
[Abstract:0103]

## WHAT MULTIMORBIDITY SHOW US ABOUT GUIDELINE-DRIVEN EVIDENCE-BASED MEDICINE

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This is a master's dissertation on philosophy of medicine. This dissertation investigates the tension between evidence-based medicine (EBM) in its fullest sense and guideline-driven EBM. The rise of EBM fuelled the dissemination of guidelines for almost all individual clinical conditions as practical tools. Over time, a guideline-driven version of EBM became dominant, where following guidelines became synonymous with delivering optimal evidence-based care. Notably, this belittled the epistemic role of clinical expertise in individualising care, a vital part of EBM. Because most guidelines are designed for single conditions, several challenges arise for physicians dealing with multimorbid patients, i.e. patients with multiple conditions, inherently complex and highly heterogeneous. Proposed solutions for these challenges have hitherto focused on improving guidelines for multimorbidity. In this dissertation, I argue that guideline-focused approaches to multimorbidity are bound to be a fiasco because they are premised on guideline-driven EBM, an epistemologically limited interpretation of EBM. Finally, I argue that clinical expertise becomes even more important in multimorbidity care because only clinical expertise can effectively capture the sheer idiosyncratic nature of multimorbid patients. To my knowledge, this dissertation is the first formal exposition of the limitations of guideline-focused approaches to multimorbidity. Understanding the limitations of guideline- driven EBM in the context of multimorbidity has important implications for medical education, primary care practice, and broader healthcare strategies. This emphasises the need for an urgent revival of EBM in its fullest sense.

***Keywords:*** *multimorbidity, evidence-based medicine, guidelines, philosophy of medicine, philosophy of science*

[Abstract:0168]

## DOES SEXUALITY HAVE AN EXPIRATION DATE?

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Dementia is the loss of cognitive function, to such an extent that it interferes with daily life. The most common causes are Alzheimer's disease, vascular dementia, lewy body dementia, frontotemporal dementia and human immunodeficiency virus (HIV). Nonetheless, in the elderly, sexually transmitted infections (STI) causes are forgotten because we assume that they don't have a sexual life.

Caucasian woman, 86 years old, dependent for daily life activities, disoriented in time and space. The only known disease was dementia and she didn't take chronic medication. She was taken to the Emergency due to acute fluctuations on consciousness characterized by agitation and restlessness that caused a fall and dyspnoea. The cranioencephalic computerized tomography didn't show acute lesions, the thoracic radiography showed diffuse alveolar infiltrates and the laboratory exams showed C-reactive protein increased (111 mg/dL) and creatinine kinase (3143 mg/dL). It was assumed to be a respiratory infection and she was hospitalized. To study the dementia, it was requested thyroid-stimulating hormone 1.2 mU/L, thyroxine-free 4 1.3 ng/dL and vitamin B12 532 pg/mL, negative venereal disease research laboratory and positive HIV2 serology with CD4 217 cell/mm$^3$ and undetectable viral load. Antiretroviral therapy was initiated. When asked about her sexual life the patient confirmed unprotected sexual relations after her husband passed away and she didn't do any screening for STI.

Internal medicine deals with elderly patients with dementia every day, therefore it is important to understand the underlying disease. Collectively, we can't assume that the sexual life of the patients has an expiration date.

***Keywords:*** *dementia, HIV, elderly*

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[Abstract:0176]

## SARCOPENIA SCREENING AT YOUR FINGERTIPS

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**Background and Aims:** Sarcopenia is a very important geriatric syndrome which confirmed diagnosis is based on revised criteria of the European Working Group on Sarcopenia and requires presence of low muscle mass associated with reduced muscle function. Our aim was evaluating sarcopenia risk with muscle mass measured by POCUS (Point-of-care-Ultrasound).
**Methods:** Cross-sectional study including 48 Internal Medicine in-patients over 70 years-old, admitted due to dyspnoea during spring of 2023. We analysed body mass index (BMI), hand-grip strength and calf circumference (CC). Comorbidity was evaluated using Charlson index (CI), nutritional status with Mini Nutritional Assessment (MNA-SF) and serum albumin, sarcopenia risk with SARC-F score. POCUS was done with a 5-MHz convex probe device in rectus femoris muscle (middle point). Data were analysed using SPSS v.25.0. The study was approved by local ethics committee.
**Results:** Mean age was 82.26 (42.1% women). Mean CI was 2.8 ± 1.8 (51% high comorbidity). Mean rectus femoris area (RFA) was 3.74 cm² ± 1.8. We observed a moderate correlation between RFA and hand-grip strength (r=0.31; p=0.02), and CC (r=0,274; p=0,06). Correlations were weaker and not significant with BMI, CI, MNA-SF, SARC-F and serum albumin.
**Conclusions:** POCUS seems to be a cheap, simple, safe and generally reliable method for assessing hand-grip strength and CC. Surprisingly, we didn't find association between RCA and MNA-SF and SARC-F, maybe due to high comorbidity observed in our patients. Further studies are needed in complex chronic multimorbidity patients.

