



Mental disorders in secondary antiphospholipid syndrome patients

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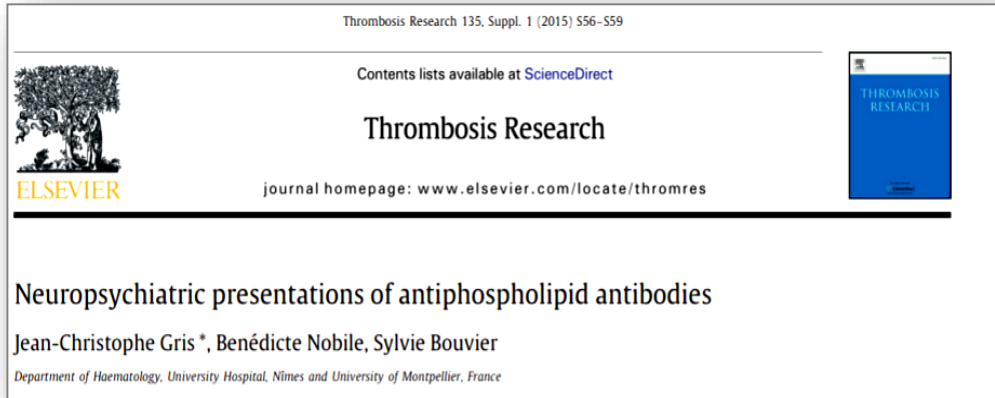
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Koningin Emmaglein 7 -
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Background



- It is known that mental disorders (MD) in antiphospholipid syndrome (APS) patients has been poorly described and recognized
- beside academic syndromic manifestations (*CNS involvement through cerebrovascular accidents and myelitis*) some nonvascular neurological manifestations of antiphospholipid antibodies (aPL) are progressively emerging, being associated with a wide range of polymorphic neurological, psychological and psychiatric manifestations:
 - in the European series of 1,000 APS patients 2.5% had a multi-infarct dementia
 - About 42% of the patients with APS had cognitive deficits compared with 18% healthy control subjects.
 - **Major, minor depressive disorders, anxiety disorders, bipolar disorders, psychosis and schizophrenia are usually described in APS-patients**
 - Women with APS more frequently had mood disorders (relative risk (RR) 1.57 (1.262-1.953), $p=0.0001$) and anxiety (RR 1.645 (1.366- 1.979), $p<0.0001$) than healthy control.

