

Annual Congress on
**Rehabilitation
and Future Pharma**

November 17, 2022 | Webinar

Scientific Tracks & Abstracts



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Title: **Dynamometry – a tool to assess functional capacity – precedes rehabilitation in elderly**

Maura Gabriela Felea | Grigore T. Popa University | Romania

Title: **Fear of falling and associated factors among older people living in Bahir Dar City, Amhara, Ethiopia- A cross-sectional study**

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Saving a severely crushed hand by implantation into the abdomen: A case report

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Overview: Crush hand injuries are rare however they represent devastating and challenging events. They are usually caused by a compressive force, resulting from a high-energy mechanism such as a motor vehicle or industrial accidents, leading to damage of multiple tissue types, including skin, soft tissues, blood vessels, nerves and bones. The objective of this case study is to highlight the management plan to save a severely crushed hand with a high risk of amputation.

Case report: It is a case study of a 45-year male patient that was referred to our tertiary trauma centre with a severe crushing injury of his left hand and distal forearm following RTA. After proper resuscitation and investigations, the patient was operated; washout, debridement of all necrotic tissues, and amputation of the completely devitalized index finger and thumb was performed. Fractured bones were stabilized, and then coverage of the big raw area with the underlying bones exposed was challenging, and we could manage by implanting the patient hand into his abdomen that was kept for 4 weeks before separation.

Results: The results were marvelous and the taken flap was completely viable; the hand was saved with a fairly good functional outcome, and the patient is being followed for 24 months up till now.

Conclusion: Implantation of a crushed hand into the abdomen is not a so popular procedure for reconstruction; however, it was the best option to save a severely crushed hand as in our case study. The primary aim of management is to save life, limb and then restore limb function in that order.



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3. RS Ahmad and PR Wan Heng. Crush injuries of the hand Part 1: History, Mechanism and Pathomechanics. 2018.
4. RS Ahmad and PR Wan Heng. Crush injuries of the hand Part 2: Clinical assessment, Management and Outcomes. 2018.
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Biography

Khalil A is the chief of general and vascular surgery department, AMC Group, Egypt. He is an international author, and he has many publications in reputed journals. Dr Khalil has passion in management of challenging and complicated cases.

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Physical and psycho-emotional improvement in post-CABG patients undergoing cardiac rehabilitation

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Grigore T. Popa University of Medicine and Pharmacy, Romania

Statement of the problem: Comprehensive cardiac rehabilitation is essential to both physical and psychological recovery after Coronary Artery By-pass Grafting (CABG). Cardiac ischemia can be assessed objectively peri- and postoperatively by measuring the level of Heart-type Fatty Acid-Binding Protein (H-FABP). Regarding psycho-emotional status, CABG surgery is known to trigger or amplify depression and anxiety. The purpose of our study was 1) to assess H-FABP protein levels longitudinally in post-CABG patients, first as an indicator of acute ischemic status, and then for the risk of re-infarction, and 2) to survey the patients' self-reported depression and anxiety over the course of their cardiac rehabilitation. The study was published recently, and on this occasion the authors aim to encourage discussion of selected results and further research collaboration opportunities.

Methodology & Theoretical Orientation: We present selected results of a unicentric, prospective study on 120 consecutive post-CABG patients completing 6-month cardiac rehabilitation through physical exercise, Mediterranean diet, and adjuvant antioxidant therapy. H-FABP levels were measured after surgery and at 6 months, when patients also filled out Hamilton questionnaires for depression and anxiety.

Findings: Mean H-FABP levels decreased from 60.56 to 4.81, and physical ability went from 1–2 to 4–5 METS. Depression scores improved substantially from means of 15.88 to 6.96, and median values halved. Similarly, mean anxiety scores went from 25.13 to 15.68 and median values dropped by 9%. No statistically significant associations were found between H-FABP and psycho-emotional status.

Conclusion & Significance: Patients were compliant and improved significantly in all studied aspects, which demonstrate the importance of cardiac rehabilitation. In countries like Romania, however, such programs are subject to systemic and financial limitations. Further research directions include the study of H-FABP levels in CABG patients exposed to the SARS-CoV-2 virus and who develop coronavirus disease (COVID-19) before and/or after the surgical intervention.

