FRI0203

A SINGLE-CENTER INVESTIGATION ON THE PREVALENCE OF MALIGNANCIES IN PATIENTS WITH POLYMYALGIA RHEUMATICA AND GIANT CELL ARTERITIS BY WAY OF 18F-FDG PET/CT: A PROSPECTIVE COHORT STUDY

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Background: Several chronic inflammatory diseases are associated with a higher risk of cancer.[1] Whether, this is the case in Polymyalgia Rheumatica (PMR) and Giant Cell Arteritis (GCA) is still a matter of debate.
Objectives: To identify the prevalence of newly diagnosed cancers in patients with PMR and GCA by means of 18F-FDG PET/CT. Moreover, to compare the characteristics of the patients with and without cancer.
Methods: Eighty consecutive patients with newly diagnosed PMR/GCA were studied. Diagnosis of PMR/GCA was confirmed by a 40-weeks follow up. A unilateral temporal artery biopsy (TAB) was also performed at the time of diagnosis. All included patients underwent an 18F-FDG PET/CT before, or in case of GCA, within 3 days of initiation of high dose oral glucocorticoid (40-75mg). All cancer-suspicious 18F-FDG-PET/CT findings were assessed thoroughly and malignant diseases were confirmed by histology. Total PMR and GCA scores were defined as the sum of a 4-point visual grading scale in each articular/periarticular site as well as arterial segment.
Results: Of the 80 patients, 64 (83.1%) were diagnosed with pure PMR, 10 (13.0%) with concomitant GCA with PMR and 3 (3.9%) with pure GCA. Three patients were diagnosed with rheumatoid arthritis during follow up and excluded from the study. Five types of cancer in 4 (5.2%;95% CI:1.4-12.8%) patients were found. Two patients had breast cancer, one patient had adenocarcinoma of colon and one patient had adenocarcinoma of colon together with skin cancer. Besides, 4 (5.2%;95% CI:1.4-12.8%) patients had Monoclonal Gammopathy of Unknown Significance (MGUS). Age and C-reactive protein were significantly higher among those with solid cancers (p:0.049) and MGUS (p:0.017), respectively (Table1).

Table 1. Characteristics of the patients with and without solid cancer ae well as MGUS

Variables	Cancer –,n=73	Cancer +, n=4	P-value	MGUS -, n =73	MGUS +, n =4	P-value
Age, mean±SD	71.4±7.8	79.7±7.5	***0.049***	71.9±8.0	70.2±9.2	0.79
Gender, n(%) Female	46(59.7%)	3(3.9%)	0.99	47(61.0%)	2(2.6%)	0.62
Constitutional symptoms, n(%)	70(90.9%)	4(5.2%)	0.99	70(90.9%)	4(5.2%)	0.99
Shoulder girdle symptoms, n(%)	68(88.3%)	4(5.2%)	0.99	68(88.3%)	4(5.2%)	0.99
Hip girdle symptoms, n(%)	65(84.4%)	3(3.9%)	0.40	64(83.1%)	4(5.2%)	0.99
Cranial symptoms, n(%)	19(24.7%)	0(0%)	0.57	17(22.1%)	2(2.6%)	0.25
Patients pain VAS	75(50-85)	62.5(50-75)	0.53	72.5(50 -80)	87.5(77.5-95)	0.07
Patients global VAS	80(60-90)	62.5(50-75)	0.37	80(60-90)	89.5(79.5-95)	0.23
Physician global VAS	30(25-40)	24.5(20-29)	0.15	30(22.5-40)	37.5(32.5-45)	0.17
Erythrocyte sedimentation rate, mm[2-20]	54(38-79)	62.5(37.5-76)	0.93	54(38-77.5)	57.5(39 -73.5)	0.94
C-reactive protein, mg/L[<6.0]	37(17-64)	34(17.0-76)	0.80	33(17-60)	98(68 -115)	0.017
TAB positive	7(9.1%)	0(0%)	0.99	7(9.1%)	0(0%)	0.99
Total PMR score	14(10-17)	12(5-15)	0.39	14(10-17)	13(6-15.5)	0.64
Total GCA score	0(0-0)	0(0-0.5)	0.89	0(0-0)	0(0-0)	0.34
Clinical diagnosis, n(%)			0.99			0.53
Pure PMR	60(77.9%)	4(5.2%)		61(79.2%)	3(3.9%)	
Pure GCA	3(3.9%)	0(0%)		3(3.9%)	0(0%)	
Concomitant PMR and GCA	10(13.0%)	0(0%)		9(11.7%)	1(1.3%)	