Background



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Review

Cognitive disorders and antiphospholipid antibodies☆

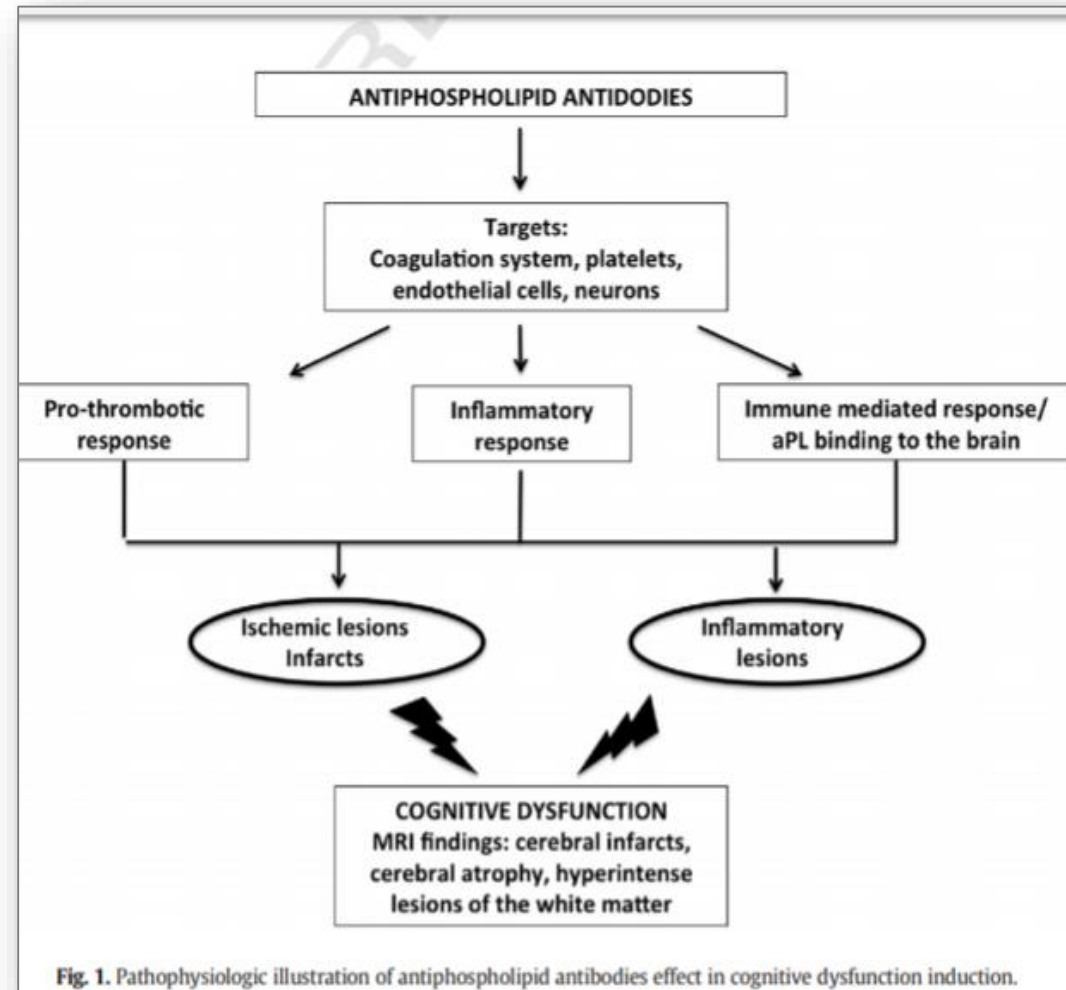
Cécile M. Yelnik ^{a,1}, Elizabeth Kozora ^{b,c,d,2}, Simone Appenzeller ^{e,*}

- **Cognitive disorders** have more frequently been described in the field of APS and systemic lupus erythematosus (SLE). Nevertheless, the relationship between those disorders and aPL remains unclear and seems to involve various mechanisms. Overlap with SLE, the small sample size of studies, and discrepancies in antiphospholipid antibodies and cognitive impairment determinations complicate analyses of the literature data.
- In aPL-positive patients the frequency of cognitive impairment ranges between 19% and 40%, frequency of dementia - 0%–6%.
- In primary APS (PAPS), studies using standardized neuropsychological testing identified cognitive impairment in 42%–80% of the patients
- The prevalence of cognitive impairment in SLE patients is estimated to be between 7% and 75% of patients

Background

- The causes of mental disorders in APS are not known

- **Possible causes are:**
 - stressful life events
 - ischemic brain lesions
 - inflammatory lesions



Objective:

- to describe the rates and spectrum of mental disorders in secondary APS patients with systemic lupus erythematosus

Baseline characteristics of enrolled patients

191 SLE patients were enrolled in the study. All the patients met the criteria of the SLICC/ACR (2012) for SLE and 48 patients - classification criteria for define APS (2006)

Characteristics, n=191	Value
Gender, n (%): male/ female	27/ 164 (14/ 86)
Mean age, years (M±SD)	36,3±12,1
SLE-patients, n (%)	143 (75)
SLE+APS-patients, n (%)	48 (25)
SLE duration, Me [25%; 75%], months	100 [41,5; 204]
SLEDAI score, Me [25%; 75%]	8,0 [2; 15]
SLICC/ACR Damage Index, Me [25%; 75%]	1,0 [0; 3,0]
Prednisone use, n (%)	191 (100)
Dosage of prednisone per day, Me [25%; 75%], mg	15 [10; 30]
Cumulative dosage of prednisone, Me [25%; 75%], grams	21,9 [7,35; 53,6]
Prednisone intake duration, Me [25%; 75%], months	54 [10; 132]
Anticoagulants use, n (%)	48 (25)

Methods

- **Psychiatric disorders were diagnosed by psychiatrist in accordance with the ICD-10 and DSM-V in semi structured interview**

Psychiatric and psychological scales and methods:

- Hospital Anxiety and Depression Scale for screening (HADS)
- Hamilton Anxiety Rating Scale (HARS)
- Montgomery Asberg Depression Rating Scale (MADRS)
- Neuro-psychological and projective psychological methods for evaluation of cognitive functions