*Keywords:* *POCUS, sarcopenia, diagnosis*

[Abstract:0180]

## ASSOCIATION OF HOBBY ACTIVITIES AND FRAILTY AMONG NONAGENARIANS

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**Aim:** Assessment of a possible association between frailty and hobby activities among nonagenarians.
**Methods:** The study included 52 patients aged 90-99 (92.8±2.3) years: 12 male, 40 female. Information about the hobby activities was obtained during a survey of a centenarian, relatives or other people caring for a centenarian. The presence of frailty was confirmed by the short physical performance battery test.
**Results:** Fifteen (29%) nonagenarians had hobby activities. Knitting/embroidery (26%) was the most common hobby activity among nonagenarians. Every fifth (20%) nonagenarians had gardening/floriculture, 13.3% of nonagenarians had reading books. Nordic walking, listening to the music, or watching football/surfing were revealed in everyone (6.6%) of the remaining five participants.
Frailty was revealed among 11 (73.3%) nonagenarians (F 64%) with hobby activities, and among 32 (86.5%) – without hobby activities, F 84%, p=0.465. A negative correlation was established between the hobby activities and frailty (p=0,007, r= -0.38). The possible contribution of hobby activities in reducing the likelihood of developing frailty was confirmed (OR 0.14, 95% CI 0.029-0.68; p<0.014).
**Conclusions:** Our analysis showed that hobby activities significantly decreased the risk for incident frailty. These findings may be important for further findings of a possible favourable factors of healthy aging.

*Keywords:* *frailty, nonagenarian, hobby activities*

[Abstract:0209]

## QUALITY OF LIFE IN ELDERLY DYSPNEA IN-PATIENTS

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**Background and Aims:** Life expectancy of Spanish populations is one of the longest in the world. Our aims was to analyse interactions between health related quality-of-life (HRQoL) and geriatric syndromes.
**Methods:** Cross-sectional study including Internal Medicine in-patients over 70 years-old, admitted to due to dyspnoea during the spring of 2023. Clinical and epidemiological information was obtained from medical records. Comorbidity was evaluated using Charlson index (CI), frailty with FRAIL scale, nutritional status with Mini Nutritional Assessment Short Form (MNA-SF), sarcopenia screening risk with SARC-F score, dependency with Barthel Index and HRQoL with EuroQoL (EQ5D5L) questionnaire. POCUS was done with a 5-MHz convex probe device in rectus femoris muscle (middle point). Data were analysed using SPSS v.25.0. The study was approved by local ethics committee.
**Results:** We included 107 patients mean age was 82.26 ± 8.49 years, 57.9% were male. Mean HRQoL with EQ5D5L value set was 0.5235 ± 0.45. We observed high correlation between EQ5D5L value set and Barthel Index (r=0.79; p<0.001), MNA-SF (r=0.54; p<0.001), SARC-F (r=-0.82; p<0.001), Frail scale (r=-0.63;

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p<0.001). Correlation was moderate with age (r=-0.45; p<0.001). Correlation was weaker and not significant with CI.

**Conclusions:** The associations of HRQoL with dependency, nutritional status, sarcopenia risk and fragility risk show an important subject in medical assistance in our elderly in-patients. Evaluation of factors associated with HRQoL aspects can improve quality of healthcare.

*Keywords:* *quality-of-life, dependency, sarcopenia*

[Abstract:0272]

## IMPACT OF TOOTH LOSS ON THE NUTRITIONAL STATUS AND QUALITY OF LIFE OF THE ELDERLY PATIENT

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**Background and Aims:** To evaluate malnutrition prevalence according to dentition state in elderly patients treated in our Service, and its impact on life quality.

**Materials and Methods:** Cross-sectional, descriptive, observational study in >70 years old patients hospitalized from November 2022 to January 2023. Clinical and laboratory data were obtained from the medical history and scales were created to assess: nutritional status (MNA-SF), dentition, dependency (Barthel), risk of falls (Downton) and pressure ulcers (Braden). Data analysis was performed with the program SPSSv.25.

**Results:** A total of 266 patients were included (52.6% male) with mean age of 83 years. BMI was 26kg/m$^2$. 9.4% subjects had all their teeth, 10% had <20 teeth, 56.7% used dental prosthesis and 6% neither had teeth nor used a prosthesis.

