
INTRODUCTION
Problems: declining functional status, quality of life, independence and increased risk of accidents, among which is to highlight the increased risk of falls. In Portugal, the falls are about 70% of accidents in the elderly. Public concern both in terms of morbidity and mortality, and in terms of costs to health and social services. As such, it becomes extremely important to know the possible causes and risk factors of the occurrence of falls.

With aging occurs a reduction in fast contraction fibers compared to slow ones leading to changes in the rate of muscle activation which may have an important role in the process of falling. The fall results, mainly the inability of the elderly to adapt their gait pattern to an unexpected situation in dominant lower limb and in which phases of gait they were more active and see if there was a relationship between the levels of muscle activation and score in POMA (Performance-Oriented Mobility Assessment).

OBJECTIVES
To find differences in electromyography parameters of rectus anterior, biceps femoris, glutus medius, soleus, gastrocnemius medialis and tibialis anterior muscles between group with and without history of falls during gait in dominator lower limb and in which phases of gait they were more active and see if there was a relationship between the levels of muscle activation and score in POMA (Performance-Oriented Mobility Assessment).

MATERIALS AND METHODS
- WHF group: 15 individuals with a history of falls;
- WOHF group: 15 individuals with no history of falls.

SAMPLE
- Non-probability, convenience, consisted of 30 elderly volunteers.
- WHF Group: 15 individuals with a history of falls;
- WOHF Group: 15 individuals with no history of falls.

RESULTS
Correlation between POMA and % RMS related to MVC of muscles:

<table>
<thead>
<tr>
<th>Muscles</th>
<th>WHF</th>
<th>WOHF</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>% RMS related to MVC</td>
<td></td>
<td></td>
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<tr>
<td>Biceps Femoris</td>
<td>29.53±13.78</td>
<td>23.57±14.33</td>
<td>0.33</td>
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<tr>
<td>Rectus Anterior</td>
<td>19.75±14.47</td>
<td>21.49±13.76</td>
<td>0.49</td>
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<tr>
<td>Soleus</td>
<td>44.12±11.26</td>
<td>46.75±14.49</td>
<td>0.49</td>
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<tr>
<td>Gastrocnemius Medialis</td>
<td>49.72±11.07</td>
<td>49.92±11.07</td>
<td>0.49</td>
</tr>
<tr>
<td>Gluteus Medius</td>
<td>30.65±13.23</td>
<td>37.13±17.10</td>
<td>0.39</td>
</tr>
<tr>
<td>Tibialis Anterior</td>
<td>38.02±12.74</td>
<td>38.10±14.92</td>
<td>0.25</td>
</tr>
<tr>
<td>POMA score</td>
<td>26.87±11.60</td>
<td>24.47±11.60</td>
<td>0.001</td>
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</tbody>
</table>

CONCLUSION
- Great variability of the results.
- WHF Group presents % activation relative to CVM> WOHF group (w. s.)
- WHF scores in Group presents POMA < WOHF group (w. s.)
- Correlations between POMA and% muscle activation on the CVM (w. s.)
- POMA is more effective and sensitive in assessing the Risk of Falling that EMG

BIBLIOGRAPHY