Results

The comparative characteristics of SLE patients with or without APS

Characteristics	SLE, n=143	SLE+APS, n=48	p
Gender, n (%): male/ female	15/128 (10,5/ 89,5)	12/ 36 (25/ 75)	0,014
Mean age, years (M±SD)	33,4±12,2	39,2±12,0	0,004
SLE duration, Me [25%; 75%], months	90 [36; 168]	192 [65; 252]	0,0005
SLEDAI score, Me [25%; 75%]	8,0 [2,0; 15,0]	7,0 [2,0; 16,0]	n/s
SLICC/ACR Damage Index, Me [25%; 75%]	1,0 [0; 2,0]	2,0 [0; 4,0]	0,0009
aPL-positivity, n (%)	43 (30)	48 (100)	<0,001
Cumulative dose of prednisone, Me [25%; 75%], grams	21,3 [7,35; 48,2]	39,9 [7,5; 82,4]	0,046

The patients with APS were older, more often were a man, had aPL-positivity, longer the median of SLE duration, more severe SLICC/ACR Damage Index and higher cumulative dose of prednisone. The groups didn't differ in SLE activity (SLEDAI).

Results

The frequency of cardiovascular disorders and diabetes in SLE patients with or without APS

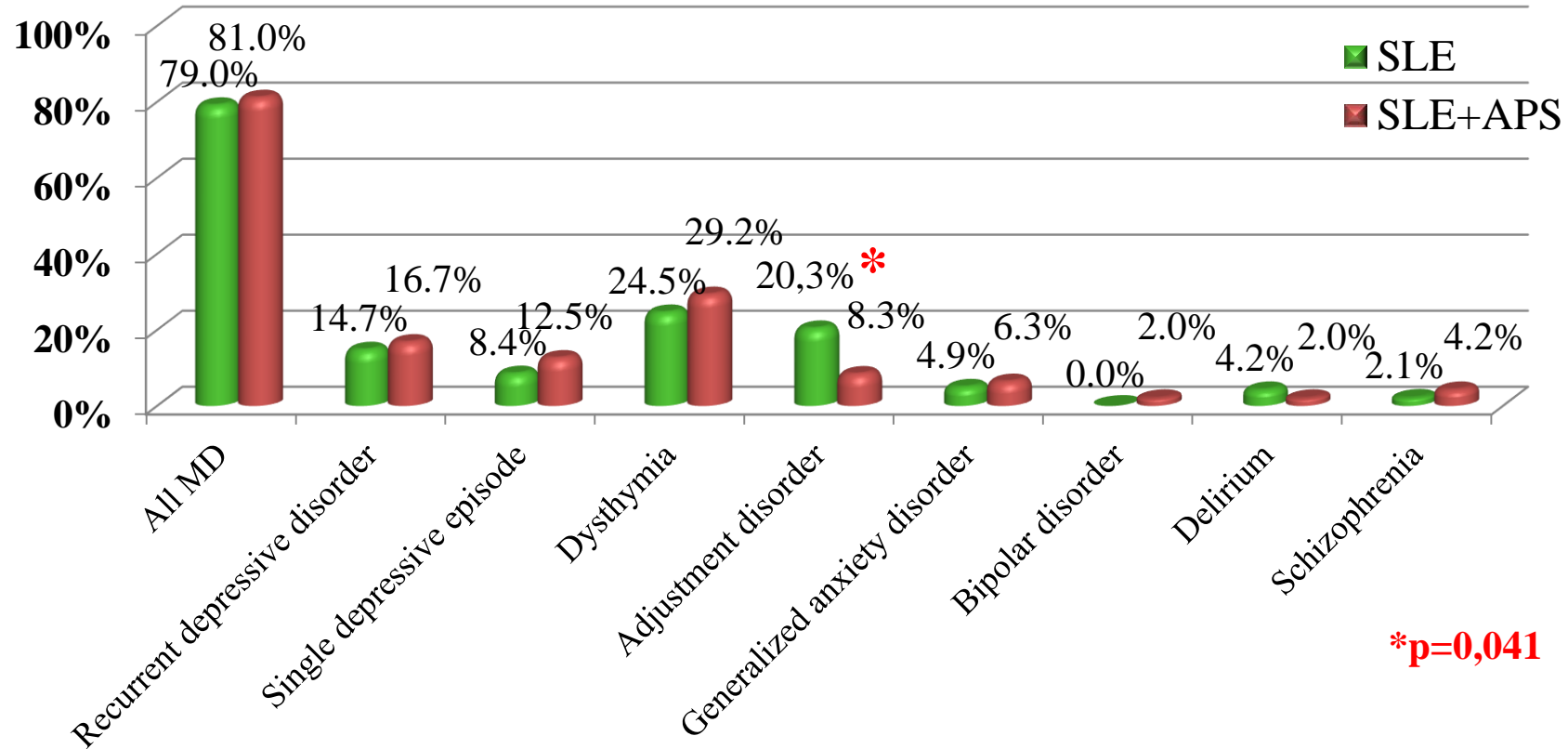
Characteristics	SLE, n=143	SLE+APS, n=48	p
Arterial hypertension, n (%)	56 (39,2)	27 (56,3)	0,039
Atherosclerosis, n (%)	31 (21,7)	24 (50,0)	<0,001
Stroke history, n (%)	7 (4,9)	17 (35,4)	<0,001
Diabetes, n (%)	8 (5,6)	1 (2,1)	n/s