Recent publications

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2. Razan Al Namat, Dina Al Namat, Manuela Ciocoiu, Marius Valeriu Hinganu, Laurențiu Șorodoc, Victorița Șorodoc, Liliana Georgeta Foia, Laura Florea, Cristiana Vlad, Ana Tănasă, Mihai Constantin, Daniel Cioloca, Minerva Codruța Bădescu, Amin Bazanyi, Maura Felea. H-FABP Levels and Psycho-Emotional Improvement of CABG Patients during Cardiac Rehabilitation. *J. Cardiovasc. Dev. Dis.* 2022, 9(8), 242.
3. R. Al Namat, M. Constantin, I. Miftode, et al. Biochemical Markers in Patients with Readmission for Congestive Heart Failure. *REV. CHIM. (Bucharest)*, 2018, 69 (7): 1687-1691.

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Biography

Al Namat Razan, (PhD Thesis: Researches on the effects of antioxidant medication and cardiovascular recovery in patients with coronary artery bypass grafting, transluminal percutaneous angioplasty or acute myocardial infarction) is an Assistant Professor at the “Grigore T. Popa” University of Medicine and Pharmacy, Romania

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Dynamometry – a tool to assess functional capacity – precedes rehabilitation in elderly

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²Preventis Medical Center, Romania

Statement of the Problem: Sarcopenia is the key trigger factor for health decline, and the consequence of various comorbidities that will impact functional capacity, cardiorespiratory fitness, morbidity and mortality in elderly. We searched the correlation of sarcopenia and cardiovascular performance.

Methodology and Theoretical Orientation: From 2020, we performed a health screening, in urban and rural community-dwelling older adult groups. They benefited from home care services. Clinical evaluation was crowned by lab tests, and adapted tests to assess functional capacity.

Findings: While men were outnumbered in this group of people, women presented a higher functional longevity than men, although there were a few in a greater physical disability with bedridden for more than 6 months. The physical performance tests results were correlated to the reduction in mobility, to cardiovascular diseases and cardiovascular deconditioning. As well as the hand grip test, with results below the cut-off value, all data were compared between gender, and urban and rural areas. At hand grip values below the threshold, people climbed less than 10 steps or none. Regarding their health status, they were asked to perform other tests.

Conclusion & Significance: According to the sarcopenia guideline, the cut-off values of the hand grip test identify the risk of sarcopenia. The SARC-F questionnaire clinically supports the confirmation of the diagnosis, but physical performance tests play a key role in classifying the severity of sarcopenia. The hand-grip strength test reveals lower values with ageing, there is still a great reserve capacity for recovery compared to immobilization effects in young or adults. The target of rehabilitation would be to evaluate and diagnose, to regain independence for daily activities and self-esteem, and to reduce the family burden during the years to come. A comprehensive management of sarcopenia, including rehabilitation, is the key element to surpass this border called ageing.

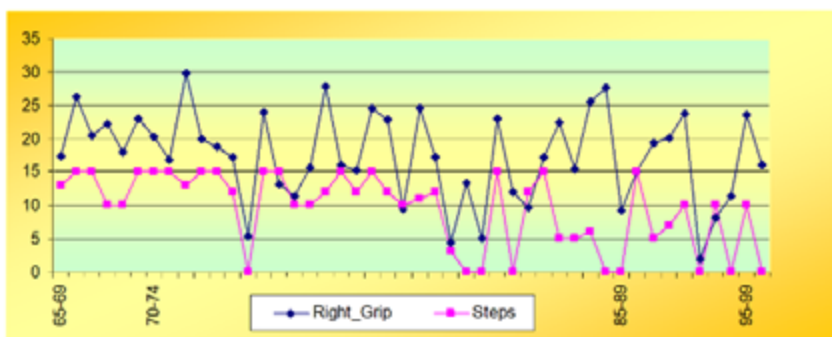


Figure 1. Dynamometry (Right Hand) & Step Test (Chester Step Test adapted for elderly assessment)

