Oral Communication
OC-466

A Multidomain Approach to Fall Prevention in Elderly Individuals: Risk Assessment, Rehabilitation, and Physical Activity

Topic: Specific Target Groups (Children, Women, Elderly, Athletes, Musicians, Refugees, Ethnic Groups, Workers, and Others)

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BACKGROUND

Fall prevention in elderly individuals is essential to reduce fractures, mortality risk, loss of autonomy, and institutionalization. Identifying at-risk patients, understanding causes, planning rehabilitation, and promoting physical activity are key.

As part of the AGE-it project, our goal is to develop a fall prevention model by:

- Identifying at-risk elderly individuals and mapping their needs;
- Exploring innovative solutions;
- Implementing prevention interventions;
- Evaluating clinical effectiveness;
- Developing economic-health intervention models.

Our prevention model emphasizes:

- Awareness through a multi-domain approach;
- Identification of risk factors and frailty indicators (e.g., nutrition, physical functionality);
- Effective, realistic interventions;
- Integration of rehabilitation, Adapted Physical Activity (APA), and proper nutrition.

Physical exercise plays a crucial role. Regular weight-bearing and muscle-strengthening exercises improve performance, bone mass, muscle strength, and balance, reducing fall risk.

We focus on sarcopenic elderly patients. A review highlights the benefits of aerobic training, muscle strengthening, balance exercises, flexibility, and resistance. We aim to design personalized training plans for this group and define their needs using the person blueprint tool.

Evaluation tools include:

- Isokinetic test (assesses muscle strength, work, and power);
- Muscle ultrasound (measures muscle trophism);
- Strength platform (analyzes exercise-related forces);
- Dynamometer (measures force intensity);
- Virtual reality rehabilitation (enhances rehabilitation);
- Posturography and gait analysis.

Our clinical studies assess:

- Strength and endurance training in at-risk patients using isokinetic methods;
- The impact of improved strength and trophism on fall risk.

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Other factors, such as motivation and environmental conditions, influence fall risk. Thus, we incorporate motivational interviews and fall risk assessments to identify obstacles and propose strategies for overcoming them.

CONCLUSION

A comprehensive fall prevention model combining physical exercise, rehabilitation, and motivational strategies can reduce fall risk in elderly individuals. Personalized interventions and innovative evaluation tools enhance patient outcomes, improving strength, balance, and overall well-being.

Statement of Disclosures

None