FRI0275

HIGH ANGIOPOIETIN-2 LEVELS ASSOCIATE WITH ARTERIAL INFLAMMATION AND LONG-TERM GLUCOCORTICOID REQUIREMENT IN POLYMYALGIA RHEUMATICA

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Background: Polymyalgia rheumatica (PMR) frequently co-occurs with giant cell arteritis (GCA). So far, a simple biomarker for detecting concomitant arterial inflammation in PMR patients is lacking. Furthermore, biomarkers predicting disease course in PMR are awaited.

Objectives: We here investigated the diagnostic and prognostic value of acute-phase markers (ESR, CRP, IL-6, serum amyloid A) and angiogenesis markers (VEGF, soluble Tie2, angiotensin-1, angiotensin-2) in isolated PMR and PMR/GCA overlap patients.

Methods: We prospectively included 39 treatment-naïve PMR patients, of which 10 patients also showed evidence of large vessel GCA on FDG-PET/CT. Age-matched healthy controls (N=32) and infection controls (N=13) were included for comparison. Serum marker levels were measured by ELISA or Luminex. ROC and Kaplan Meier analyses were used to assess diagnostic and prognostic accuracy, respectively.

Results: All acute-phase and angiogenesis markers, except angiotensin-1, were higher in isolated PMR patients compared to HCs. Angiotensin-2, ESR and soluble Tie-2 were significantly higher in patients with PMR/GCA overlap compared to isolated PMR patients. Angiotensin-2, but not soluble Tie2, outperformed ESR and CRP in discriminating patients with and without overlapping GCA (AUC 0.90). Moreover, high angiotensin-2 levels were associated with long-term glucocorticoid requirement.

Conclusion: Assessment of angiotensin-2 at baseline may assist diagnosis of concomitant vasculitis in PMR. Moreover, high levels of angiotensin-2 were associated with a unfavorable disease course in isolated PMR patients. These findings imply that angiotensin-2 could be an interesting diagnostic and prognostic biomarker in PMR.

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FRI0276

TIME OF DISEASE EVOLUTION AND EFFICACY OF TOCILIZUMAB IN GIANT CELL ARTERITIS

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Background: Tocilizumab (TCZ) has proved to be effective in the management of Giant Cell Arteritis (GCA). Based on results of the GiACTA

trial, it has been approved by the FDA and the European Commission for GCA treatment. Nevertheless, almost half of the GiACTA trial patients presented a short time evolution disease.

Objectives: Our aim was to evaluate the efficacy of TCZ according to the time of disease evolution.

Methods: Retrospective, multicenter study of 134 patients with GCA in treatment with TCZ. A comparative study between two groups according to the time from disease diagnosis and TCZ onset was performed.

Results: Our study included 134 GCA patients. **TABLE 1** summarizes a comparative study between: a) ≤ 6 months of disease evolution, and b) > 6 months of disease evolution. Non-significant difference in baseline characteristics was found. In terms of visual involvement, we observed more patients affected in the first group (≤ 6 months) ($p=0.30$). Analyzing clinical improvement non-significant difference was seen during follow-up. At TCZ onset, in the group of ≤ 6 months of evolution, the prednisone dose was higher with a mean dose of 31.3 ± 16.5 mg/d vs 17.7 ± 14.2 mg/d ($p<0.001$), however, a similar reduction of corticosteroids was achieved in both groups after 6 months of follow-up. The incidence of adverse events and severe infections was similar in both groups ($p=0.132$ and $p=0.672$ respectively).

Conclusion: In this retrospective analysis, our results support the previously reported efficacy and safety profile of TCZ. We can conclude that TCZ can be used in GCA independently the time of disease evolution.

REFERENCES:

- Calderón-Goercke M. Tocilizumab in giant cell arteritis. Observational, open-label multicenter study of 134 patients in clinical practice. *Semin Arthritis Rheum.* 2019 Jan 5. pii: S0049-0172(18)30571-7. Doi: 10.1016/j.semarthrit.2019.01.003. [Epub ahead of print]
- Salvarani C, Magnani L, Catanoso M, Pipitone N, Versari A, Dardani L, et al. Tocilizumab: a novel therapy for patients with large-vessel vasculitis. *Rheumatology (Oxford).* 2012; 51:151-6.
- Stone JH, Tuckwell K, Dimonaco S, Kleerman M, Aringer M, Blockmans D, et al. Trial of Tocilizumab in Giant-Cell Arteritis. *N Engl J Med.* 2017; 377:317-28.