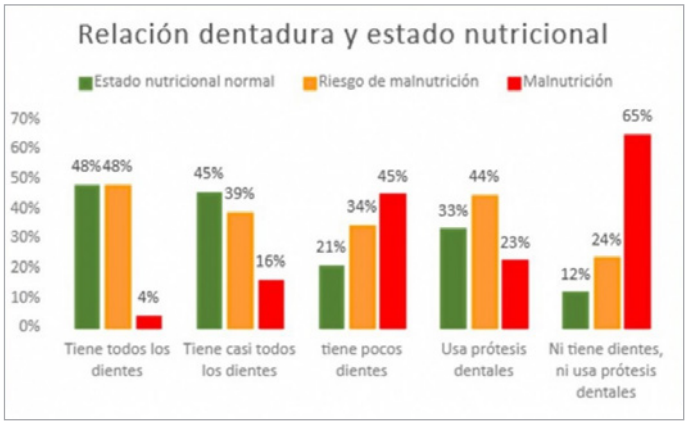
Malnutrition prevalence was 45% in patients with <20 teeth, reaching 65% in those who didn´t have teeth or use dentures. It was much lower in subjects with prostheses (23%), and in those with all (4%) or >20 teeth (16%). We did not find differences between malnutrition and sex (p<0.05). A linear association (p<0.05) was found between malnutrition and older age.

Among malnourished patients, 23% had severe dependence (Barthel 35-20), and 54% total dependence (Barthel <20).

Likewise, 78.7% had a high risk of falls (Donwton >2) and 72.4% of presenting pressure ulcers (Braden <12).

**Conclusions:** The loss of teeth in the elderly has a direct relationship with health status, causing poor nutrition, and consequently, greater fragility, dependency and deterioration on quality of life. These findings highlight the importance of the evaluation and adequate care of dental health.

*Keywords:* *malnutrition, frailty, dental health*




*Relationship Of Denture And Nutritional Status.*

[Abstract:0323]

## ALCOHOL CONSUMPTION RECORD IN SPANISH ELDERLY PATIENTS (RECALAN)

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**Objectives:** Alcohol consumption is linked to various health issues across the life. However, data on its prevalence and association with complications during hospitalization and comorbidities in elderly patients are scarce.

**Methods:** A multicentre observational study was conducted with the participation of researchers from 18 hospitals across Spain. The study protocol was approved by the Ethics Committees. Patients over 80 years old admitted for any reason to hospitals were included. Each patient was interviewed to assess aspects related to alcohol consumption, dependency, frailty, sarcopenia,


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or cognitive impairment. And the medical history of each patient was reviewed.

**Results:** A total of 910 patients were included, with a mean age of 86.3 (SD=6.7) years, and 53.8% were women. 27.7% of patients had active alcohol consumption, 49.3% had consumed alcohol in the last year, and 64.8% had habitually consumed alcohol throughout their lives. Alcohol consumption was documented in the medical records in 32.7% of cases. The development of delirium (30.4% vs. 24.4% P=0.086), falls (6.4% vs. 2.4% P=0.009), and insomnia (40.8% vs. 28.8% P=0.002) during admission was more frequent in the group of patients who consumed alcohol. Additionally, 48% of patients who currently or previously consumed alcohol showed signs of risky drinking when evaluated using the AUDIT test.

**Conclusions:** Alcohol consumption in very elderly patients is common, is not routinely considered in medical records and associating with higher frequencies of insomnia, falls, and delirium during hospital admission.

*Keywords:* *alcohol, comorbidity, elderly, internal medicine*

[Abstract:0405]

## BEYOND CELLULITE

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An 83-year-old man with history of hypertension, dyslipidaemia, stroke, chronic liver disease, venous insufficiency, lower limb ulceration, right hip and knee prosthesis, polypharmacy, and unhealthy alcohol intake. Formerly independent, he had a recent functional decline due to lower leg pain. He has difficulty grooming, inadequate hearing correction and he walks with a crutch.

He lives with his wife, who has dementia, and their two children partially take care of them. The MNA and GLIM criteria indicates malnutrition. He administers his medications himself, but he arrives at the hospital with six fentanyl patches (325 mcg).

He was admitted to the Internal Medicine Ward with cutaneous sepsis treated with piperacillin/tazobactam and daptomycin for 14 days, progressing well. However, after antibiotic discontinuation, he experienced pain in his right leg, confirming an abscess by echography. Traumatology performed drainage and arthroscopic right knee lavage without prosthetic replacement. An ESBLE *E. coli* was isolated, initiating targeted treatment with ertapenem.

