

**Abstract PS4:68 Table 3** Relative risk conferred by APS-related factors for increased number of subclinical atherosclerotic plaques in the carotid and femoral arteries, corresponding 95% confidence intervals (CI), and p-values for interaction between each APS-related factor and APS type

APS-related factors*	PAPS RR (95% CI)	SLE/APS RR (95% CI)	P-value for difference between PAPS and SLE/APS
Previous arterial thrombosis	2.10 (0.83–5.31)	1.66 (0.67–4.11)	0.716
Anti-cardiolipin IgG positivity	0.72 (0.17–1.73)	1.35 (0.45–24.37)	0.343
Anti-cardiolipin IgM positivity	0.95 (0.43–2.08)	0.86 (0.37–8.24)	0.859
Anti-β2GPI IgG positivity	0.81 (0.41–1.60)	4.43 (1.77–11.10)	0.005
Anti-β2β2GPI IgM positivity	0.79 (0.39–1.64)	1.13 (0.45–14.51)	0.553
Lupus Anticoagulant positivity	0.87 (0.42–1.78)	1.15 (0.46–2.93)	0.631
Triple antiphospholipid antibody positivity	0.81 (0.38–1.71)	1.53 (0.67–3.52)	0.296
High Antiphospholipid antibody titers ‡	0.91 (0.46–1.83)	4.03 (1.63–9.97)	0.016

\*Each APS-related factor was evaluated in a separate multiple negative binomial regression model including a term of interaction between the factor in question and APS type, age, gender, hypertension, dyslipidemia, pack years of smoking, family history of coronary artery disease, and body mass index ‡ Greater than four-fold of the upper normal limit in any antiphospholipid antibody

PAPS: Primary Antiphospholipid Syndrome; SLE/APS: Systemic Lupus Erythematosus-associated Antiphospholipid Syndrome

#### PS4:69 EPIDEMIOLOGY OF VASCULAR PRIMARY ANTIPHOSPHOLIPID ANTIBODIES SYNDROME

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**Objective** Antiphospholipid Syndrome (APS) is a systemic autoimmune disease characterised by the presence of thrombotic and/or obstetrical manifestations and antiphospholipid antibodies (aPL). In 2006 were published the Sapporo criteria for APS but by now no epidemiological study on this disease were performed. Incidence and prevalence of primary APS (PAPS) are still unknown. The aim of this study was to evaluate the prevalence during the year 2013 and incidence for the period 2011–2015 of vascular PAPS in the adult population of a defined area, Valtrompia valley, using multiple sources. Valtrompia is a 40 kilometers-long prealpine valley in northern Italy. The population in 2013 was 101,477 inhabitants. The only easy access to the valley is from Brescia, the main city of the province. This valley is a cul-de-sac area without any other comfortable and practicable access. Therefore, this valley is ideal for epidemiological studies. In addition, the only Rheumatology referral tertiary Centre of the province is

located in Brescia. This project was approved by the local Ethical Committee.

**Methods** We identified adult subjects of 18–50 years old living in Valtrompia. Patients with thrombotic events were identified by two sources:

- hospital demission code using key words (deep vein thrombosis, pulmonary embolism, myocardial infarction, ischaemic stroke);
- patients with defined diagnosis of vascular PAPS already followed by the Rheumatology tertiary Centre in Brescia.

**Results** We identified 47 patients with venous events during 2011–2015. 27/47 (57%) were tested for aPL, 4/27 (15%) positive. Regarding arterial events, 36 patients had stroke and 33/36 (92%) were tested for aPL, 4/33 (12%) positive. Finally, 64 patients with myocardial infarction (IMA): only 14/64 (22%) were tested for aPL, 2/14 (14%) positive. Table 1 shows incidence of vascular PAPS. Prevalence was 35.4 (95% CI: 20.6 to 59.6) per 100,000 inhabitants in 2013.

**Conclusions** Preliminary results of this study showed that PAPS is a rare disease and accurate epidemiological studies are necessary to better characterised patients. Another point is that aPL were not routinely tested in young subjects with vascular events, especially in patients with myocardial infarction.

Results will be updated, we are going to recall patients never tested for aPL during the hospital admission.

