We enrolled 20 acromegaly subjects (AS) and 20 control subjects (CS). In each subject immunological parameters were analyzed: humoral immunity (ANA and ENA), anticyclic citrullinated protein antibodies (ACPA), erythrocyte sedimentation rate (ESR) and power doppler (PWD) articular uptake. In acromegaly patients we noticed higher GH levels at the enrollment, number of enlargement p 0.004, hemorragies p 0.01 and capillaries p 0.0269. No statistically significant differences are detected regarding immunological parameters. ANA and ENA screening resulted positive in 10% in AS and in 5% in CS. No IgA ACPA were detected in AS or CS, while IgG ACPA were positive only in one AS subject. The presence of IgM and IgG ACPA was not statistically significant between the two groups. Five fold higher IgG FR in AS compared to CS were detected. ESR levels were significantly higher in AS compared to CS (p = 0.0405), as well as increased power doppler (PWD) articular uptake (AS 30% vs CS 5% p 0.081). The capillaroscopic evaluation showed a significant difference in almost each parameter that has been evaluated; they, also, underwent bilateral joint ultrasound of hands and wrists and nail capillaroscopy. The Chi square test and the Fisher’s exact test were used to evaluate the association between binary variables, while the Spearman’s test to evaluate the correlation of continuous ones. A multiple or logistic regression model was calculated in order to define the association between the capillaroscopic alterations and other detected variables.

**Results:** Articular pain emerged as significantly more frequent in AS (p = 0.0269). No statistically significant differences are detected regarding immunological pattern. ANA and ENA screening resulted positive in 10% in AS and in 5% in CS. No IgA ACPA were detected in AS or CS, while IgG ACPA were positive only in one AS subject. No significant differences were detected between IgM and IgG RF in the two groups (AS 5% and CS 0%). Three fold higher IgG FR in AS compared to CS were detected. ESR levels were significantly higher than in CS (p = 0.0405), as well as increased power doppler (PWD) articular uptake (AS 30% vs CS 5% p 0.081). The capillaroscopic evaluation showed a significant difference in almost each parameter that has been evaluated (logistic regression: number of enlargement p 0.004, hemorragies p 0.01 and capillaries p 0.001), showing a moderate-severe microangiopathy in AS. Interestingly, analyzing only the acromegaly cohort, we noticed higher GH levels at the enrollment in patients which developed capillary enlargements (GH: 0.95 ng/ml IQ 0.6-1.6) compared to other ones (GH: 0.55 ng/ml IQ 0.4-0.7; p = 0.08) and a significant lower number of hemorraghes (p = 0.02) in patients treated with GH antagonist pegvisomant.

**Conclusion:** Our results demonstrated that joint disease in acromegaly does not seem to have an autoimmune etiology. Therefore, articular damage is mechanical and increased ESR and PWD alterations seems to confirm the presence of an inflammatory component. In addition, acromegaly is characterized by a microvascular pattern of moderate-severe microangiopathy, without correlation to IGF-I, but GH levels. Although requiring further confirmatory studies, our preliminary results seem to indicate how the capillaroscopic examination could be useful to detect earlier microangiopathy and to identify patients with a greater risk of macroangiopathy development.

**References:**


**Disclosure of Interests:** None declared

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