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FRI0292 ANTI-PHOSPHATIDYLSERINE/PROTHROMBIN (APS/PT) ANTIBODIES IN PRIMARY ANTIPHOSPHOLIPID SYNDROME

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Background: Several studies have showed conflicting results regarding the presence and meaning of anti-phosphatidylserine/prothrombin (aPS/PT). However aPS/PT antibodies seem to be a risk factor for thrombosis. Nevertheless, most of the studies have focused on patients with SLE and secondary antiphospholipid syndrome (APS).
Objectives: To assess the prevalence of aPS/PT antibodies, as well as their association with other antiphospholipid (aPL) antibodies (specially lupus anticoagulant [LA]) and thrombosis, in a well-established cohort of primary APS from a single center.
Methods: We included 96 consecutive patients with primary APS according the Sydney classification criteria and/or patients with hematological features (thrombocytopenia and hemolytic anemia) attending a referral center in Mexico City. Patients from both groups fulfilled the Sydney laboratory criteria for APS. We registered demographics, disease duration and type of manifestation. aCL (IgG and IgM), antibodies to purified human anti-β2GP-I (IgG and IgM) and aPS/PT antibodies (IgG and IgM) were assessed by ELISA (INOVA Diagnostics). LA was determined by LA/1 screening reactant and a confirmatory test LA/2 according to published guidelines. We used chi-square ($\chi 2$) test, Spearman correlation analysis and logistic regression.
Results: Most patients were females (69.7%), mean age 44.5±14.6 and median disease duration 7.3 years. The main clinical features were thrombosis (n=74, 77%), hematologic involvement (n=49 patients, 51%) and obstetric events (n=24, 25%) (non-exclusive groups). The prevalence of LA was 69.8%, aCL-IgG 56.8%, anti-β2GP-I IgG 43.1%, aCL-IgM 31.5% and anti-β2GP-I IgM 21%. The frequency of aPS/PT antibodies was 61.2% and 61.6% for IgG and IgM isotype, respectively. When we compared patients with LA+ (n=58) vs. LA- (n=25), the first group had a higher prevalence of aPS/PT-IgG (79.3% vs.16%, p=0.0001) and aPS/PT-IgM antibody (81.5% vs. 31.8%, p=0.001), as well as higher titers (aPS/PT-IgG 130.5 U vs. 8.2 U and aPS/PT-IgM 58.5 U vs. 16.6 U, p=0.0001). aPS/PT-IgG antibodies correlated with aPS/PT-IgM (ρ=0.59, p=0.0001), aCL-IgG (ρ=0.62, p=0.0001), anti-β2GP-I IgG (ρ=0.63, p=0.001) and anti-β2GP-I IgM (ρ=0.35, p=0.001). On the other hand, aPS/PT IgM antibodies correlated with aCL-IgG (ρ=0.57, p=0.0001), aCL-IgM (ρ=0.42, p=0.001), anti-β2GP-I IgG (ρ=0.48, p=0.001) and anti-β2GP-I IgM (ρ =0.59, p=0.0001). We found moderate agreement between the presence of LA and both aPS/PT isotypes (k=0.58 p=0.0001 for IgG, and k=0.47 p=0.001 for IgM). Thrombosis was associated with aPS/PT-IgG antibodies (87.7% vs. 61.1%, p=0.003) but not with aPS/PT IgM (73.6% vs. 81.8%, p=0.37). At the logistic regression analysis, the aPS/PT IgG antibodies remained associated with thrombosis after adjusting by all other aPL antibodies, OR 8.6 95% CI 2.1–33.8, p=0.002.
Conclusions: In this cohort of patients with primary APS, aPS/PT antibodies were highly prevalent, correlated with other aPL antibodies and were associated independently with thrombosis.
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FRI0293 CHARACTERIZATION AND RISK ESTIMATE OF CANCER IN PRIMARY SJÖGREN SYNDROME: ANALYSIS IN 1300 PATIENTS

