presence of the DC sign and/or ultrasound tophus (not included in ACR-EULAR criteria). It significantly improves the sensitivity of ultrasound while maintaining its PPV, with less false positive patients compared to DECT.

REFERENCES:

- [1] Neogi T, Jansen TLTA, Dalbeth N, et al. 2015 Gout Classification Criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative. *Arthritis & Rheumatology*. 2015; 67:2557–68.
- [2] Nötzel A, Hermann K-G, Feist E, et al. Diagnostic accuracy of dual-energy computed tomography and joint aspiration: a prospective study in patients with suspected gouty arthritis. *Clin Exp Rheumatol*. 2018; 36 :1061–7.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.6879

THU0597 ULTRASOUND REVEALS SUB-CLINICAL ATHEROSCLEROSIS IN PATIENTS WITH GOUT AND ASYMPTOMATIC HYPERURICEMIA

Chiara Bertolazzi¹, Jaime Mendoza Torres¹, Luis Carlos Rodriguez Delgado¹, Mariana Moreno¹, Carlos Pineda¹, Luis Humberto Silveira Torre², Jessica Gutierrez¹, Marwin Gutierrez¹. ¹National Rehabilitation Institute, Ciudad de México, Mexico; ²National Institute of Cardiology Ignacio Chavez, Ciudad de México, Mexico

Background: Accelerated atherosclerosis and the higher risk of developing premature cardiovascular disease are well known in chronic inflammatory rheumatic diseases. Moreover, strong evidence supporting both proatherogenic and protrombotic characteristics of high levels of uric acid have been published.

Ultrasound (US) measurement of the carotid intima-media thickness (cIMT) is a non-invasive outcome measure of premature sub-clinical atherosclerosis with a predictive value in terms of vascular events.

Objectives: To determine the prevalence of increased cIMT, as sign of pre-clinical atherosclerosis, in patients with gout and asymptomatic hyperuricemia by an automated ultrasound (US) method.

Methods: 342 subjects (138 with gout, 105 with asymptomatic hyperuricemia and 99 healthy control subjects) were enrolled. Before the US assessment, all patients underwent a clinical examination aimed to record age, gender, disease duration, smoking, ischemic cardiopathy, comorbidities (including diabetes mellitus, high blood pressure, dyslipidemia, renal insufficiency, obesity), and current therapy. Moreover, ESR, CRP, total cholesterol, HDL-high-density lipoprotein, triglycerides, fasting serum glucose, serum creatinine and uricemia were recorded. Patients with history of myocardial infarction, cerebrovascular events or autoimmune diseases were excluded.

US examinations of the IMT at both common carotids were performed by a rheumatologist expert in US, using a linear probe and an automatic method (QIMT) based on the radio-frequency technology. For the IMT, a cut-off point of 0.8 mm was adopted, according Mannheim cIMT Consensus.

Results: A total of 684 common carotids were assessed. In 65 (47.10%) out of the 138 patients with gout and 50 (47.62%) out of the 105 patients with asymptomatic hyperuricemia, US detected an increased cIMT and only 9 (0.09%) of the control group patients had an increased cIMT ($p=0.0001$). The regression analysis found a significant positive correlation between increased cIMT and disease duration in gout group ($p=0.001$) and between the level of uric acid and increased cIMT in asymptomatic hyperuricemic patients ($p=0.009$). No significant correlation was found with the other clinical and laboratory parameters. There was a significant difference in cIMT between in gout and control groups ($p=0.0001$) and between asymptomatic hyperuricemia and control group ($p=0.0001$).

