

DECREASED TESTOSTERONA AND CORTISOL LEVELS IN FIBROMYALGIA AND BURNOUT SYNDROME PATIENTS

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Basis and objective: The Central Susceptibility Syndrome can have different clinical manifestations, some painful such as Fibromyalgia, others in the form of fatigue such as the Burnout Syndrome. We have measured the levels of cortisol and testosterone in the blood, as well as the comorbidity existing with anxiety and depression in both processes.

Materials and methods: A group of 20 patients diagnosed with Fibromyalgia according to criteria of the American College of Rheumatology and a group of 20 patients diagnosed with Burnout Syndrome according to the Maslach Burnout Index were selected. As a control group, another group of 20 healthy persons was selected. They were evaluated according to the State-Trait Anxiety Index and the Beck Depression Index, and the concentration of cortisol and testosterone in the blood was determined.

Results: Significantly low but not deficient values of cortisol and testosterone in the blood were observed in the groups of patients with Fibromyalgia and Burnout Syndrome, with respect to the control group. The results of the anxiety and depression indices showed high values in the groups with Fibromyalgia and Burnout Syndrome with respect to the control group, with the differences being statistically significant.

Graph 1. Result of the STAI questionnaire

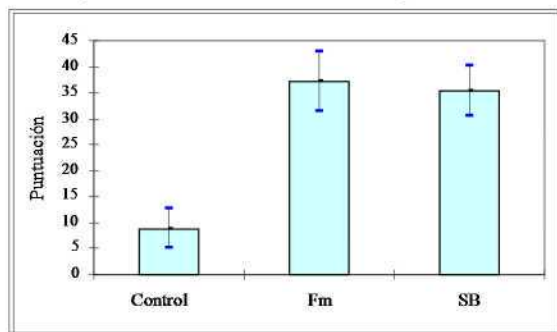


Table I

ESTADÍSTICAS DESCRIPTIVAS					
Variable	Observaciones	Mínimo	Máximo	Meda	Desviación típica
STAI: Fm	20	0,000	28,000	8,850	7,693
STAI: SB	20	19,000	54,000	37,050	11,583
STAI: control	20	14,000	52,000	35,400	9,616
Prueba de Kruskal-Wallis:					
K (Valor observado)	35,819				
K (Valor crítico)	5,991				
GDL	2				
p-valor (bilateral)	< 0,0001				
alfa	0,05				
Diferencias significativas					
	STAI: control	STAI: Fm	STAI: SB		
STAI: control	No	Si	Si		
STAI: Fm	Si	No	No		
STAI: SB	Si	No	No		

Nivel de significación corregido de Bonferroni: 0,0167

Graph 2. Values of cortisol in blood

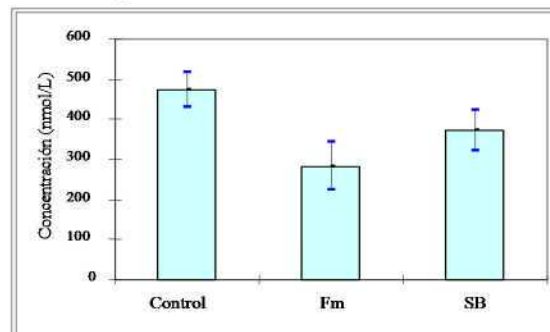


Table II

ESTADÍSTICAS DESCRIPTIVAS					
Variable	Observaciones	Mínimo	Máximo	Meda	Desviación típica
Cortisol en sangre: control	20	239,000	613,000	473,500	88,879
Cortisol en sangre: Fm	20	12,000	411,000	283,100	118,044
Cortisol en sangre: SB	20	186,000	533,000	373,000	100,432
Prueba de Kruskal-Wallis:					
K (Valor observado)	25,421				
K (Valor crítico)	5,991				
GDL	2				
p-valor (bilateral)	< 0,0001				
alfa	0,05				
Diferencias significativas					
	Testosterona en sangre: control	Testosterona en sangre: Fm	Testosterona en sangre: SB		
Cortisol en sangre: control	No	Si	Si		
Cortisol en sangre: Fm	Si	No	No		
Cortisol en sangre: SB	Si	No	No		

Nivel de significación corregido de Bonferroni: 0,0167

Graph 3. Values of testosterone in blood

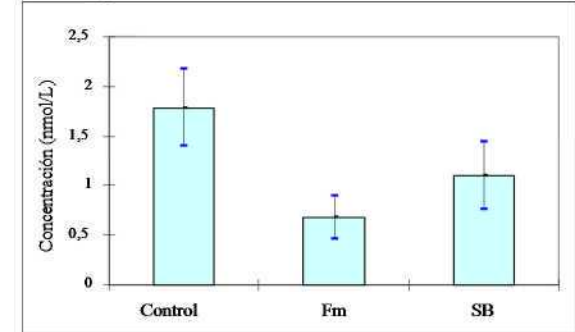


Table III

ESTADÍSTICAS DESCRIPTIVAS					
Variable	Observaciones	Mínimo	Máximo	Meda	Desviación típica
Testosterona en sangre: control	20	0,130	3,110	1,785	0,767
Testosterona en sangre: Fm	20	0,070	1,700	0,680	0,437
Testosterona en sangre: SB	20	0,350	2,330	1,102	0,672
Prueba de Kruskal-Wallis:					
K (Valor observado)	19,236				
K (Valor crítico)	5,991				
GDL	2				
p-valor (bilateral)	< 0,0001				
alfa	0,05				
Diferencias significativas					
	STAI: control	STAI: Fm	STAI: SB		
Testosterona en sangre: control	No	Si	Si		
Testosterona en sangre: Fm	Si	No	No		
Testosterona en sangre: SB	Si	No	No		

Nivel de significación corregido de Bonferroni: 0,0167

Conclusions:

Our results confirm the hypothesis that stress is an influencing factor in the development of Fibromyalgia and Burnout Syndrome. Anxiety is a co-morbidity factor in the clinical picture characterized by pain and the one characterized by fatigue, and biochemical repercussions in both processes are equivalent. These data suggest that Fibromyalgia and Burnout Syndrome share a similar psychophysiological process but develop different clinical manifestations according to biopsychosocial factors.

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