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Recent publications

1. Al Namat R, FELEA M, Bazyani A, et al (2020) Psychological evaluation by using the Hamilton depression and anxiety rating scales in coronary artery bypass grafting patients undergoing cardiovascular rehabilitation treatment. Romanian Journal of Cardiology.
2. Bazyani A, Al Namat R, FELEA MG, et al (2019) QRISK2 Score in CABG Patients Correlated with Risk Factors. REV.CHIM. (Bucharest) 70 (5): 1676-1680.
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Biography

Maura Gabriela Felea has expertise in clinical evaluation and passion in improving the health and wellbeing of humans. The first approach was towards the medical field of Geriatrics and Gerontology. Thus, she began to build her experience that was further continued by the work in the "Grigore T. Popa" University of Medicine and Pharmacy of Iasi, Romania, she started a new pathway, in the vast domain of Sports Medicine, in order to enrich the management in evaluation, diagnosis and Rehabilitation.

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Fear of falling and associated factors among older people living in Bahir Dar City, Amhara, Ethiopia- A cross-sectional study

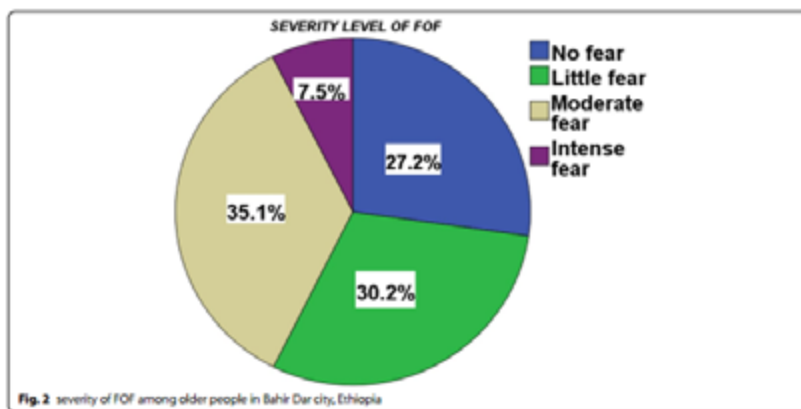
Gebremeskel Birhanie

Bahir Dar University, Ethiopia

Statement of the Problem: Ageing is a dynamic, progressive and physiological process associated with functional, structural, biochemical and psychological changes. Fear of falling is one of a consequence to fall. It is a major health problem among older people living in the communities who have and have not a history of falling. Researchers have reported that old age, gender, poor vision, frailty, previous history of falls, lower levels of economic resources, poor health, decreased physical function or mobility, the presence of environmental hazards, decreased social contacts, and living alone, depression, anxiety are associated with fear of falling. If it is not treated early, it will lead to loss of confidence, reducing both physical and social activities/interaction, depression, loss of mobility and independence, risk of future falls and associated mortality, increased physical weakness, and the risk of nursing home admission. These consequences can have a negative impact on older people's quality of life and economic burden on their families/ or caregivers. However, the impact of fear of falling has not been previously studied in Ethiopia. The purpose of this study is to assess the prevalence and associated factors of fear of falling among older people living in the city of Bahir Dar, Ethiopia.

Findings: The prevalence of fear of falling among the older people was. Fear of falling was significantly associated with advanced age, female, lower education level, anxiety, confirmed medical conditions and walking aids used.

Conclusions: A moderate prevalence of fear of falling was observed. The major associated factors were advanced age, being female, lower educational level, anxiety, confirmed medical conditions and walking aids used. Recommendations are the need to plan and design appropriate fall and fear of falling preventive strategies, guidelines or policies for older people who have fear of falling.



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Recent publications

1. Birhanie, G., Melese, H., Solomon, G. et al. Fear of falling and associated factors among older people living in Bahir Dar City, Amhara, Ethiopia- a cross-sectional study. *BMC Geriatr* 21, 586 (2021).
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3. Aregu MB, Soboksa NE, Kanno GG. High Strength Wastewater Reclamation Capacity of Vetiver Grass in Tropics: The Case of Ethiopia. *Environ Health Insights.* 2021 Nov 23;15:11786302211060162.