The patients with APS were significantly more likely to have arterial hypertension, atherosclerosis and a history of stroke

Results

The frequency of MD in SLE patients with/ without APS

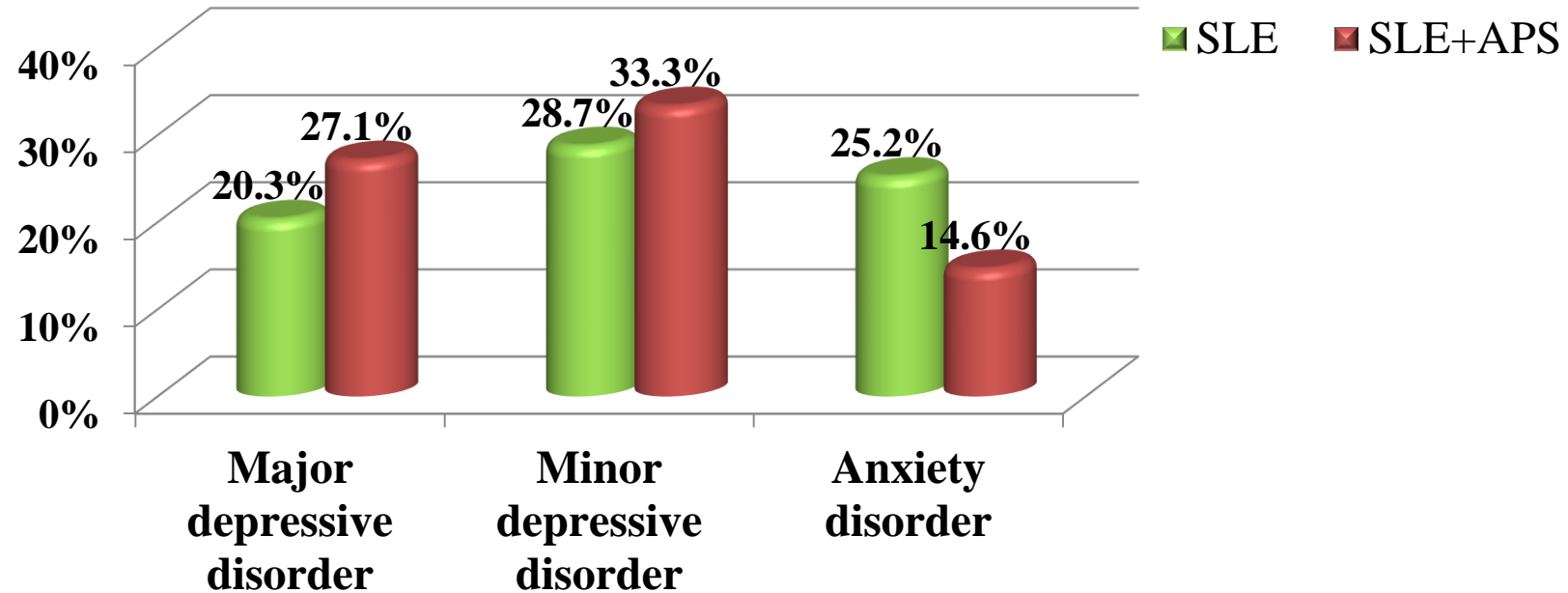
(in accordance with ICD-10)



In accordance with the ICD-10 the frequency of depressive disorders was slightly higher among SLE patients with APS. Anxiety disorders, in particular - adjustment disorders with anxiety symptoms – in patients without APS. The differences between groups were statistically significant only for adjustment disorders. Bipolar disorders and schizophrenia were rare, but in patients with APS - 2 times more often than without it, delirium was more common in patients without APS

Results

**The frequency of anxiety-depressive disorders in SLE patients with/ without APS
(in accordance with DSM-V)**

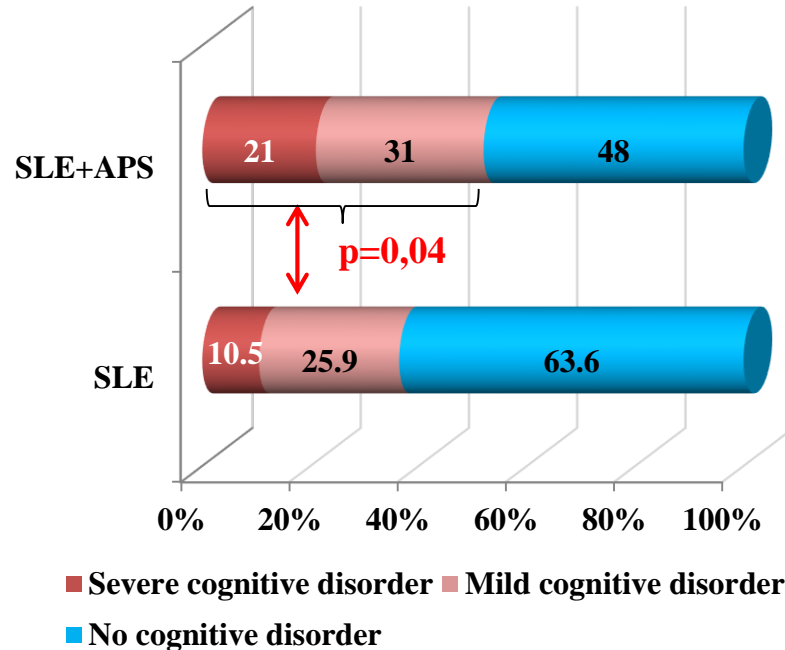


In accordance with the DSM-V classification the frequency of major and minor depressive disorders was slightly higher among SLE patients with APS, anxiety disorders - in patients without APS.

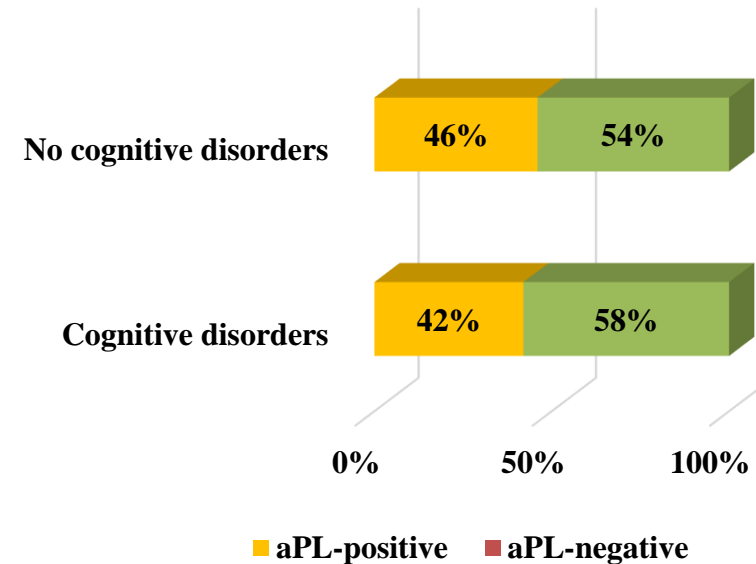
The differences between the groups were not statistically significant