During admission, he experienced acute kidney failure, bronchoaspiration, and left wrist monoarthritis treated with corticosteroids. He got Clostridiodes difficile diarrhoea because of antibiotic use with oral vancomycin treatment, and an immobility syndrome treated with physiotherapy, allowing the patient to stand and take small steps.

Finally, after the infection and other issues were resolved, he was transferred to another hospital for functional rehabilitation.

**Discussion:** We highlight the complexities of medical care for patients with multiple diseases. Since medical and social demands are among the leading causes of death among the elderly, a thorough and multifaceted assessment is required.

*Keywords:* *elderly, multifaceted assessment, multimorbidity*

[Abstract:0482]

## PREVALENCE OF DISEASES AND POLYPHARMACY IN MULTIMORBIDITY PATIENTS TREATED IN AN INTERNAL MEDICINE CONSULTATION

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**Objectives:** 1. Study the prevalence of diseases and polypharmacy in patients with multimorbidity

2. Assess the appropriateness of treatment according to the respective diseases

**Methods:** A retrospective study was designed in patients with multimorbidity treated between 2021-2022. Data on sex, age, disease, and number of medications were collected. The prevalence of these variables and the appropriateness of the treatment was evaluated.

**Results:** 141 patients were included in the study. 50% of the participants were women, with an average age of 86 years. Prevalence rates of these diseases are shown in Table 1. Prevalence of polypharmacy (taking ≥5 drugs) was 95%, and excessive polypharmacy (taking >10 drugs) was 62%. The most commonly consumed drugs were diuretics (80%), proton pump inhibitors (77%), beta-blockers (57%), lipid-lowering agents (56%), benzodiapines (26%), and protein supplements (23%). Regarding the appropriateness of the treatment, 71% were administered a combination of four drugs specifically recommended for hearth failure reduced ejection fraction (EF); 24% were prescribed islgt2 and 38% received ARM for hearth failure preserved EF. Additionally, 80% of patients with ischemic heart disease were prescribed beta-blockers. Notably, 94% of patients diagnosed with atrial fibrillation were prescribed anticoagulants (58% NOACs). Only 2% of patients received a combination of anticoagulants and antiplatelet agents with 100% adequacy.

**Conclusions:** The high prevalence of conditions impacting patients with multimorbidity, along with tailored treatments for these conditions, contributes to the presence of polypharmacy and the potential for adverse events. Employing decision support tools and embracing a multidisciplinary strategy becomes imperative to achieve optimal outcomes.

*Keywords:* *multimorbidity, polypharmacy, adequacy of treatment*

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| Disease | Prevalence (%) |
|---|---|
| Hypertension | 85% |
| Diabetes | 52% |
| Dyslipidaemia | 77% |
| Obesity | 75% |
| Chronic kidney disease (GFR < 60 ml/min) | 78% |
| Atrial fibrillation | 60% |
| Heart failure | 77% |
| Ischemic heart disease | 37% |
| Cerebrovascular disease | 23% |
| Peripheral arterial disease | 12% |
| Anaemia | 35% |

*Table 1. Prevalence of diseases in the sample.*

[Abstract:0492]

# FUNCTIONAL DETERIORATION DURING HOSPITAL ADMISSION IN PLURIPATHOLOGICAL PATIENTS

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Functional deterioration is a risk factor for readmissions and morbimortality. The study aimed to identify variables related to loss of functionality in pluripathological patients during hospitalization.

Patients meeting Ollero's criteria admitted to Internal Medicine or Geriatrics in four hospitals in Spain between 02/2022-05/2023 were recruited. Sociodemographic data, medical history and complications were collected. The Barthel questionnaire was completed at baseline and discharge, considering a clinically significant decrease of ≥10 points.

Descriptive and comparative analyses were conducted using Chi-square for categorical variables and Wilcoxon test for continuous variables. A logistic regression model was built to identify characteristics of patients with Barthel deterioration.

Data from 154 patients was considered, mostly women with an average age of 86. The mean Barthel variation was -7.1, and 65 patients (42%) showed ≥10 deterioration. Most (76%) resided at home before admission. The main diagnosis was HF (44%) and the most common complication during admission was delirium (22%). Significant differences ($p < 0.05$) were found between Barthel decline and comorbidities of pressure ulcers (PUs) and peripheral arterial disease (PAD); as well as in patients diagnosed with depression during admission. Relationships, though not statistically significant ($p < 0.2$), were observed between Barthel decline and other variables, such as high socio-familial risk.

According to our study, Barthel decline is associated with PU presence at admission, prior PAD diagnosis, and depression development during hospitalization.

Larger studies are needed to precisely identify variables related to functional decline during admission in pluripathological patients for developing predictive tools and applying preventive interventions.