Conclusion: Our results demonstrate that patients with gout and hyperuricemia without clinically evident cardiovascular disease have a high prevalence of atherosclerosis represented by the increased cIMT.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.6173

THU0598 ROLE OF DUAL-ENERGY CT AS A SCREENING TOOL FOR CORONARY GOUT

Waleed Abdellatif¹, Brandon Chow², Savvas Nicolaou¹. ¹University of British Columbia/Vancouver General Hospital, Radiology, Vancouver, Canada; ²Faculty of Medicine, University of British Columbia, Vancouver, Canada

Background: Gout is prevalent in older men and has been demonstrated as independent cardiovascular risk factor. Presence of clinical gout rather than isolated hyperuricemia is related to the increased cardiovascular risk. Dual-Energy CT (DECT) has proven to be of high sensitivity and specificity in detection of monosodium urate (MSU) deposits in joints and soft tissues.

Objectives:

1. Evaluate DECT as a potential screening tool for monosodium urate deposits within the coronary arteries.
2. Calculate prevalence of coronary gout in patients with confirmed tophaceous gout in comparison to asymptomatic control group.

Methods: Cases were retrospectively assigned into two groups. The first (tophaceous gout) group included patients who were referred for DECT gout screening. The inclusion criteria were: males > 50 years of age and clinical diagnosis of tophaceous gout confirmed by DECT. The second (control) group included patients who underwent non-contrast DE Cardiac CT for calcium scoring during the same duration as part of cardiovascular risk workup. Inclusion criteria were males > 50 years of age, no clinical diagnosis of gout and Agatston calcium score less than 400. All DECT scans were done on the same scanner, which was validated and adequately titrated before the start of and during the study. All scans were reviewed by two radiologists with expertise in DECT gout deposits.

Results: Among the 13 cases that met the inclusion criteria for the tophaceous gout group, 11 were positive (84.62%) for coronary MSU deposits. Among the 48 cases that met the inclusion criteria for the control group: 47 were negative and one was positive (2.08%). DECT sensitivity was 84.62% (95% CI: 54.55-98.08%), specificity was 97.92% (95% CI: 88.93- 99.95%), positive predictive ratio was 91.67% (95% CI: 60.94- 98.73%), negative predictive value was 95.92% (95% CI: 86.78- 98.83%) and accuracy was 95.08% (95% CI: 86.29- 98.97%).

Conclusion: Coronary MSU deposits are seen in 84.62% of tophaceous gout patients and in 2.08% of gout-asymptomatic individuals (of the same

age and sex group). DECT has high sensitivity, specificity and diagnostic accuracy in detection of MSU coronary deposits and can be used as a feasible, quick, low dose and low risk screening tool to detect coronary gout. DECT cardiac scans should be included in the routine CT gout protocol. Performing CT Calcium score using dual-energy has the added value of coronary gout detection as part of cardiovascular risk assessment and workup.

REFERENCES:

- [1] - He, J., Yang, Y., & Peng, D. Q. (2012). Monosodium urate (MSU) crystals increase gout associated coronary heart disease (CHD) risk through the activation of NLRP3 inflammasome. *International journal of cardiology*, 160(1), 72-73.
- [2] - Andrés, M., Quintanilla, M. A., Sivera, F., Sánchez Payá, J., Pascual, E., Vela, P., & Ruiz Nodar, J. M. (2016). Silent monosodium urate crystal deposits are associated with severe coronary calcification in asymptomatic hyperuricemia: an exploratory study. *Arthritis & Rheumatology*, 68(6), 1531-1539.
- [3] - Yu, Z., Mao, T., Xu, Y., Li, T., Wang, Y., Gao, F., & Sun, W. (2018). Diagnostic accuracy of dual-energy CT in gout: a systematic review and meta-analysis. *Skeletal radiology*, 1-7.
- [4] - Nicolaou, S., Yong-Hing, C. J., Galea-Soler, S., Hou, D. J., Louis, L., & Munk, P. (2010). Dual-energy CT as a potential new diagnostic tool in the management of gout in the acute setting. *American Journal of Roentgenology*, 194(4), 1072-1078.
- [5] - Rai, S. K., Aviña-Zubieta, J. A., McCormick, N., De Vera, M. A., Shojania, K., Sayre, E. C., & Choi, H. K. (2017, February). The rising prevalence and incidence of gout in British Columbia, Canada: population-based trends from 2000 to 2012. In *Seminars in arthritis and rheumatism* (Vol. 46, No. 4, pp. 451-456). WB Saunders.