VAS: Visual analogue scale

Conclusion: The prevalence of cancers in this cohort was higher, compared to the 1-year prevalence of all cancer sites of 1.2% among age-, gender- and region-matched background population in 2016. Occult malignancies are important and relatively prevalent findings in newly diagnosed PMR/GCA patients.
References:
[1] Hemminki K, et al. Cancer risk in hospitalized rheumatoid arthritis patients. Rheumatology (Oxford) 2008;47:698-701.
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FRI0204

COMPARISON BETWEEN TRANSMURAL AND ISOLATED (PERI)ADVENTITIAL INFLAMMATION AT TEMPORAL ARTERY BIOPSY: A SINGLE CENTER COHORT OF BIOPSY-POSITIVE GCA WITH LONG TERM FOLLOW-UP

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Background: Temporal artery biopsy (TAB) showing transmural inflammation is considered the gold standard for the diagnosis of giant cell arteritis (GCA). In some cases, inflammation is confined to periadventitial small vessels and/or the adventitia. However, the clinical significance of this more limited inflammation remains unclear. Up to date, no studies have compared treatment, prognosis and long-term outcomes of patients with transmural inflammation with those of patients with isolated (peri)adventitial inflammation.
Objectives: To compare treatment and long-term outcomes of patients with transmural inflammation with those of patients with (peri)adventitial inflammation in a single center cohort of patients with biopsy-positive GCA with long-term follow-up.
Methods: All TABs performed for suspected GCA between 1986 and 2013 were reviewed by a single pathologist. Based on the localization of the inflammation, inflamed TABs were classified into 2 categories: transmural inflammation (TMI), with external elastic lamina disruption and extension of the inflammation to the media; (peri)adventitial inflammation (PAI), with inflammation limited to small periadventitial vessels and/or to the adventitia without extension to the media. All medical records of these patients were retrospectively reviewed from the date of TAB to 31 December 2018 or death. Only patients with a follow-up of at least 18 months after GCA diagnosis were included. Cohort characteristics were compared using Wilcoxon rank sum tests for continuous variables and chi-square tests for categorical variables. Kaplan-Meier methods and log-rank tests were used to estimate the rate of development of outcomes.
Results: In the study period 254 TMI and 80 PAI were identified. Baseline clinical manifestations and laboratory findings of the 2 cohorts were previously reported (1). Similar frequencies of systemic symptoms, visual manifestations and polymyalgia rheumatica were found in the 2 cohorts. Compared with patients with TMI, those with PAI had a significantly lower frequency of cranial symptoms, abnormalities of TA at physical examination, halo at TA color duplex sonography, lower levels of ESR and CRP and higher frequency of male gender and peripheral arthritis. Large vessel involvement was found in 6/22 (27%) patients with PAI and 32/81 (40%) patients with TMI, p=0.292.
118 patients with TMI and 35 with PAI had a follow-up longer than 18 months and were included for outcome analysis. Median (IQR) follow-up was 79.8 months (52, 115) for patients with TMI and 67.9 (34, 125) for those with PAI, p=0.125. Compared to patients with TMI, those with PAI received a significantly lower initial prednisone dose (35.8±22.0 vs 46.8±15.0 mg, p<0.0001), reached sooner a prednisone dose <10 mg/day (median 4.7 months vs 6.3, p=0.001) and <5 mg/day (median 7.5 months vs 10.3, p=0.005), had a lower cumulative prednisone dose at 1 year (5.7±3.8 vs 7.2±2.3 g, p=0.005) and at the end of the follow-up period (10.0±9.0 vs 12.9±9.6 g, p=0.015). There were no differences in the frequencies of relapses, long-term remission, time to first GC discontinuation and treatment duration between patients with TMI and PAI (p>0.05).
Conclusion: Patients with PAI seem to have a disease course similar to those with the transmural pattern, but may require lower GC dosage. Our data confirm that inflammation confined to periadventitial small vessels and/or the adventitia could be considered part of the histopathologic spectrum of GCA.
References:
[1] Restuccia G, et Al. Small-vessel vasculitis surrounding an uninflamed temporal artery and isolated vasa vasorum vasculits of the temporal artery: Two subsets of giant cell arteritis. Arthritis Rheum. 2011.
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