**Keywords:** *functional decline, multimorbidity, internal medicine, geriatrics*

| Variables | Total (N=154) | Barthel decrease No (N=89) | Barthel decrease Yes (N=65) | P Value |
|---|---|---|---|---|
| **Gender** | | | | 0.2219 |
| Males | 69 (45.7) | 43 (50.0) | 26 (40.0) | |
| Females | 82 (54.3) | 43 (50.0) | 39 (60.0) | |
| **Ages** | | | | 0.1905 |
| Mean±SD | 86.3±8.7 | 85.6±9.4 | 87.2±7.5 | |
| **Origin** | | | | 0.0301 |
| Socio-sanitary center | 14 (9.1) | 10 (11.3) | 4 (6.1) | |
| Home | 117 (76.0) | 60 (67.4) | 57 (87.7) | |
| Other acute care hospital | 23 (14.9) | 19 (21.3) | 4 (6.2) | |
| **Complexity** | | | | |
| Serious mental disorder (yes) | 3 (1.9) | 3 (3.4) | 0 (0) | 0.1350 |
| Extrem polypharmacy (yes) | 108 (70.1) | 65 (73.0) | 43 (66.2) | 0.3569 |
| Socio-familiar risk (yes) | 19 (12.3) | 14 (15.7) | 5 (7.7) | 0.1341 |
| Pressure ulcers ≥ II (yes) | 7 (4.5) | 1 (1.1) | 6 (9.2) | 0.0171 |
| Delirium (yes) | 51 (33.1) | 30 (33.7) | 21 (32.3) | 0.8553 |
| Malnutrition (yes) | 4 (2.6) | 2 (2.2) | 2 (3.1) | 0.7492 |
| ≥2 admissions on previous 12 monhts (yes) | 49 (31.8) | 28 (31.5) | 21 (32.3) | 0.9113 |
| Alcoholism (yes) | 2 (1.3) | 1 (1.1) | 1 (1.5) | 0.8223 |
| **Comorbidities** | | | | |
| Hypertension | 134 (87.0) | 78 (87.6) | 56 (86.2) | 0.7864 |
| Diabetes mellitus | 72 (46.8) | 43 (48.3) | 29 (44.6) | 0.6495 |
| Chronic kidney failure | 91 (59.1) | 53 (59.6) | 38 (58.5) | 0.8920 |
| Heart failure | 85 (55.6) | 51 (58.0) | 34 (52.3) | 0.4872 |
| Cerebrovascular disease | 46 (29.9) | 28 (31.5) | 18 (27.7) | 0.6138 |
| COPD | 36 (23.4) | 20 (22.5) | 16 (24.6) | 0.7562 |
| Cognitive impairment | 39 (25.3) | 27 (30.3) | 12 (18.5) | 0.0942 |
| Previous neoplasia | 43 (27.9) | 22 (24.7) | 21 (32.3) | 0.2998 |
| Previous hip fracture | 20 (13.0) | 13 (14.6) | 7 (10.8) | 0.4841 |
| Visual deficit | 32 (20.8) | 23 (25.8) | 9 (13.8) | 0.0700 |
| Hearing impairmente | 31 (20.1) | 22 (24.7) | 9 (13.8) | 0.0965 |
| Falls on previous 6 months | 37 (24.5) | 19 (21.8) | 18 (28.1) | 0.3748 |
| Peripheral arterial disease | 24 (15.9) | 20 (23.3) | 4 (6.2) | 0.0044 |
| **Main diagnoses** | | | | |
| Heart failure | 66 (43.7) | 43 (48.9) | 23 (36.5) | 0.1312 |
| Ictus | 1 (0.7) | 1 (1.1) | 0 (0) | 0.3959 |
| Non-condensing respiratory infection | 37 (24.3) | 23 (26.1) | 14 (21.9) | 0.5456 |
| Pneumonia | 7 (4.6) | 4 (4.5) | 3 (4.7) | 0.9671 |
| UTI | 28 (18.5) | 13 (14.8) | 15 (23.8) | 0.1589 |
| Arrhythmia | 13 (8.6) | 10 (11.4) | 3 (4.7) | 0.1462 |
| Sepsis | 4 (2.6) | 3 (3.4) | 1 (1.6) | 0.4826 |
| COVID-19 | 7 (4.6) | 6 (6.8) | 1 (1.6) | 0.1269 |
| Anemia | 24 (15.8) | 14 (15.9) | 10 (15.6) | 0.9622 |
| Delirium | 15 (9.8) | 10 (11.4) | 5 (7.7) | 0.4503 |
| Worsening of renal function | 72 (47.7) | 41 (47.7) | 31 (47.7) | 0.9983 |