Disclosure of Interests: Waleed Abdellatif: None declared, Brandon Chow: None declared, Savvas Nicolaou Grant/research support from: The Department of Radiology, Vancouver General Hospital has a Master Research Agreement with Siemens Healthcare, Forchheim, Germany (non-pharmaceutical company).

DOI: 10.1136/annrheumdis-2019-eular.3547

THU0599

RESOLUTION OF VASCULAR INFLAMMATION IN PATIENTS WITH GIANT CELL ARTERITIS RECEIVING GLUCOCORTICOIDS, METHOTREXATE OR TOCILIZUMAB TREATMENT-DATA FROM THE ITALIAN/GERMAN RIGA STUDY

Verena Schönauf¹, Jessica Roth¹, Koray Tascilar¹, Jürgen Rech¹, Daniela Schmidt¹, Torsten Kuwert¹, Filippo Crescentini², Luigi Boiardi², Massimiliano Casali², Annibale Versari², Georg Schett¹, Carlo Salvarani², Francesco Muratore². ¹Friedrich Alexander University Erlangen-Nuremberg, Erlangen, Germany; ²Azienda Unità Sanitaria Locale-IRCCS di Reggio Emilia, Reggio Emilia, Italy

Background: ¹⁸F-FDG-PET/CT is a sensitive and comprehensive technique to diagnose giant cell arteritis (GCA) (1). This technique may be also very useful to test whether vascular inflammation in GCA has disappeared or not, judging effectiveness of anti-inflammatory treatment. However, the role of ¹⁸F-FDG-PET/CT in monitoring disease activity and judging disease remission is less well-established to date

Objectives: RIGA is an observational 2-center study that addresses the resolution of vascular inflammation in patients with new-onset GCA that are treated with either glucocorticoid monotherapy (GLC), GLC/methotrexate (MTX) or GLC/tocilizumab (TOC).

Methods: Patients with newly diagnosed GCA with large vessel involvement were clinically documented, subjected to sequential ¹⁸F-FDG-PET/CT scanning and received treatment with GLC, MTX or TOC upon physicians' decision. Images were graded as active, questionable active and inactive according to nuclear medicine physician opinion and additionally graded by PETVAS score proposed by Grayson et al. (0-27) (2). We performed a mixed effects linear regression analysis to estimate the change in the PETVAS score adjusted by baseline CRP level and tested for treatment group interactions. We compared the proportion of radiologic

activity states according to the activity tracer uptake in the follow up ¹⁸F-FDG-PET/CT scan in three treatment groups with a chi-squared test.

Results: We included 48 patients (n=20 from Germany, n=28 from Italy) with a mean age of 66 years. At baseline ¹⁸F-FDG-PET/CT scan was graded active in 46 patients while it was graded as questionable active in the remaining 2 patients. The mean CRP level was 66.8 mg/L (min 1.2; max 233.2 mg/L) and the mean PETVAS score was 21.1 (min=10 max=27). 12 patients received GLC, 27 MTX and 9 TOC as primary treatment. Follow-up PET/CT scans were graded as active in 11, questionable in 16 and inactive in 21 patients. The mean CRP level at follow up was 12.4 mg/L (min 0.2; max 76.0) and the mean PETVAS score was 9.1 (min 0, max 27) with significant decreases in all 3 groups. The mean adjusted improvement in the PETVAS score (95%CI) was 13.0 (8.7 – 17.3) in GLC, 11.7 (8.9 – 14.6) in MTX and 11.8 (6.8 – 16.7) in TOC groups and interaction terms for treatment effect were not significant. However, only 17% of patients who received GLC showed no vasculitis activity in their follow up PET-CT compared to 53% of patients who received MTX or TOC (figure 1).