Results

The frequency of cognitive disorders in SLE patients with/ without APS



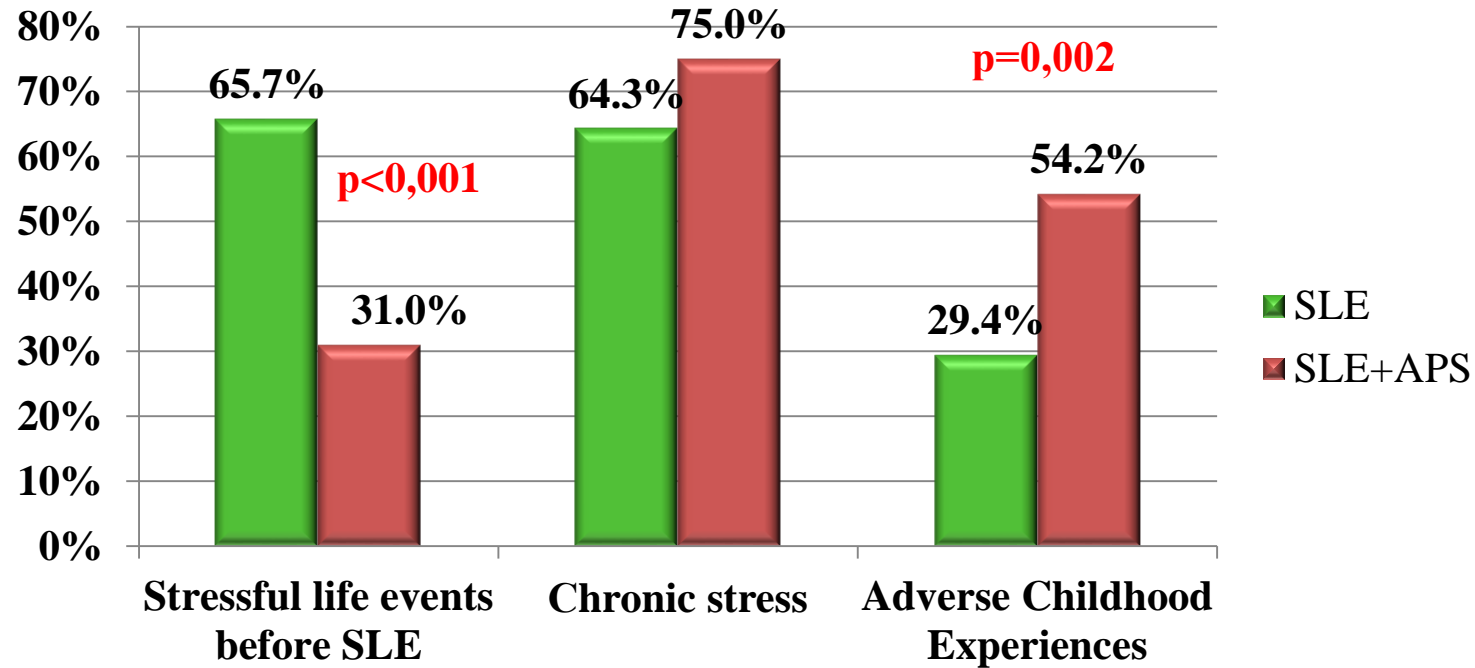
The frequency of aPL-positivity in SLE patients with/ without cognitive disorders



Cognitive disorders were diagnosed in 25 (52%) of SLE patients with APS and 52 (36.4%) of patients without APS, that is statistically significant. **Severe** cognitive disorders were detected in patients with APS 2 times more often (21% vs 10.5%, OR=1.7, p=0.05). There were no differences in the frequency of aPL-positivity in patients with and without cognitive disorders.

Results

The frequency of stressful factors in SLE patients with/ without APS



The SLE-patients with APS were 2 times more likely to have **adverse childhood experiences**, but 2 times significantly less – **stressful life events** before SLE. The frequency of **chronic stress factors** was high in both groups

Conclusion:

- **Depressive and cognitive disorders are typical for SLE patients with secondary APS**
- **Cognitive disorders were diagnosed in APS-patients significantly more often than in SLE patients without APS**
- **Patients with APS were 2 times more likely to have adverse childhood experiences, but 2 times significantly less – stressful life events before SLE**
- **Adverse childhood experiences, chronic stress and cardiovascular diseases – the most likely causes of mood and cognitive disorders in APS patients with SLE**



Thank you very much!