*Table 1. Comparison of sociodemographic and pluripathological patient-related variables (n=154).*

| Variables | Total (N=154) | Barthel decrease No (N=89) | Barthel decrease Yes (N=65) | P Value |
|---|---|---|---|---|
| **Complications during admission** | 6 (3.9) | 3 (3.4) | 3 (4.7) | 0.6894 |
| Acute kidney failure | | | | |
| Bleeding requiring transfusion | 3 (2.0) | 2 (2.3) | 1 (1.6) | 0.7559 |
| Urinary retention | 4 (2.6) | 2 (2.3) | 2 (3.1) | 0.7459 |
| Hipotension | 8 (5.3) | 5 (5.7) | 3 (4.7) | 0.7864 |
| Hipoglycemia | 3 (2.0) | 3 (3.4) | 0 (0) | 0.1357 |
| Nosocomial UTI | 2 (1.3) | 0 (0) | 2 (3.1) | 0.0951 |
| SARS-CoV 2 infection | 4 (2.6) | 2 (2.3) | 2 (3.1) | 0.8286 |
| Delirium | 34 (22.2) | 21 (23.9) | 13 (20.0) | 0.5699 |
| Cognitive impairment | 9 (5.9) | 9 (10.2) | 0 (0) | 0.0079 |
| Malnutrition | 6 (3.9) | 2 (2.3) | 4 (6.2) | 0.2215 |
| Depression | 8 (5.2) | 8 (9.1) | 0 (0) | 0.0125 |
| Constipation | 23 (15.0) | 13 (14.8) | 10 (15.4) | 0.9166 |
| Accidental fall | 10 (6.6) | 3 (3.4) | 7 (10.9) | 0.0645 |
| Pressure ulcer | 5 (3.3) | 1 (1.1) | 4 (6.2) | 0.0844 |
| Hyponatremia | 3 (2.0) | 1 (1.1) | 2 (3.2) | 0.3761 |
| Anemia | 20 (13.2) | 15 (17.0) | 5 (7.8) | 0.0964 |

*Table 2. Comparison of sociodemographic and pluripathological patient-related variables (n=154).*


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[Abstract:0531]

# A CASE OF SEVERE DRUG REACTION WITH EOSINOPHILIA AND SYSTEMIC SYMPTOMS RELATED TO ALLOPURINOL

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Drug reaction with eosinophilia and systemic symptoms (DRESS) is one severe cutaneous adverse reactions (SCARs) to drugs, such as Stevens Johnson syndrome and toxic epidermal necrolysis. Wide range of drugs may cause DRESS, such as, allopurinol, carbamazepine, phenytoin, and dapsone. Allopurinol is a classic and well-known drug to treat hyperuricemia, and it is one of the most common culprit drug to cause DRESS within Han Chinese, Taiwanese, Japanese and Korean population. Immune system dysfunction and viral reactivation are possible related mechanisms. It is characterized by extensive skin rash and lymphatic system, liver, kidney and lung are most common involved organs. Occasionally, organs involvement can be severe. Cessation of the culprit drug and systemic corticosteroid is the mainstay treatment of DRESS.

Here, we describe a case of a 64-years-old male, recently diagnosed with hyperuricemia and to whom allopurinol was prescribed. He developed generalized skin rash and fever. He was admitted in Internal Medicine ward and put on anti-histamines and topical medication. Later he developed acute kidney failure, eosinophilia and RBC casts in urinalysis. Nephrology was consulted and he was started on temporary renal replacement therapy. Considering DRESS he was treated with Prednisolone (1mg/kg/day), with clinical and kidney function improvement with no need for further haemodialysis.

In conclusion, allopurinol can lead to severe adverse events and in our case the patient was successfully treated and recovered. Nowadays, in our clinical practice, we would request HLA B5801 gene before prescribing allopurinol in order to reduce the risk for severe and fatal reaction

*Keywords: DRESS, allopurinol, drug reaction*

[Abstract:0574]

# THE ASSOCIATION OF PRE-ADMISSION POLYPHARMACY AND FALLS IN ELDERLY INPATIENTS

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**Introduction:** The use of multiple medications may be a significant contributor to falls. We examined the association between preadmission polypharmacy and history of falls in elderly medical inpatients.

**Methods:** Data was obtained from participants aged ≥65 years as part of a prospective cross-sectional observational study on polypharmacy in elderly inpatients at Ballina Hospital, Australia. The medication regimen complexity index (MRCI), drug-burden index (DBI) and anticholinergic effect on cognition (AEC) scores were calculated for medications taken prior to admission. A polypharmacy and falls questionnaire were used to identify falls in the past 6-months and aptitude towards medication use.

