INTEGRATED GERIATRIC AND PRIMARY CARE MANAGEMENT OF FRAIL OLDER ADULTS IN THE COMMUNITY

LM Pérez (1), P Burbano (1), M Hernandez (1), N Gual (1,2), G Liesa (1), E Martin (3), L Tobella (3), MB Enfedaque (3), M Inzitari (1,2)

1 Parc Sanitari Pere Virgili
2Universitat Autònoma de Barcelona
3 Institut Català de la Salut – Àmbit d’Atenció Primària de Barcelona
CONFLICT OF INTEREST DISCLOSURE

I have no potential conflict of interest to report
Definition

- Multidimensional clinical entity
- Dynamic state of increasing vulnerability
- Higher risk of falls, disability, institutionalization and mortality
- Determined by:
  - A decline in physiological reserve and homeostasis
  - A loss of global functional capacity
  - A loss of redundancy of systems and pathways
  - A loss of ability to respond or compensate different types of stressors
Background (II)

Does Frailty, could be reversible?

Community agents

Geriatrics

Primary Care

Introduction
Objective

- To assess the impact on physical performance and frailty, of an integrated program between geriatrics and primary care, based on frailty screening, comprehensive geriatric assessment and development of tailored intervention.
Methods (I)

Geriatric Team

- Geriatrician
- Physiotherapist
- Patients
Methods (II)

Primary Care Team

- >80 years old with higher risk
  - Slowness
  - Memory complaints
  - Involuntary weight loss
  - Social risk

Geriatric Team

- Multidisciplinary assessment
  - Comprehensive Geriatric Assessment
  - Geriatrician + PT
  - Specific frailty tools (SPPB, CFS)

Tailored intervention plan

3 months follow-up

Continuity with existing community resources

NICE, FRANCE - SEPTEMBER 20/22, 2017
Methods (III)

Tailored intervention plan

Pharmacological interventions
- Review prescriptions
- Des-prescription
- Treatment conciliation

Non-pharmacological interventions
- Health education
- Patient empowerment
- Referral to Dementia Clinics

Physical activity program
- 10 sessions
  - Strength
  - Endurance
  - Flexibility
  - Socialization

3 months follow-up

Continuity with existing community resources

Primary Care Team

Geriatric Team
Results (I)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N=106 included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>81.78 ± 5.07</td>
</tr>
<tr>
<td>Woman</td>
<td>71.7% (76)</td>
</tr>
<tr>
<td>Charlson comorbidity index</td>
<td>1.5 (1-2)</td>
</tr>
<tr>
<td>Cognitive impairment</td>
<td>24.5% (25)</td>
</tr>
<tr>
<td>CFS vulnerable or frail</td>
<td>61.3% (65)</td>
</tr>
<tr>
<td>Barthel Index - ADL</td>
<td>95 (85-100)</td>
</tr>
<tr>
<td>Lawton Index - IADL</td>
<td>6 (3-8)</td>
</tr>
<tr>
<td>Lives alone</td>
<td>40.57% (43)</td>
</tr>
<tr>
<td>Self-perceived Health status - Low</td>
<td>28.3% (30)</td>
</tr>
<tr>
<td>Polypharmacy (&gt;5 drugs)</td>
<td>84.91% (90)</td>
</tr>
<tr>
<td>Physical activity</td>
<td>25.47% (27)</td>
</tr>
</tbody>
</table>

Clinical Frailty Scale*

1. Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.
2. Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.
3. Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.
4. Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being “slowed up”, and/or being tired during the day.
5. Mildly Frail – Those people often have more evident slowing, and need help in higher order IADLs (finances, transportation, heavy housework, medications). Typically mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.
6. Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standing) with dressing.
7. Severely Frail – Completely dependent for personal care from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).
8. Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.
9. Terminally Ill – Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common symptoms in mild dementia include forgetting the details of a recent event, still remembering the event itself, repeating the same question/story and social withdrawal.

In moderate dementia, recent memory is very impaired, even though they seemingly can remember their past life well. They can do personal care with prompting. In severe dementia, they cannot do personal care without help.

   2. K. Knocken et al. “A global index used to measure of frailty in elderly people” CMAJ 2003;169(9):495.

Rockwood et al, CMAJ 2005
## Results (II)

### Frailty Characteristics

<table>
<thead>
<tr>
<th>Frailty Characteristics</th>
<th>Total N=106</th>
<th>At baseline (N=51)</th>
<th>3 months Follow-up (N=51)</th>
<th>Improvement</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Function (SSPPB) (0-12)</td>
<td>6.65 ± 2.77</td>
<td>6.96 ± 2.23</td>
<td>8.61 ± 2.14</td>
<td>1.65 ± 1.79</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SPPB - Gait speed (m/seg)</td>
<td>0.65 ± 0.19</td>
<td>0.65 ± 0.25</td>
<td>0.76 ± 0.15</td>
<td>0.11 ± 0.12</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SPPB - Chair stand test (seg)</td>
<td>15.97 ± 10.52</td>
<td>16.71 ± 9.70</td>
<td>14.75 ± 6.48</td>
<td>1.95 ± 1.22</td>
<td>0.1157</td>
</tr>
<tr>
<td>SPPB- Balance impairment</td>
<td>53.77% (57)</td>
<td>54.90% (28)</td>
<td>23.52% (12)</td>
<td>16 improve</td>
<td>0.008</td>
</tr>
<tr>
<td>Number of drugs</td>
<td>8.12 ± 3.66</td>
<td>8.12 ± 3.66</td>
<td>8.07 ± 3.5</td>
<td>0.05 ± 0.05</td>
<td>0.2721</td>
</tr>
<tr>
<td>Antipsychotic withdraw</td>
<td></td>
<td></td>
<td></td>
<td>29.41% (15)</td>
<td></td>
</tr>
</tbody>
</table>

### Intervention

<table>
<thead>
<tr>
<th>Intervention</th>
<th>N=106</th>
<th>Physical activity</th>
<th>Health education</th>
<th>Referral to Dementia Unit</th>
<th>Pharmacological changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical activity</td>
<td>93.4% (99)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health education</td>
<td>97.17% (103)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referral to Dementia Unit</td>
<td>19.8% (20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacological changes</td>
<td>64.54% (61.54)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Adherence (>7.5 sessions) 80.95%**
Discussion

Main limitations

- Lack of continuity of “therapeutic exercise”
- Lack of psychological support and formal cognitive intervention
- Lack of control group

Short term plans

- Continuity through co-designed exercise program in the community
- Assessment of long-term outcomes (adherence to physical activity, hospitalizations, number of drugs)
- Evaluation of the implementation process (end-users, professionals)
Conclusions

- A multidisciplinary and comprehensive geriatric intervention in frail older community-dwellers could improved physical function.

- Specific tailored interventions could reversed frailty at 3 months.
Thanks!

Lperez@perevirgili.cat