[SAT0598] OUTCOMES, RATES, AND RISK FACTORS OF TRANSITION OF RAYNAUD'S PHENOMENON TO A CONNECTIVE TISSUE DISEASE: SYSTEMATIC REVIEW AND META-ANALYSIS

N. Ughi[1], F. Ingegnoli[2], C. Crotti[1], M. Mosca[3], C. Tani[3]. [1]Division of Rheumatology, Gaetano Pini Institute, Department of Clinical Sciences & Community Health, University of Milan; [2]Division of Rheumatology, Istituto Gaetano Pini, University of Milan, Milan; [3]Rheumatology Unit, Department of Clinical and Experimental Medicine, University of Pisa, Pisa, Italy

Background: A number of observational studies were carried out in patients with isolated Raynaud's phenomenon (RP) to investigate the predictors of transition to RP secondary to connective tissue diseases (CTDs). Data from a meta-analysis, including studies until June 1996, highlighted the potential role of nailfold capillaroscopy and/or antinuclear antibodies (ANAs) in predicting such transition [1].
Objectives: To provide an updated comprehensive review and meta-analysis on the rates and the role of predictors of transition to CTDs and systemic sclerosis (SSc) in patients with RP.
Methods: A systematic search of observational studies was undertaken using Medline and Embase (07/1996 to 08/2014). From the list of records retrieved, studies were screened by titles/abstracts and the full papers were sought where abstracts were felt to be relevant. Cohort studies reporting incidence and risk factors of transition from primary RP (pRP) or suspected secondary RP (ssRP) to CTDs were selected and data collected in ad hoc forms. pRP was defined according to Leroy and Medsger criteria (no history or physical findings suggestive of a secondary cause, normal capillaroscopy, negative serologic findings); ssRP was defined in presence of positive ANAs and/or abnormal capillaroscopy (even in association with symptoms or physical findings suggestive of a secondary cause without fulfilling criteria for a definite CTD). Relative risk (RR) and 95% confidence interval (CI) were extracted or calculated to present the association between risk factors and transition to CTDs. Random effects model was used to pool the results.
Results: From 2.221 articles captured, 36 met the predefined criteria, 29 were excluded on full text, and 7 selected studies provided information on transition from pRP and/or ssRP to secondary RP: 5 prospective and 2 retrospective cohort studies. Six studies included a total of 4051 patients with pRP with a cumulative mean follow-up of 20241 person-years (mean follow-up 4.9±2 years); a total of 1220 transitions to overt CTDs were recorded (pooled incidence rate 2.5/100 person-years of observation, range 0–7.7); among these, 321 transitions were to SSc (pooled incidence rate 1.58/100 person-years, range 0–2.8). Five studies included 657 patients with ssRP with a cumulative mean follow-up of 2377 person-years (mean follow-up 3.6±1.1 years); a total of 188 transitions to CTDs were recorded (pooled incidence rate 7.9/100 person-years, range 3.3–26) and 135 to SSc (pooled incidence rate 5.7/100 person-years, range 2.1–13). With respect to the patients with pRP, having ANA without capillary abnormalities provided a modest risk to develop SSc (pooled RR 2.8, CI 2.1–3.8), even weaker resulted the association between capillary abnormalities without ANA and the risk of SSc transition (RR 1.3, CI 0.7–2.4). On the other hand, the coexistence of ANA and abnormal capillaroscopy significantly increased the risk of transition to SSc (RR 8.1, CI 6.9–9.7).
Conclusions: A low incidence rate of transition from pRP to overt CTDs was confirmed. In patients with ssRP, whilst accepting the influence of selection bias of different studies, there appears to be a strong risk of transition toward a CTD regarding the concomitant presence of ANAs and abnormal capillaroscopy.
References:

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