**Abstract PS4:69 Table 1** Incidence rates of antiphospholipid antibody syndrome per 100.000 inhabitants in valtrompia in adult population (18–49 year) between 2011 and 2015. The 95% confidence intervals (CIs) are reported in parenthesis

	INCIDENCE	
	Number of cases	Incidence (95% CI) per 100,000
<b>OVERALL</b>		
<b>Males + Females</b>	9	3.7 (1.7-7.1)
<b>Males</b>	5	4.0 (1.3-9.4)
<b>Females</b>	4	3.4 (0.9-8.8)
<b>VENOUS THROMBOSIS</b>		
<b>Males + Females</b>	4	1.7 (0.5-4.3)
<b>Males</b>	1	0.8 (0.0-4.5)
<b>Females</b>	3	2.6 (0.5-7.5)
<b>STROKE/ICTUS</b>		
<b>Males + Females</b>	4	1.7 (0.5-4.3)
<b>Males</b>	3	2.4 (0.5-7.1)
<b>Females</b>	1	0.9 (0.0-4.8)
<b>IMA</b>		
<b>Males + Females</b>	1	0.4 (0.0-2.3)
<b>Males</b>	1	0.8 (0.0-4.5)
<b>Females</b>	0	-

PS4:70

#### ANTI-PHOSPHATIDYLSERINE/PROTHROMBIN ANTIBODIES AND CARDIOVASCULAR RISK IN A SLE COHORT OF PATIENTS

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**Introduction** Clinical activity of SLE may wax and wane, but persistent, active systemic inflammation leads to organ damage and rises morbidity and mortality. Early damage is mostly related to disease activity, whereas later damage, in particular atherosclerosis, infections and malignancies are usual complications of long-standing disease and treatment with immunosuppressive agents. One of the major late causes of death in SLE is thrombosis, in particular stroke and myocardial infarction due to CAD. In these patients, the increased cardiovascular morbidity is not fully explained by traditional risk factors and this may lead to under-recognition and under-treatment. Petri, et al. proposed an equation for cardiovascular disease risk in SLE, which combines classical parameters and disease activity markers. Other scores such as the GAPSS(Global AntiPhospholipid Syndrome Score) have been recently evaluated. The importance of aPL in thrombosis in general is well defined, as they constitute the culprit of the so-called anti-phospholipid

syndrome(APS). Their role in sustaining the high risk of cardiovascular complications of SLE patients is under-debated.

**Objective** To study the role of the anti-phosphatidylserine/prothrombin(aPS/PT) antibodies, included in the GAPSS score, in contributing to the thrombotic risk of SLE patients.

**Methods** We enrolled 172 patients from Ospedale San Raffaele. 132 patients with SLE(111/132, 84% without secondary APS, SAPS, and 21/132, 16% with SAPS), 19 with primary APS(PAPS) and 21 healthy controls. Each recruited patient was tested for aPS/PT IgG and IgM through ELISA by INOVA Diagnostic, Inc. San Diego, CA USA.

**Results** 36/111 (32.4%) SLE without APS, 15/21 (71.4%) SAPS, 13/19 (68.4%) PAPS and 3/21 (14.3%) healthy donors were aPS/PT+. aPS/PT+SLE patients had a higher cardiovascular risk according to the Petri's score, when compared to aPS/PT-patients, irrespectively of a positive or negative history of overt APS (Mean  $\pm$ SD Petri' score=20.8 $\pm$ 18.1, 14.0 $\pm$ 12.8 and 23.8 $\pm$ 22.5, 11.6 $\pm$ 9.3 respectively,  $p < 0.05$ ). Accordingly, the GAPSS score was significantly higher in APS patients than in APS negative patients with SLE(12.1 $\pm$ 5.7, 11.5 $\pm$ 4.6 and 4.9 $\pm$ 4.9 respectively,  $p < 0.001$ ). Patients with a GAPSS score  $> 10$  had also higher prevalence of pregnancy complications.

**Conclusion** aPS/PT antibodies are associated with a high risk of thrombosis and CAD in SLE. aPS/PT assays should be routinely introduced in the management of these patients.