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Objectives: To characterize the risk of solid and hematological cancer in a large, well-characterized cohort of patients with primary Sjögren syndrome (SjS).
Methods: The GEAS-SS multicenter registry is a network of Spanish reference centers with specific clinical experience in the management of SjS patients. By January 2016, we had analyzed the development of cancer in 1300 consecutive patients fulfilling the 2002 SjS classification criteria. Multivariate Cox proportional-hazards regression analysis allowed adjustment for age at diagnosis, gender and the statistically-significant baseline variables associated with cancer in the univariate analysis. The sex- and age-specific incidence rates (SIR) of cancer were estimated from 2012 Spanish mortality data modeling, using a set of age-, sex- and site-specific incidence:mortality ratios.
Results: After a mean follow-up of 91 months (9922.3 person-years), 127 (9.8%) patients developed 133 cancers. The most frequent type of cancer was B-cell lymphoma (34% of cancers, including 27 MALT and 19 non-MALT B-cell lymphomas). Systemic activity at diagnosis of primary SjS correlated with the risk of hematological neoplasia (HR 1.06, $p<0.001$). Positive cryoglobulins at SjS diagnosis were associated with a high risk of either B-cell or non-B-cell lymphoma subtypes. Patients with cytopenias had a high risk of non-MALT B-cell and non-B-cell cancer, while those with low C3 levels had a high risk of MALT lymphomas and those with monoclonal gammopathy and low C4 levels had a high risk of non-MALT B-cell lymphomas. The estimated SIR for solid cancer was 1.13 (95% CI 0.88–1.46) and 11.02 (95% CI 8.35–14.54) for hematological cancer. SIRs for specific cancers were 36.17 (95% CI 25.44–51.43) for multiple myeloma and immunoproliferative diseases, 19.41 (95% CI 7.29–51.72) for Hodgkin lymphoma, 6.04 (95% CI 3.43–10.64) for other non-Hodgkin lymphomas, 5.17 (95% CI 1.94–13.79) for thyroid cancer, 4.81 (95% CI 1.81–12.83) for cancers of the lip and oral cavity and 2.53 (95% CI 1.05–6.07) for stomach cancer.
Conclusions: One third of cancers developed by patients with primary SjS are B-cell lymphomas. The prognostic factors identified at SjS diagnosis differed according to the subtype of B-cell lymphoma developed. Primary SjS is also associated with an enhanced risk of development of some types of non-hematological cancers (thyroid, oral cavity and stomach).
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FRI0294 ULTRASOUND OF THE SALIVARY GLANDS HELPS TO DISTINGUISH BETWEEN PRIMARY AND SECONDARY SJÖGREN SYNDROME

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Background: Previous studies have demonstrated typical findings in the ultrasound of salivary glands (USG) in patients with primary Sjögren syndrome (pSS) compared with healthy controls. However, it is unknown, if these findings are only seen in patients with pSS but also in patients with secondary Sjögren syndrome (sSS) or other connective tissue diseases with positive Ro-SSA/La-SSB antibodies.
Methods: We used an ultrasound score developed by Zhang [1] to investigate salivary glands with a score ranging from 0–48. We compared the score from patients with pSS according the criteria of the American-European Consensus Group (group 1) with patients who fulfilled the clinical criteria (1–4), but were Ro-SSA/La-SSB negative (group 2), with patients who had another rheumatic disease, but had sicca symptoms and were Ro-SSA and/or La-SSB positive (sSS) (group 3), with patients with other rheumatic disease without Ro-SSA or La-SSB antibodies (group 4), with patients with other rheumatic disease with Ro-SSA antibodies but no sicca symptoms (group 5) and with patients with no rheumatic disease (group 6), respectively. We investigated the parotid and the submandibular salivary glands bilaterally. The USG was assessed with a score from 0–48 points with a maximum of 12 points for 4 items each (hyoechoic areas, hyperechoic reflexes, inhomogeneity and distinct organ border). If available the score was correlated with the scintigraphically measured function of the salivary glands.
Results: We included USG of 92 patients in our study. Group 1 (n=33) had a score of 16.6±11.6; group 2 (n=7) 2.4±3.5; group 3 (n=16) 8.6±9.5; group 4 (n=16) 5.3±7.8; group 5 (n=11) 4.5±6.7 and group 6 (n=9) 1.5±2.3, respectively. The score between group 1 and all other groups was significantly different ($p<0.01$), with no significant differences between all other groups. In 25 patients a scintigraphy of the salivary glands was available. The excretory function in the scintigraphy highly significantly correlated with the ultrasound score (r=0.53, $p<0.001$).
Conclusions: USG showed significantly higher scores in patients with pSS, than in patients with sSS or other rheumatic disease. USG as a non invasive investigation might be similarly helpful for the diagnosis of pSS like salivary gland functional tests. USG findings can reliable distinguish between pSS and sSS associated with other rheumatic disease, also if they are positive for Ro-SSA/La-SSB.