Conclusion: GLC, MTX and TOC significantly reduced vascular inflammation in GCA, but no significant differences between the three treatment strategies was found in this yet small population. However, when looking at complete resolution of vascular inflammation, MTX and TOC appear as being superior to GLC monotherapy, suggesting that addition of these agents right from the beginning of treatment of GCA may be beneficial to achieve complete control of vascular inflammation

REFERENCES:

- [1] Schönauf V, et al. The value of ¹⁸F-FDG-PET/CT in identifying the cause of fever of unknown origin (FUO) and inflammation of unknown origin (IUO): data from a prospective study. *Ann Rheum Dis*. 2018 Jan;77(1):70-77 doi: 10.1136/annrheumdis-2017-211687
- [2] Grayson, P. C. et al, ¹⁸F Fluorodeoxyglucose-Positron Emission Tomography As an Imaging Biomarker in a Prospective, Longitudinal Cohort of Patients With Large Vessel Vasculitis. *Arthritis Rheumatol*, 70: 439-449 doi:10.1002/art.40379

Disclosure of Interests: Verena Schönauf Speakers bureau: Novartis (less than 2000 Euros), Jessica Roth: None declared, Koray Tascilar: None declared, Jürgen Rech Grant/research support from: Bristol-Myers Squibb and Celgene (greater than \$10,000), Consultant for: Bristol-Myers Squibb, Celgene, Chugai, GlaxoSmithKline, Janssen, Eli Lilly, Novartis, Roche, Sanofi Aventis, and UCB (in total more than \$10,000), Speakers bureau: Bristol-Myers Squibb, Celgene, Chugai, GlaxoSmithKline, Janssen, Eli Lilly, Novartis, Roche, Sanofi Aventis, and UCB (in total more than \$10,000), Daniela Schmidt: None declared, Torsten Kuwert: None declared, Filippo Crescentini: None declared, Luigi Boiardi: None declared, Massimiliano Casali: None declared, Annibale Versari: None declared, Georg Schett: None declared, Carlo Salvarani Grant/research support from: Roche, Consultant for: Eli Lilly and Company, Roche, Abbvie, Francesco Muratore: None declared

DOI: 10.1136/annrheumdis-2019-eular.6096

THU0600

QUANTITATIVE INDEXES TO ASSESS THE INTERSTITIAL LUNG DISEASE, AND ITS EXTENSION, IN SJÖGREN'S SYNDROME

Pablo Guisado-Vasco^{1,1}, Mario Silva², Miguel Angel Duarte-Millán³, Gianluca Sambataro⁴, Chiara Bertolazzi⁵, Mauro Pavone⁴, Isabel Martín-Garrido¹, Oriol Martín-Segarra¹, José Manuel Luque-Pinilla¹, Daniele Santilli⁶, Domenico Sambataro⁴, Sebastiano Emanuele Torrisi⁴, Vancheri Ada⁴, Marwin Gutierrez⁵, Mayra Mejia⁷, Stefano Palmucci⁸, Flavio Mozzani⁶, Jorge Rojas-Serrano⁷, Carlo Vanchieri⁹, Nicola Sverzellati¹⁰, Alarico Ariani⁶.

¹Complejo hospitalario Ruber Juan Bravo, Internal Medicine, Madrid, Spain;

²Ospedale Maggiore, Radiology, Parma, Italy; ³Hospital Universitario de Fuenlabrada, Internal Medicine, Fuenlabrada, Spain; ⁴Policlinico-Vittorio Emanuele, Clinical and Experimental Medicine, Catania, Italy; ⁵Instituto Nacional de Rehabilitación Luis Guillermo Ibarra Ibarra, Division of Musculoskeletal and Rheumatic Disorders, Mexico, Mexico; ⁶Azienda Ospedaliero-Universitaria di Parma, Internal Medicine and Rheumatology Unit, Parma, Italy; ⁷Instituto Nacional de Enfermedades Respiratorias, Ismael Cosío Villegas, Interstitial Lung Disease Unit and Rheumatology Unit, Mexico, Mexico; ⁸Department of Medical Surgical Sciences and Advanced Technologies "GR Ingrassia", Radiology Unit, Catania, Italy; ⁹Regional Referral Center for Rare Lung Diseases, A. O. U. "Policlinico-Vittorio Emanuele", Clinical and Experimental Medicine, Catania, Italy; ¹⁰Azienda Ospedaliero-Universitaria di Parma, Radiology, Parma, Italy

