

EULAR Study Group "Microcirculation in Rheumatic Diseases"

Introduction

The pre-clinical and early clinical stages of rheumatic diseases (RD) with (micro)vascular involvement (i.e. Raynaud's phenomenon, dermatomyositis, systemic sclerosis, psoriasis etc.) may present important therapeutic windows of opportunity.

Mechanisms of endothelial and microvascular damage are complex and include several players such as endothelial progenitor cells, angiogenic factors, vascular endothelial growth factors and lastly microRNAs.

The value of techniques evaluating morphologically and functionally the microcirculation is fourfold.

First, they may identify those patients who will develop certain RD by recognizing both tissutal and functional biomarkers. Second, in established RD they may predict disease progression. Third, they may be used in monitoring (e.g. therapies). Fourth, they are included in classification or diagnostic criteria in certain RD.

In order to drill into all possibilities offered by techniques evaluating the microcirculation, generalisability/consensus concerning interpretation and standardisation of the techniques is paramount.

Aims

The EULAR study group on **Microcirculation in RD** aims to build an international network of expert centres to facilitate collaboration and exchange knowledge within Europe.

Both soluble biomarkers and altered microvascular morphology/peripheral blood flow are the main focus of research and arguments for the study group **on Microcirculation in RD (11)**.

The study group on Microcirculation in RD will provide a platform on which the investigators can:

1. Study (micro)vascular mechanisms involved in the progression of RD with (micro)vascular involvement.
2. Develop natural history investigations operating across existing cohorts of European centres interested in the cooperation.
3. Identify through statistical analysis (based on large samples), models based on (micro)vascular assessment tools to predict disease progression and outcome.
4. Evaluate the microvascular effects of novel target strategies within specific RD populations.

The specific aims of the study group on Microcirculation in RD are:

1. To integrate different expertises to study the pathophysiology of the disease process (i.e. linking microvascular morphological/functional analysis with soluble vascular biomarkers).
2. To exchange knowledge and to facilitate standardisation concerning different techniques to assess the (micro)circulation such as nailfold capillaroscopy, laser doppler and laser speckle contrast analysis (LASCA).
3. To elaborate predictive indexes for disease progression and follow-up based on the integration of different tools and biomarkers.
4. To develop intervention protocols based upon an understanding of and targeting disease mechanisms (i.e. microvascular damage progression to fibrosis).

Management and final disposition

As EULAR is recognised to foster innovative research, all study group meetings will be liaised to the EULAR annual meetings and possibly to the EULAR courses on capillaroscopy bi-annually.

In addition, in accordance with the EULAR regulation the study group will (non-exhaustive): be open to any new applicant, not request financial support and will perform governance democratically.

Where applicable rheumatic patients will be included in the clinical investigations planning and result discussion, and an annual report will be sent to the EULAR secretary under the aegis of the study group on microcirculation.

The leader will complete a “Declaration of Interest” form as provided by EULAR and an annual progress report including a membership update, which will be sent to the EULAR secretariat

Founding members

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