

FUNCTIONAL AND CLINICAL EVALUATION OF THE PELVIC FLOOR MUSCLE IN FEMALE ULTRAMARATHON RUNNERS.

Hypothesis / aims of study In the present days, through the world, especially in Europe and United States, there are around 1000 Ultramarathon, with distances varying and performed in all types of ground. Ultramarathon is any competition over the mark of a marathon (42,195 km). Studies show predominance of urinary incontinence along the performance in elite athletes varies from 0% to 80%. The higher prevalence take place in sports that involve activities of high impact as: gymnastics, athletics and some games with ball. A significant portion of these athletes report loss of urine, it is very embarrassing affecting concentration as well performance. This study was developed to find out eating disorders, loss of urine and the pressure of pelvic floor muscle in female ultramarathon runners.

Study design, materials and methods

The analysis of dysfunctions of the pelvic floor was done by ICIQ-SF. To quantify the eating disorders, the athletes answered the Eating Attitudes Test (EAT-26). All women underwent the pelvic floor prolapse quantification system examination (POP-Q) in dorsal lithotomy position, during maximal Valsalva and the pressure of pelvic floor muscle was assessed by a portable perineometer (Peritron 9300®).

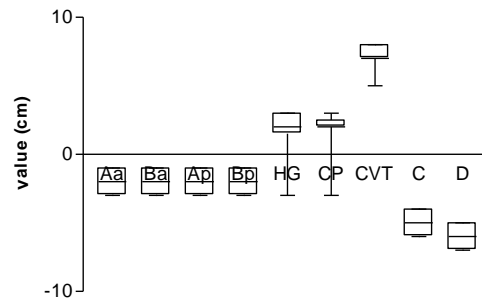
Results

7 female ultramarathon runners were evaluated. Table 1 shows the demographic characteristics. The average ages of ultramarathoners were above 40 years and they were all in postmenopause. No one athlete presented urinary incontinence as showed by ICIQ-SF. The average of the pressure of contraction was 42.9 cmH₂O. Figure 1 shows the distribution of POP-Q landmark points in the anterior, central, and posterior compartment.

Table 1: Demographics parameters

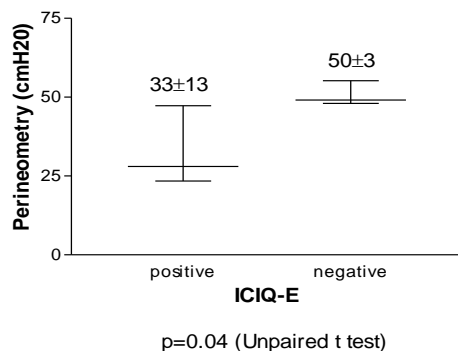
	Mean ± SD	Min-max
Age (years)	50.1±7.4	41-63
Parity	1±0.8	0-2
BMI (Kg/cm ²)	22±2	20-26
EAT-26	21±6	10-29
ICIQ-SF	0	0
Pressure (cmH ₂ O)	42.9±12	23.4-42.9

Figure 1: Landmarks point of POP-Q.



Comparing the mean figures of perineometer among athletes with or without eating disorders (EAT-26>21) difference was statically significant (Figure 2).

Figure 2. Comparison among the mean figures, of perineometer in athletes with or without eating disorders.



Interpretation of results

ICIQ-SF bigger or equal eight is considered by some authors the better reference for differentiate patients presenting urinary incontinence and those not. In the present study, neither athlete had showed by ICIQ-SF urinary incontinence. In others study the urinary incontinence was found in 25% of female athletes, including female long-distance runners². However, comparing athletes with eating disorders with those without eating disorders, statistically difference was found in perineometry, suggesting that the female ultramarathon runners with eating disorders have less strength in pelvic floor muscles. This contribute to the theory of athletes with eating disorders are subject of having pelvic floor dysfunctions.

Concluding message

The present study suggest that female ultramarathon runners with a tendency to eating disorder should complete the functional evaluation of the pelvic floor for the introduction of preventive measures for pelvic floor dysfunctions.

References

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2. Bo K, Borgen JS. Prevalence of stress and urge urinary incontinence in elite athletes and controls. *Med Sci Sports Exerc.* 2001;33:797-802

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Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	COMITÊ DE ÉTICA EM PESQUISA da UNIFESP/EPM
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes