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AB1033 THE EXPRESSION OF IMMUNOGLOBULIN G AND IMMUNOGLOBULIN G4 IN LYMPHOMA

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Background: Although IgG4-related disease has been gradually recognized, its relationship with malignant diseases, especially lymphoma has been an eternal topic.
Objectives: To explore the expression of IgG4 positive cells in lymphoma.
Methods: Surgical excision specimens with definite diagnosis of lymphoma from January to December, 2013 were collected. Hematoxylin-eosin staining and immunohistochemical staining of IgG and IgG4 were then evaluated on dense lymphoplasmacytic infiltration, storiform fibrosis and obliterative phlebitis. For the quantification of IgG and IgG4 positive cells, the areas with the highest density of positive cells were evaluated. Three high-powered fields (hpf) in each section were analyzed, and the average number of positive cells per hpf was calculated.
Results: 16 patients with lymphoma were selected in our study. There were 9 males and 7 females with an average age of 51 years old. The pathologic type included 13 cases of non-Hodgkin lymphoma and 3 cases of Hodgkin lymphoma. Sub types of Non-Hodgkin lymphoma contained 8 cases of diffuse large B cell lymphoma, 2 cases of small B cell lymphoma, 1 case of mucosa accociated lymphoid tissue marginal zone B cell lymphoma (MALToma), follicular lymphoma, peripheral T-cell lymphoma and hepatosplenic T-cell lymphoma. The 16 specimens all manifested as dense lymphocytic infiltration, accompanied by atypical lymphocytes. Proliferation of fibrous tissue was only seen in one specimen. 14 cases were IgG positive with the highest cell count from 20–350/hpf. IgG can be expressed in both cytoplasm and cytomembrane. 2 cases of IgG4 positive were Hodgkin lymphoma and the highest cell counts were 11 and 12/hpf respectively.
Conclusions: IgG4 positive cell, fibrosis and obliterative phlebitis seldom appear in lymphoma. Added specific tumor signature molecules, it may not be difficult to distinguish lymphoma from IgG4-related disease.
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AB1034 SCORING SYSTEMS OF MUSCLE MRI IN IDIOPATHIC INFLAMMATORY MYOPATHIES

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Background: MRI is a widely used radiological method for assessing muscle involvement in idiopathic inflammatory myopathies (IIM). There is still no universally accepted and validated scoring protocol for the quantification of pathological changes in muscles.
Objectives: To identify MRI scoring systems used in previous studies. To summarize the most frequently evaluated MRI features and to suggest parameters for a unified scoring system, that has to be validated in the future.
Methods: A detailed literature search was conducted in the standard medical databases. Information regarding individual MRI scoring systems were obtained from the methodological explanations and their parameters were compared.
Results: We identified different scoring systems with a large variability of assessed localizations and parameters (Table 1). Muscle oedema as a sign of active muscle inflammation was evaluated in all studies. There were some studies using modified Mercuri score for evaluation of the fatty infiltration as a marker of chronic muscle damage or the Goutallier grading (1, 2), developed originally for the assessment of inherited neuromuscular disorders or structural changes in orthopedics. Perifascicular oedema or soft-tissue oedema were also assessed in some cases. There was no concordance between evaluated muscle groups.
Conclusions: MRI plays a significant role in the evaluation of pathological changes in IIM. This search demonstrated, that there is no widely used, standardized method for assessment of a MRI finding. According to our results, a future concept of MRI scoring system should include evaluation of muscle oedema, fatty infiltration and possibly also the presence of perifascicular (-fascial) and subcutaneous tissue inflammation. Muscle groups most convenient for evaluation have to be determined as well.
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AB1035 EXAMINATION OF ULTRASOUND FINDINGS IN UNDIFFERENTIATED SPONDYLOARTHRITIS PATIENTS WITH DACTYLITIS

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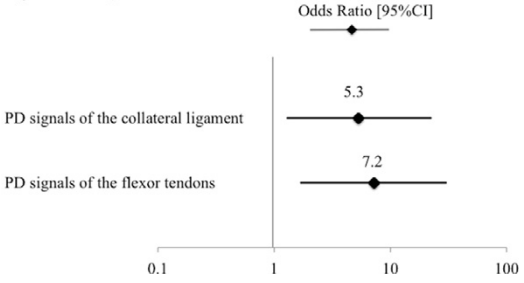
Objectives: To evaluate the ultrasound findings in undifferentiated spondyloarthritis (uSpA) patients with or without dactylitis.
Methods: Between April 2014 and December 2016, sixty-six patients with uSpA diagnosed at our center were consecutively enrolled. The diagnosis of uSpA was made by the Japan College of Rheumatology (JCR)-certified rheumatologists and dactylitis was defined as sausage-digit appearance. Ultrasound, clinical and laboratory findings at diagnosis in patients with dactylitis (dactylitis group; n=30) were compared to those without dactylitis (non-dactylitis group; n=36). Grey scale (GS) and power Doppler (PD) signals of the wrist and finger joints, PD signal of extensor and flexor tendon sheaths, and PD signals of the collateral ligament of the fingers in both hands were assessed by ultrasound. Ultrasound assessment was made by JCR-registered sonographers.
Results: There were no significant differences in clinical and laboratory findings, including inflammatory back pain, arthritis of the lower limbs, tenderness of the entheses, radiographic/MRI changes of sacroiliac joint and HLA-B27 allele frequency, between two groups. In ultrasound findings, the dactylitis group had significantly more PD signals of the flexor tendon sheaths (83% vs. 22%, $p<0.0001$), the collateral ligament (83% vs. 25%, $p<0.0001$), and the MCP joint (30% vs. 3%, $p<0.01$) as compared with the non-dactylitis group. In logistic

Figure 1. Logistic regression analysis of ultrasound findings for the contribution of diagnosis of dactylitis



Abstract AB1034 – Table 1. Muscle MRI scoring systems

Author	Muscle oedema	Fatty infiltration	Sequences	Muscle groups	Other aspects
Pipitone 2016	1 = present, 0 = absent	–	STIR	17 bilat.	–
Andersson 2015	1 = present, 0 = absent	0 - 4 Goutallier gr.	T1W, STIR	thigh, NS	–
Malattia 2014	0 = no abnormalities, 1 = mild-moderate <50%, 2 = high degree >50%	–	STIR	42 (whole body MRI)	perifascicular + subcutaneous tissue inflammation
Zheng 2014	0–5 scale from normal to moderate intrafascicular global oedema	0–5 modif. Mercuri score	T1W, STIR	12, thigh muscles bilat.	–
Davis 2011	0 = absent, 1 = mild, 2 = moderate, 3 = severe	–	STIR	4, thigh bilat.	soft-tissue + perifascicular oedema
Studynkova 2007	VAS 0–10	–	STIR	thigh muscles, NS	muscle oedema extent + total MRI affection

STIR = short-tau inversion recovery, NS = not specified, T1W = T1 weighted sequences, VAS = visual analogue scale.