Biography

Gebremeskel Birhanie is a lecturer of Physiotherapy at School of Medicine College of Health Sciences, and Tibebe Giyon Specialized Hospital, Bahir Dar University, Ethiopia

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Effects of the coronavirus in swallowing disorder

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Dysphagia disorder affects a large number of people and has a large impact on families and caregivers. The measures for providing food and liquids, due to the quality of life of people with dysphagia, swallowing, swallowing treatment, oral care, and tracheostomy care should be placed in the patient's care program. We conducted a search in PMC, Science Direct, and PubMed databases. The present information is available by reviewing the articles from 2020 to 2022 by searching the resources. In December 2019, cases of pneumonia, due to the β -coronavirus, occurred in China, Wuhan, known as Coronavirus on January 12, 2020, by the World Health Organization. Severe acute respiratory syndrome coronavirus 2 has affected over 24 million people globally, with over 327 643 cases reported in the UK. Patients with COVID-19 may have multi-organ system pathology, and as a result, often require prolonged periods of rehabilitation. Dysphagia is associated with compromised patient outcomes, including aspiration pneumonia, malnutrition, increased length of admission, and higher mortality. Face-to-face swallow assessment included oro-motor examination to explore motor function (strength, speed, and range of movement) of intra-oral musculature, including cranial nerve examination. Voice quality was also assessed. The International Dysphagia Diet Standardisation Initiative was used to describe the level of food or fluid used during the assessment of swallow. Observation of the patient's swallowing, perceptual analysis of any overt clinical signs of dysphagia, and use of laryngeal palpation was optional for therapists involved in care. The role of swallow rehabilitation in patients with COVID-19 is critical in these patients presenting with dysphagia in acute care hospitals. In this commentary, we describe the risk and complications of dysphagia in patients with COVID-19 and the crucial role of intensive swallow rehabilitation to manage dysphagia associated with this disease, including therapeutic respiratory weaning for those with a tracheostomy.

Recent publications

1. Fatemeh Fekar Gharamaleki 1, Boshra Bahrami 2, Jafar Masumi 3Autism screening tests: A narrative review 2021 Aug 5;11(1):2308.
2. Fekar Gharamaleki F, Zarei S, Mehri A. The Speech Therapy Methods for Global Aphasia: A Narrative Review. J Res Rehabil Sci 2020; 16: 170-7.
3. Bahrami B, Fekar-Gharamaleki F. The Pragmatic Assessments in Children: A Narrative Review. J Res Rehabil Sci 2021; 17: 1-8

Biography

Fatemeh Fekar Gharamaleki is a PhD student of speech therapy in University of Social Welfare and Rehabilitation Sciences, she works in Legal Medicine Research Center, Department of Speech Therapy, Legal Medicine Organization, Tehran, Iran.

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Muscular dynamic reprogramming in the treatment of muscular skeletal diseases

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The rehabilitation by muscular dynamics (RDM), inserted in postures and microflexions (prostrate, sitting, and standing), inserted in articulars points, called "body codes" identified in the postural examination. This process facilitate the central nervous system to decode the new movements, reorganizing the nervous tensions and compressions by the moviments themselves, stabilizing the loss of motor capacity, sensitive, control engine (PINTO, 2012).

The RDM was created by the physiotherapist, Dr. Francisco Miguel Pinto in the 90's, researching a type of treatment that supported not only the spine, but also hypothesis of excess joints and muscles, easing pain, and postural changes that stimulate the neurological system, rising of motor control and self- recognition of body limits, as well as overcoming them through the proprioceptive system (PINTO, 2010, 2012).

The RDM work on diverse age group in a progressive way, continuous and evolutionary form for the corporal self-control (the patient is in the control). One of the characteristics that differentiate the RDM method, from others methods, is to teach with a progressive therapeutic pedagogy, the patient can be acquainted with yourself and make their changes with micro resistives, using EP - Proprioceptive elements, made in special polymers with anatomical formantes (currently, there are 21 Eps). All are manufactured with varying foam densities. Its action can stimulate neural center over the micro body movements (PINTO, 2018).

Recent publications

1. Dynamic Muscle Reprogramming in Rehabilitation after Brain Trauma: An Experimental Clinical Study.
2. The reeducation of muscular dynamics in the treatment of scoliosis: a case study

Biography

Francisco Miguel Pinto did physical therapy and physical education. He completed his master's degree at human movement at UCB, Brazil, 10 years ago. Director of the School of posture Schools integrated in Brazil.

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