**Results:** 204 participants (mean age 80.3 [SD 7.9]) (114 females, 90 males) were interviewed. Preadmission polypharmacy was high; mean number of regular medications =7.8 [SD 3.8], mean MRCI =21 [SD 12.4]. 117 participants had experienced a fall in the past 6-months with 47 reporting ≥2 falls. Age was positively associated with the risk of fall(s) (p=.001).

A MRCI ≥20 was associated with a fall (p =.035) and with ≥2 falls (p =.021). A higher number of medications was associated with ≥2 falls (p =.024). Fall(s) risk increased with greater DBI scores (p =.015) and an AEC score ≥2 (p =.018). There was an association between falls and patients who reported forgetting to take medications (p =.047).

**Conclusions:** Multi-drug regimens may increase the risk of falls in the elderly, especially when complex. Higher DBI and anticholinergic scores are associated with increased risk. Regular medication reviews are recommended to simplify medication regimens and reduce potentially inappropriate polypharmacy.

*Keywords: polypharmacy, falls, elderly*

 **DOI:** 10.12890/2024_V11Sup1

[Abstract:0613]

# SGLT2 INHIBITORS USE IN OLDER PLURIPATHOLOGICAL PATIENTS WITH ACUTE HEART FAILURE. PROFUND-IC REGISTRY

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**Summary:** Heart failure (HF) is a prevalent clinical syndrome associating significant morbidity and mortality. Sodium-glucose cotransporter type 2 inhibitors (SGLT2i) have shown to improve survival and quality of life in patients with HF regardless of left ventricular ejection fraction (LVEF).

**Purpose:** To describe the characteristics of older pluripathological patients admitted with acute heart failure (AHF) as main diagnosis, the population treated with SGLT2i, as well as to evaluate if it use was associated with less readmission and mortality.

**Methods:** A prospective study of patients from the PROFUND-IC registry admitted with AHF was conducted. A descriptive and bivariate analysis between those taking SGLT2i and those who do not was performed, using the Chi-square test for qualitative variables and Welch's test for quantitative ones, as well as the Fisher and Wilcoxon tests, if the variables didn´t adjust to normality. Kaplan-Meier curves were constructed analysing readmission and mortality of patients at 12 months based on SGLT2i treatment.

**Results:** 750 patients were included, 58% women with a mean age of 84 years. Functional class II predominated (54%) and mean LVEF was 51%. SGLT2i were only prescribed in 28% patients. In this group, men predominated (48.6%vs39.8%, p=0.036), they were younger (82vs84, p=0.002) and LVEF was lower (48%vs52%, p<0.001). Fewer mortality was observed in the group treated with SGLT2i, both during baseline admission (2.4%vs6.9%, p<0.05) and at 12 months follow-up (6.2%vs13%, p=0.023) and lower readmission rate (23.8%vs38.9%, p<0.001).

**Conclusions:** SGLT2i use was associated with lower readmission and mortality at 12-months follow-up in older pluripathological patients admitted with AHF.

*Keywords:* *acute heart failure, SGLT2 inhibitors, elderly*

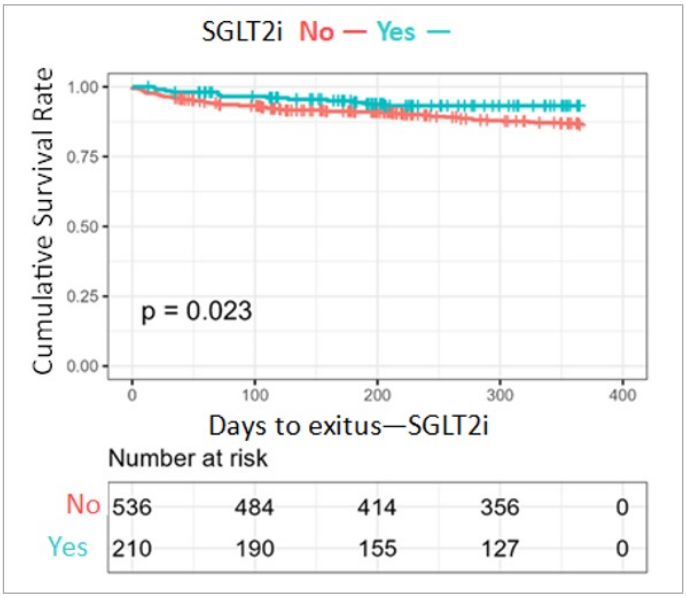


*Figure 1. Mortality analysis during the 12-month follow-up in the group treated with SGLT2i versus the untreated group.*

