RP have younger age at onset (<30 years), there are no clinical features of a secondary disease, no trophic changes or abnormal capillaroscopic pattern.

Methods: Literature data on quantitative analysis of capillaroscopic parameters in primary RP are limited.

Results: In an own study that included 31 patients with primary RP patients, significantly wider arterial and venous capillary diameters as compared with healthy controls was found in 96.6% of cases. The mean arterial capillary diameter (0.018 ± 0.004 mm) in primary RP patients was significantly larger in comparison healthy volunteers (0.012 ± 0.001 mm, $p < 0.005$). The mean venous capillary diameter was also significantly higher in primary RP (0.026 ± 0.006 mm vs 0.017 ± 0.002 mm in healthy controls, $p < 0.005$).¹ Similarly, Bukhari *et al.* (2000)² also observed greater diameters of arterial, venous limb and apical loop in comparison with control subjects in 15 primary RP patients, but the difference was not statistically significant.² Anderson *et al.* (2005)³ also found greater capillary diameters in 21 patients with primary RP vs healthy volunteers but the difference was statistically significant only for the arterial capillary limb and the apex loop but not for the venous capillary diameter.³

Conclusions: These capillaroscopic observations in primary RP patients suggest that the absence of an abnormal capillaroscopic pattern is diagnostic for primary RP but minor capillaroscopic dilation is a frequent microvascular feature in these patients.

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Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4075

AB1219 CONTRIBUTION OF MRI TO CERVICAL INVOLVEMENT IN RHEUMATOID ARTHRITIS: PROSPECTIVE STUDY OF 30 CASES

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Background: Cervical spine involvement is common during RA and is characterised by its potential severity.

Objectives: To determine the prevalence of cervical involvement in RA, to clarify the contribution of MRI to diagnosis and to identify predictive factors for cervical rheumatoid involvement.

Methods: Our study included 30 RA patients with a duration of more than 2 years.

Results: 16 patients (53%) were assessed on the two imaging methods (standard radiographs in 37% and MRI in 53%), of which 2 cases (7%) were asymptomatic. This cervical involvement was dominated by the C1-C2 pannus objectivated in 50% of cases and AAS. Of the AAS, aAAS was the most frequent with a prevalence of 23%, followed by the pAAS found in 10% of the cases, the vAAS present in 7% of the cases then the IAAS and the rAAS objectivated in 3% each. The ASS was found in 3 cases (10%), odontoid erosion in 11 cases (37%), C1-C2 arthritis in 5 cases (16%) and inflammatory spondylodiscitis in 6 cases (20%). MRI resulted in a better study of the C1-C2 pannus and odontoid erosions as well as the evaluation of the impact of rheumatoid lesions on the neural axis: a medullary imprint was noted in 4 cases (13%). Several factors were associated with cervical rheumatoid involvement: the presence of cervicobrachial neuralgia or bulbomedullary signs, duration of PR ≥ 5 years, HAQ score ≥ 1.1 and positive RF. The search for factors associated with AAS has revealed the duration of the disease, DAS $28 > 3.2$ and the presence of a biological inflammatory syndrome.

Conclusions: Cervical involvement accompanies the active and destructive forms of RA. It can be asymptomatic, it is the interest to seek it in a systematic way in RA. The standard radiography with dynamic views is to be realised first-line. The MRI must be indicated in order to make an early diagnosis, to carry out an accurate lesional assessment and to guide the therapeutic decision.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.5730

AB1220

STUDY OF THE RELATIONSHIP BETWEEN TOE DEFORMITIES IN THE FOREFOOT REGION AND THE FLEXOR TENDONS IN RHEUMATOID ARTHRITIS USING 3D VOLUME RENDERING

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Background: Multi-slice computed tomography (CT) is frequently used to evaluate the morphology, arrangement, and other characteristics of bone. Three-dimensional volume rendering (3D-VR) has made it possible to three-dimensionally visualise tendons and other structures by arbitrarily changing CT values. In deformities of the forefoot region in rheumatoid arthritis (RA), dislocation of the metatarsophalangeal (MTP) joints results in the formation of painful calluses that require surgery; however, the toes can sometimes be displaced inwards or outwards by this dislocation. MTP joint dislocation also causes the flexor tendons to dislocate from their original positions, although the relationship with toe displacement is unclear.

Objectives: We therefore used 3D-VR to examine the relationship between the flexor tendons and toe displacement in the dislocated toes of RA patients.

Methods: Thirty-one feet (10 right and 21 left) of 24 patients (5 men and 19 women) were examined. The Tsuboi classification was used to classify MTP joint dislocation into subluxation (Grade 2) or dislocation (Grade 3). CT images taken with no load applied to the feet were used for preoperative evaluation. The mean age of the patients at the time of imaging was 59.0 (36–76) years. A Fujifilm volume analyzer (SYNAPSE VINCENT) was used for 3D-VR reconstruction and CT values were adjusted to visualise the flexor tendons and examine their relationship with the heads of the metatarsal bones. When the flexor tendons were displaced inward or outward from the base of the metatarsal bone head, this was classified as flexor tendon dislocation. Toe displacement was identified when the proximal phalanx was displaced inward or outward from the extended line of the metatarsal axis.

Results: MTP joint dislocation was seen in 80 toes (63 cases of dislocation and 17 cases of subluxation). The flexor tendons were dislocated in 27 s toes (15 inward and 12 outward), 27 third toes (21 inward and 6 outward) and 16 fourth toes (15 inwards and 1 outward). Of the cases of MTP joint dislocation, toe displacement was seen in 12 s toes (1 inward and 11 outward), 12 third toes (12 outward) and 2 fourth toes (1 inward and 1 outward). The flexor tendons were dislocated towards the displaced toes in all cases. No flexor tendon dislocation was seen in any of the cases of subluxation.

Conclusions: RA is often accompanied by hallux valgus and toe displacement is affected by retraction of the first toe. The results of this study demonstrate that the toes are displaced inwards in some cases and can become dislocated independent of the influence of the first toe. All the toes were displaced towards the dislocated flexor tendons and MTP arthritis had resulted in loosening of the joint capsule and ligaments and dislocation of the flexor tendons, which was likely to cause displacement.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.4497

AB1221

THE ASSOCIATION BETWEEN SYNOVITIS IN THE FOOT ON JOINT ULTRASONOGRAPHY AND CLINICAL PARAMETERS IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Treatment of rheumatoid arthritis (RA) has improved dramatically with the widespread use of biological disease-modifying antirheumatic drugs. In this context, the number of RA patients who undergo orthopaedic surgery is reportedly decreasing. However, the number of RA patients who undergo foot surgery is increasing. Joint ultrasonography has been used for early diagnosis and