	GCA ≤ 6 MESES (n=44)	GCA > 6 MESES (n=90)	p
CORTICOSTEROIDS AT TCZ ONSET			
Prednisone dose, mg/d (mean (SD))	31.3 $\pm$ 16.5	17.7 $\pm$ 14.2	<0.001
EFFICACY AND SAFETY AFTER TCZ			
Prolonged remission n (%)			
Month 6	16 (57.1)	42 (58.3)	0.272
Month 12	11 (64.7)	35 (67.3)	0.843
Month 24	6 (66.7)	21 (67.7)	0.952
Relapses n (%)			
Month 1	2 (4.9)	2 (2.3)	0.593
Month 3	4 (10.8)	3 (3.5)	0.197
Month 6	1 (3.6)	4 (5.6)	1.000
Month 12	2 (11.8)	7 (13.5)	0.857
Month 24	1 (11.1)	6 (19.4)	0.567
CORTICOSTEROIDS SPARING EFFECTS, median [IQR]			
Month 1	18.8 [10-30]	10 [5-15]	<0.001
Month 3	12.5 [7.5-20]	7.5 [5-10]	<0.001
Month 6	5 [4-10]	5 [2.5-7.5]	0.202
Month 12	5 [0-5]	2.5 [0-5]	0.335
Month 24	0 [0-4.4]	0 [0-5]	0.724
SIDE EFFECTS, n (%)			
Relevant adverse events	14 (31.8)	18 (24)	0.132
Serious infections	6 (13.6)	10 (11.1)	0.672

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FRI0277 ISCHEMIC AND SYSTEMIC SYMPTOMS IN GIANT CELL ARTERITIS PATIENTS, RESPONSE TO TOCILIZUMAB

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Background: In Giant Cell Arteritis (GCA) two dominant cytokine clusters have been linked to disease activity, IL-6 – IL-17 axis (Th17) and IL-12 – IFN γ axis (Th1). The first one related to systemic symptoms and the second route responsible for ischemic symptoms. Tocilizumab (TCZ) performs its effect mainly by inhibiting Th17 axis and terminally Th1 route.

Objectives: Our aim was to evaluate the effect of TCZ on ischemic and systemic symptoms throughout the follow-up.

Methods: Retrospective, multicenter study of 134 patients diagnosed of GCA on treatment with TCZ. We evaluate the efficacy of TCZ by improving ischemic (visual involvement, headache, jaw claudication) and systemic symptoms (fever, constitutional syndrome, polymyalgia rheumatica (PMR)).

Results: We evaluated 134 patients (101 w/33 m) and its main symptoms at TCZ onset, **TABLE.** 73 (54.5%) patients presented PMR followed by headache in 70 (52.2%) cases, constitutional syndrome in 31 (23.1%) and visual involvement in 28 (20.9%) patients. After one month of treatment there was an important clinical improvement, persisting in 13.6% of patients PMR, 10.6% headache and 10.6% visual involvement. Throughout the follow-up, the improvement of ischemic symptoms was slower. At month 12, in 5.6% (4) of patients persisted with visual impairment, and 2.8% (2) patients presented headache and constitutional syndrome. However, the analytical improvement was statistically significant from the first month and sustained during follow-up.

Conclusion: According to the results of our study, we can conclude that in clinical practice, ischemic symptoms take longer to improve than systemic symptoms; being visual affectionation the most frequent symptom after 12 months of follow-up.

REFERENCES:

- [1] Soriano A, Muratore F, Pipitone N, Boiardi L, Cimino L, Salvarani C. Visual loss and other cranial ischaemic complications in giant cell arteritis. *Nat Rev Rheumatol.* 2017; 13:476-84.
- [2] Ciccia F, Rizzo A, Ferrante A, Guggino G, Croci S, Cavazza A, et al. New insights into the pathogenesis of giant cell arteritis. *Autoimmun Rev.* 2017; 16:675-83.
- [3] Calderón-Goercke M. Tocilizumab in giant cell arteritis. *Observational, open-label multicenter study of 134 patients in clinical practice.* *Semin Arthritis Rheum.* 2019 Jan 5. pii: S0049-0172(18)30571-7. Doi: 10.1016/j.semarthrit.2019.01.003. [Epub ahead of print]

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	Basal	Month 1 n=132	Month 3 n=122	Month 6 n=99	Month 12 n=71
SYSTEMIC MANIFESTATIONS					
Fever, n (%)	9 (6.7)	0	1 (0.8)	1 (1.0)	1 (1.4)
Constitutional syndrome, n (%)	31 (23.1)	12 (9.1)	6 (4.9)	2 (2.0)	2 (2.8)
PMR, n (%)	73 (54.5)	18 (13.6)	14 (11.5)	4 (4.0)	0
ISCHEMIC MANIFESTATIONS					
Visual involvement, n (%)	28 (20.9)	14 (10.6)	9 (7.4)	5 (5.1)	4 (5.6)
Headache, n (%)	70 (52.2)	14 (10.6)	7 (5.7)	6 (6.1)	2 (2.8)
Jaw claudication, n (%)	14 (10.4)	0	0	1 (1.0)	1 (1.4)
ACUTE PHASE REACTANTS					
ESR, mm/1 st hour, mean (SD)	33 [14.5-61] ** (129)	6 [2-12] ** (102)	4 [2-7.5] ** (116)	4 [2-8] ** (93)	4 [2-8] ** (71)
CRP, mg/dL mean (SD)	1.7 [0.4-3.2] ** (131)	0.1 [0-0.5] ** (98)	0.1 [0-0.4] ** (110)	0.1 [0-0.2] ** (92)	0.1 [0-0.2] ** (67)

**p<0,001

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