Background: Interstitial lung disease (ILD) is the most frequent pulmonary impairment in Sjögren's syndrome (SS). The diagnosis is challenging, as there are not specific tests (i.e. autoantibodies or pulmonary function tests) or symptoms. Chest CT is the gold standard. Semiquantitative visual scores (SQCT) estimate ILD extent, though burdened by relevant intra-, inter-rater variability. Quantitative chest CT (QCT) is a promising method to assess ILD severity

Objectives: to verify if QCT assessment could identify SS subjects affected by ILD and to identify those SS patients with an extensive lung disease.

Methods: in this multi-center, cross-sectional, and retrospective study, subjects affected by SS and with a chest CT were enrolled. A blind and centralized SQCT assessment was carried out in order to calculate both Goh and Taouli scores. An operator-independent analysis of all CTs with an open-source software (i.e. Horos), provided the QCT indexes. Patients were clustered in cohorts according to ILD extent. Differences in QCT indexes distribution were analyzed using non-parametric tests.

Results: 102 consecutive SS patients were enrolled. ILD prevalence was 36% (36/102). There was a difference in QCT indexes' distribution in SS-ILD versus SS without ILD ($p < 0.001$). Moreover, SS-ILD patients with an ILD >20% (according to Goh score) had QCT indexes statistically different from those with a limited ILD extension ($p < 0.001$). QCT indexes have a moderate to good correlation with Goh and Taouli scores (from 0.44 to 0.65; absolute numbers, +/-; $p < 0.001$). To value its potential of diagnosis, ROC curves were calculated, achieving several of them values of AUC > 0.7; the best QCT index was: tSkew AUC 0.87 (95CI 0.78-0.95), $p < 0.001$; cut-off ≤ 2.72 - sensitivity 0.81 (95CI 0.65-0.9), specificity 0.82 (95CI 0.7-0.89).

Conclusion: QCT indexes are a serious alternative to visual scorings in ILD related to autoimmune diseases. This innovative tool will open up a potential research area in SS as it appears able to select ILD patients with an extensive lung impairment and likewise a worse prognosis. We are confident that in the next future, QCT will have a pivotal role in the diagnosis, monitoring and treatment pathway of ILD associated to SS.

REFERENCES:

- [1] Silva M, Milanese G, Seletti V, Ariani A, Sverzellati N. Pulmonary quantitative CT imaging in focal and diffuse disease: current research and clinical applications. *Br J Radiol* 2018; 91: 20170644.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.3496

THU0601

SALIVARY GLAND ULTRASONOGRAPHY FOR SJÖGREN SYNDROME AND SICCA SYMPTOMS WITH EVALUATION THE DIFFERENT IMAGE PARAMETERS AND BIOPSY RESULT

Yen Po Tsao, Ming Han Chen, Wei Sheng Chen, Chang-Youh Tsai. *Taipei Veterans General Hospital, Division of Allergy, Immunology, and Rheumatology, Taipei, Taiwan, Republic of China*

Background: Sjögren's syndrome involves multiple organs, especially the lacrimal and salivary glands. Salivary gland ultrasonography (SGUS) is

quick and easily accessible, which provides visibility of salivary glands. Currently, there were several scoring systems for SGUS. Acuity for different image parameters remained unclear, and these parameters including heterogeneity of glands, clearance of posterior border, size of glands, fibrosis bands and size of vacuoles in the glands. Each gland would be scored through these parameters which may rank from 0 to 3 or 0 to 4. The weight of different parameters have not been clarified.

Objectives: To evaluate the effectiveness of different image parameters of SGUS in evaluation Sjögren's syndrome.

