

CORRELATION BETWEEN PELVIC FLOOR MUSCLE STRENGTH AND VAGINAL TROPHISM IN CONTINENT WOMEN

Hypothesis / aims of study

During female aging there is a broad change in hormonal milieu and decreasing levels of estrogen may be related to the weakness of pelvic floor muscles (PFM). Different authors have shown that progressive decline in estrogen during menopause may cause vaginal mucosa atrophy. However, this does not set the correlation between PFM strength and vaginal hormonal "status" during the aging process of continent women. The aim of this study was to correlate cytology and trophism of vagina and objective assessment of PFM strength.

Study design, materials and methods

Hundred forty healthy continents volunteers were prospectively distributed into 4 groups according to age: G1 (n = 34) 30-40 years old; G2 (n = 38) 41-50 years old; G3 (n = 35) 51-60 years old and G4 (n = 33) over 60 years. The following parameters were evaluated: clinical questionnaire, vaginal trophism observation in gynecological examination and Pap smear, and PFM strength assessment using vaginal perineometer.

Results

There was no statistical difference among different groups in weekly physical activity ($p= 0.056$) and number of micturitions in 24 hours ($p= 0.450$). Average age was significantly higher in women with vaginal atrophy compared to women with trophic genitalia ($p < 0.001$). Vaginal trophism evaluated by gynecological examination demonstrated a significantly greater proportion of atrophy in G4 (46.9%) compared to G1 (0%), G2(0%) and G3(11%) ($p < 0,001$), showing greater vaginal atrophy in age groups over 60 years. There was an excellent concordance (Kappa test) of vaginal trophism assessed by gynecological examination and vaginal cytology (Table 1). There was no statistical difference in PFM strength among different groups ($p= 0.60$). There was no correlation between vaginal trophism and PFM strength ($p= 0.62$).

Interpretation of results

Although of higher incidence of vaginal atrophy in older women, it seems this fact did not affect PFM strength. We also observed that gynecologic examination had an excellent accuracy in the vaginal atrophy diagnosis compared to objective evaluation (vaginal cytology).

Concluding message

Vaginal atrophy did not impact on PFM strength in different age groups..

Table 1: Concordance level of vaginal trophism assessed by gynecological examination and cytology.

Methodology of assessment	Vaginal Trophism
Examination vs. Cytology	0.888

CONCORDANCE LEVEL (Kappa Test): 0-0.20: weak; 0.21-0.40: regular; 0.41-0.60: moderate; 0.61-0.80: good; >0.81: excellent

Disclosures

Funding: None **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Ethical Committee of Universidade Sagrado Coracao **Helsinki:** Yes **Informed Consent:** Yes