**Conclusion.** – In this exploratory study, AA size and amount of previous treatment were not predictors of AD. Size cut-offs currently used to recommend surgery in the general population of patients with AA may not be applicable in GCA.

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**Patients with Takayasu’s arteritis having persistent acute phase response usually have an increased major vessel uptake by 18F-FDG-PET**

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**Introduction.** – Although not uniformly accepted, an increased uptake by 18F-fluorodeoxyglucose positron emission tomography (18F-FDG PET) in large-vessels is accepted to be a sign of active disease in Takayasu’s arteritis (TAK). In this study, we aimed to investigate the value of 18F-FDG-PET for clinical assessment in a subset of TAK patients having a persistent acute phase response (APR) without any signs or symptoms of clinical activity.

**Methods.** – We studied 12 patients with TAK (mean age: 39.2 ± 14.8 years, F/M: 10/2, disease duration: 5.4 years). Patients were clinically inactive (according to the definition of activity by Kerr et al.), while categorized as having “persistent” disease activity by physician’s global assessment due only to APR. All patients were under immunosuppressive treatments including corticosteroids. The severity of large-vessel 18F-FDG uptake was graded using a four-point scale from grade 0 (no uptake present) to grade III (high-grade: uptake higher than liver). Any uptake in major vessels with a grade ≥ 2 was accepted to be “active”.

**Results.** – Mean ESR was 55.5 (30–86) mm/h and mean CRP was 29.6 (7.7–90) mg/L. Active vasculitic lesions were observed by 18F-FDG-PET in 8 of 12 (66%) of the study group, with a mean number of 2.1 (1–4) active vascular lesions. Aortic aorta was involved in 25%, ascending aorta in 20%, right brachiocephalic artery in 20%, descending aorta in 15%, abdominal aorta in 10% and left and right subclavias in 5% each of the investigated vessels. A step-up treatment change was decided in 7 patients according to 18F-FDG-PET results.

**Conclusion.** – We observed increased 18F-FDG-PET uptake in the majority of TAK patients with an increased APR, but clinically silent disease. Although specificity of observed lesions are not clear, 18F-FDG-PET imaging may influence physician’s assessment of clinical activity and treatment choices in TAK.

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P95

**Can serum procalcitonin help to diagnose patients with new onset giant cell arteritis?**


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**Introduction.** – Procalcitonin (PCT) is highly elevated in severe infection and sepsis [1]. In patients with giant cell arteritis (GCA) studies reported PCT not to be elevated [2,3]. Some patients with GCA can present with symptoms and laboratory signs that make the differential diagnosis between arteritis and severe infection a challenging issue. The aim of this study was to examine the levels of procalcitonin in patients with new onset GCA.

Methods. – Patients with newly diagnosed GCA were recruited 2010 and 2012. A PCT test was performed at the time of the initial evaluation. All GCA patients had a positive color Doppler ultrasound of the temporal arteries [4] and fulfilled the American College of Rheumatology GCA classification criteria [5]. In addition to procalcitonin, other inflammatory markers as C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) were assessed. The cut-off for elevated PCT was > 0.1 ng/ml for CRP > 5 mg/dl and for ESR > 30 mm/h, respectively. A value of PCT > 0.5 ng/ml was taken as the marker of bacterial infection [3].

**Results.** – Twenty-six patients (10 males and 16 females) entered the study (mean age 71.7 years). Mean PCT levels were 0.1 (0.1–0.24 ng/ml, SD 0.03). Except of two patients with a PCT of 0.17 and 0.24 ng/ml, all the remaining GCA patients had normal PCT values (< 0.10 ng/ml). One GCA patient with slightly elevated PCT (0.17) had acute renal and liver failure at the time of the initial evaluation. Mean ESR was 74.0 mm/h (range 12–131, SD 30.3) and mean CRP at 67.7 mg/dl (range 5–264, SD 49.8). No correlation was seen between PCT and ESR or CRP.

**Discussion.** – PCT is not elevated in the majority patients with new onset GCA and may be a useful marker to distinguish between severe infectious diseases and GCA. However, in GCA patients with concomitant multi-organ failure, procalcitonin levels can be slightly elevated.

**Conclusion.** – PCT may be a useful marker in the differential diagnosis between severe infection and GCA.

**References**


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**Large vessel giant cell arteritis: Clinical, imaging characteristics and outcomes**

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**Introduction.** – To describe the clinical, radiographic findings and outcomes in patients with giant cell arteritis (GCA) and upper extremity (UE) large vessel (LV) involvement.

**Methods.** – All patients ≥ 50 years with radiographic evidence of UE involvement from GCA diagnosed between 1999–2008 at a single tertiary care institution were retrospectively identified.

**Results.** – The study included 120 patients (80% female) with UE LV-GCA, mean age at diagnosis 68.2 years. Diagnosis was made by CTA in 49.2%, MRA in 20%, conventional angiography in 29.2%, PET scan in 0.8% and
ultrasonography in 0.8%. Temporal artery biopsy was positive in 41/79 patients (52%). Most common signs and symptoms were abnormal pulse (60%), UE claudication (52%), vascular bruits (38%), Raynaud’s (11%). Cranial symptoms of GCA were present in 41%; vision loss was uncommon (4%). Imaging changes of the subclavian artery included stenosis/occlusion (56%), wall thickening (26%), ectasia/aneurysm in 9%, stenosis and ectasia (6%), other (4%). Radiographic changes of the thoracic aorta were present in 56%. Patients with ectatic changes of the subclavian arteries more frequently had thoracic aortic aneurysms (5/11, 55%) compared to those with stenosis (1/67, 1.5%) or thickening (2/31, 6.5%) of the subclavian artery; P < 0.001. During a median follow-up of 3.7 years in 102 patients, relapses occurred in 76%. Median duration of glucocorticoid therapy was 4.5 years and 50% patients received additional immunosuppressants. At last evaluation, symptoms of vascular insufficiency improved in 55%, resolved in 29%, worsened in 2% and were unchanged in 14%. Revascularization was performed in 13 patients.

Conclusion.– Patients with UE LV-GCA often had involvement of the thoracic aorta. Different pathophysiologic mechanisms or vascular response to injury may account for the higher frequency of aortic aneurysms in those with dilatation of subclavian arteries compared to those with stenotic changes or thickening. Most patients with UE LV-GCA did well with medical management.

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Efficacy of long-term treatment with TNF inhibitors in patients with refractory Takayasu arteritis

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Introduction.– TNF inhibitors consider to be the drugs of choice in patients with Takayasu arteritis refractory to standard treatment though their efficacy was shown only in few series of cases.

Methods.– Nine patients with 1AK (all females, average age 28.6 years, type 5 in eight patients) were included in retrospective study. Average duration of disease was 92.2 months (30–168). Prior to TNF inhibitors administration all patients were treated with immunosuppressive drugs for 48.4 months (16–112). Average PRED dose was 27.8 mg daily (10–30). High activity of disease was confirmed clinically and by standard laboratory tests (average ESR 77 mm/h, CRP 17.6 mg/L, IL-6 6.8 pg/mL) and PET.

Results.– Eight patients were treated with infliximab (induction dose 200–300 mg every 4–6 weeks) and one patient with adalimumab (40 mg every two weeks). Average duration of treatment was 39.8 months (12–84). One (11.1%) patient with low activity of disease did not respond to infliximab (the drug was used as a steroid sparing agent). Complete and partial remission was achieved in 5 (55.6%) and 3 (33.3%) patients, respectively. PRED dose was reduced to 8.9 mg daily (≤10 mg daily in all patients). Average ESR, CRP and IL-6 were 17 mm/h, 1.2 mg/L and 1.5 pg/mL, respectively. Repeated PET confirmed low activity of disease in 6 (85.7%) of 7 patients. TNF inhibitors were well tolerated. In one patient infliximab was replaced with adalimumab due to allergic reaction. In 4 patients we tried to reduce the frequency of infliximab administration (to every 6–8 weeks) but all of them developed the relapse of disease.

Conclusion.– TNF inhibitors are effective and well-tolerated in patients with difficult to treat 1AK. Infliximab can be used in fixed doses (200–300 mg per infusion, or 3 mg/kg) every 4 weeks. The risk of infections is low even during long-term treatment.

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P98

Serum osteopontin in giant cell arteritis: A biomarker associated with systemic inflammatory response and relapsing course

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Introduction.– Osteopontin (OPN) is a multifunctional glycoprotein highly implicated in inflammatory scenarios, contributing to macrophage chemotaxis as well as Th1 and Th17 differentiation. The aim of our study was to determine the OPN concentration in GCA patients and its relationship with activity and persisting disease.

Methods.– OPN concentrations in serum from 67 GCA patients at the time of diagnosis and 20 healthy controls were measured by ELISA. Clinical manifestations and laboratory findings at diagnosis, as well as data about treatment requirements and relapses during follow-up were prospectively recorded.

Results.– Serum OPN concentrations were significantly elevated in patients with GCA (93.66 ± 53.77) compared with healthy controls (42.18 ± 25.18, P < 0.001). GCA patients with systemic symptoms (fever and/or weight loss) presented OPN levels significantly higher (107.15 ± 55.03 vs 64.13 ± 37.35; P < 0.001). Moreover, circulating OPN showed a positive correlation with ESR and CRP (both r = 0.35; P = 0.006), and negative with hemoglobin levels at diagnosis (r = -0.45; P = 0.04). These differences persisted significant at 6 and 12 months of follow-up. Patients that suffered from more than one (129.00 ± 71.81 vs 81.62 ± 42.15; P = 0.02) or two relapses (226.37 ± 41.18 vs 84.04 ± 42.91; P < 0.001) presented OPN concentrations significantly higher, and number of relapses correlated with OPN levels (r = 0.35; P = 0.028). Furthermore, time required to achieve a stable steroid dose <10 mg and <5 mg daily (r = 0.37, P = 0.02 and r = 0.45, P = 0.03, respectively), and cumulated prednisone dosage at steroid withdrawal correlated with circulating OPN concentrations (r = 0.40, P = 0.01).

Conclusion.– Increased serum OPN levels are found in active GCA patients at diagnosis and correlated with the intensity of the systemic inflammatory response and treatment refractoriness. OPN may have a relevant role as a proinflammatory biomarker and may be related to the persistence of inflammatory activity in GCA. Supported by SAF 08/0438 and SAF 11/30073.

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ANCA-associated systemic vasculitis is associated with impaired dilatory capacity of the conduit brachial artery – a link to increased cardiovascular risk?

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Introduction.– ANCA-associated systemic vasculitis (AAV) has been shown to be associated with subsequent increased macrovascular cardiovascular risk. This study tested the dilatory capacity of the conduit brachial artery and the plasma concentration of the potential vascular marker von Willebrand Factor (vWF) at diagnosis and after immunosuppressive treatment in order to examine potential pathophysiological mechanisms behind the association.