Methods: Total SGUS with 56 patients were retrospectively evaluated, who also underwent minor salivary gland biopsy. SGUS was conducted by a 10MHz-13MHz linear probe at both parotid and submandibular glands. Each gland was scored from 0 to 4 according to the scoring scale proposed previously. The total maximum score was 16. Heterogeneous structure, fibrosis band and size of vacuoles were evaluated for each gland. Minor salivary gland biopsy was evaluated with Chisholm-Mason grade, ranging from 1-4.

Results: The distribution of minor salivary gland biopsy was grade 1 (28.6%), grade 2 (14.3%), grade 3 (19.6%), and grade 4 (37.5%). The average SGUS score was 6.00 for grade 1, 6.38 for grade 2, 7.00 for grade 3 and 10.00 for grade 4 ($p=0.019$). Evaluation different image parameters for each gland, heterogeneous structure and fibrosis bands revealed significant in linear regression of parotid gland score (heterogeneous structure $p=0.043$ for left side, $p=0.025$ for right side; fibrosis bands $p<0.001$ for both sides) but size of vacuoles did not reveal significant. Fibrosis bands and size of vacuoles revealed significant in the linear regression model of submandibular glands (both <0.001 in both sides). Final pathology grade correlated with fibrosis bands of left side parotid gland ($p=0.006$), fibrosis bands of both sides of submandibular glands ($p=0.006$ for left side, $p=0.001$ for right side), and size of vacuoles among submandibular glands ($p=0.003$ for left side, $p=0.012$ for right side). In regarding to the different image parameters, the biopsy result correlated well with total summation of SGUS ($p=0.004$).

Conclusion: Different image parameters had different significance for representing the gland conditions. For parotid glands, fibrosis bands and heterogeneous structure were main parameters. For submandibular glands, fibrosis bands and size of vacuoles accounted for the change of glands. SGUS correlated with final pathology result.

REFERENCES:

- [1] Jousse-Joulin S, et al. *Rheumatology* (Oxford). 2016;55:789-800.
- [2] Takagi Y, et al. *Ann Rheum Dis* 2010;69:1321-4.
- [3] Seror R, et al. *Ann Rheum Dis* 2011;70:968-72.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8156

THU0602

THE ROLE OF INFRARED THERMOGRAPHY IN THE ASSESSMENT OF PERIPHERAL VASCULOPATHY AND IN THE THERAPEUTIC MANAGEMENT OF SYSTEMIC SCLEROSIS PATIENTS TREATED WITH SYNTHETIC PROSTANOIDS

Irene Cecchi, Massimo Radin, Elena Rubini, Silvia Grazietta Foddai, Daniela Rossi, Savino Sciascia, Dario Roccatello. *University of Turin, Turin, Italy*

Background: Skin lesions represent the leading feature of systemic sclerosis (SSc), with Raynaud's phenomenon (RP) the most frequent and early clinical manifestation of the disease. Digital vasculopathy severely affects SSc patients, lowering their quality of life and negatively impacting on their daily functions. Digital ulcers is associated with poor cardiovascular prognosis and decreased survival rate [1]. Nevertheless, standardized treatment strategies and non-invasive tools for the management of RP and SSc skin manifestations are badly needed.

Objectives: The aim of this study was a) to evaluate the efficacy of infrared thermography in the assessment of peripheral vasculopathy in a cohort of SSc patients treated with cyclic intravenous infusions with synthetic prostanoids b) to identify those patients who might benefit from an intensified infusional treatment protocol with prostanoids.

Methods: Twenty-six SSc patients [2], attending our Department for their routinely 28-days apart intravenous therapy with prostanoids (Iloprost) based on the presence of severe secondary RP and/or digital ulcers, were enrolled in this study. Thermographic evaluation of both hands was made at baseline (T0), and at days 14 and 28 after the first prostanoid infusion (named T1 and T2, respectively). Statistical analyses have been performed and a p-value <0.05 was considered statistically significant.