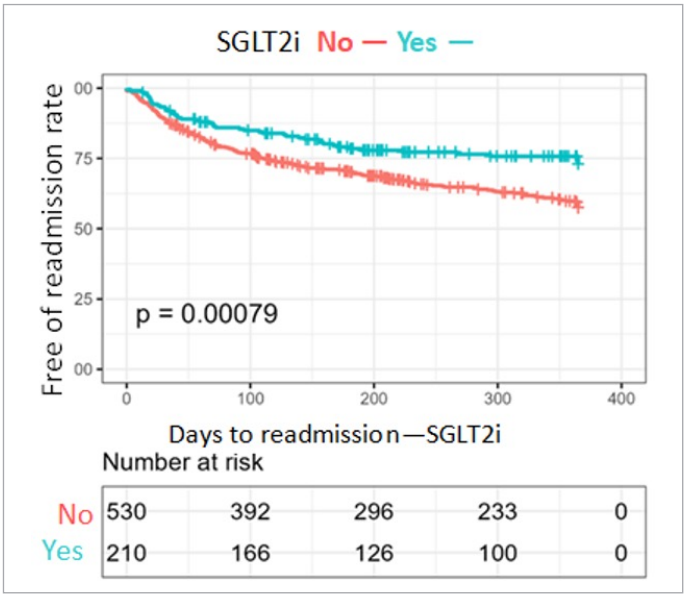


*Figure 2. Readmission analysis during the 12-month follow-up in the SGLT2i -treated group versus the untreated group.*


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[Abstract:0753]

# DEPRESCREPTION OF POTENTIALLY INAPPROPRIATE MEDICATION IN OLDER HOSPITALIZED PATIENTS: A PROSPECTIVE STUDY IN A GREEK INTERNAL MEDICINE DEPARTMENT

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**Purpose:** Polypharmacy and use of Potentially Inappropriate Medication (PIM) has been associated with increased adverse effects and in-hospital stay. Only limited data derives from Greece. In this study we assessed the prevalence of PIM use as chronic medication in older hospitalized patients and the association with clinical outcomes on discharge and 2 months later.

**Methods:** In our prospective study, we included patients aged ≥65, taking ≥3 medications, admitted to the internal medicine ward of a tertiary hospital. START-STOPP (version 2) criteria were used to review the chronic medication for potential deprescription.

**Findings:** Since May 2023, 181 patients were enrolled (54.7% females, median age 80.5 years).

More than half (58.5%) were treated with PIM before admission. Most common categories of PIM included benzodiazepines (25%), drugs without evidence-based clinical indication (24%), thiazide diuretics with electrolytic disorders or history of gout (18%).

Patients on PIMs had increased risk of in-hospital mortality (OR=2.2, p-value=0.10).

On discharge, at least one PIM was deprescribed in 78% of patients, reducing in half the risk of re-hospitalization (9% vs. 23%, p-value=0.15). Among most common PIMs, benzodiazepines were less probable to be stopped.

**Conclusions:** In our ongoing study, we observe a high prevalence of PIM use on admission, corresponding to the lack of geriatric medical awareness in Greece. The initiative of physicians participating in the study leads to a significant deprescription, with positive impact on re-hospitalization rates. This highlights the need to promote education on geriatrics in Greece, which has among the oldest populations in Europe.

*Keywords:* *START-STOPP, polypharmacy, deprescription*

[Abstract:0754]

# ALWAYS CHECK PATIENTS' MEDICATION

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An 89-year-old man with a personal history of type 2 diabetes mellitus and Alzheimer's disease. He does not have any allergy to any medication. As a basic treatment he takes insulin, vildagliptin 50 mg/metformin 1000 mg, quetiapine 100 mg.

He was admitted to the Internal Medicine service due to the presence of generalized skin lesions, very pruritic and with poor clinical evolution despite receiving prolonged treatments with antibiotics. Accompanying these injuries, the appearance of low-grade fever. New prescribed treatments are reviewed, and the initiation of the medication vildagliptin/metformin stands out with the appearance a few days after the lesions.

The examination revealed a regular general condition. Multiple blistering lesions, several broken with abundant exudate, were observed on the trunk and extremities.

In blood tests, an increase in acute phase reactants is notable.

Bullous pemphigoid due to gliptins is indicated as a diagnosis. Given the high suspicion of the diagnosis, existing scientific evidence, before performing a skin biopsy, it was decided to withdraw vildagliptin. After the withdrawal of the medication, the lesions begin an involutional phase.

Bullous pemphigoid is the most common blistering disease in adults over 60 years of age and its aetiology is autoimmune mediated by antibodies. Gliptins modify the antigenic response of the epidermal basement membrane, favouring the appearance of bullous pemphigoid.

Bullous pemphigoid is an adverse reaction with a frequency that is not clearly known; therefore, in case of suspicion, early diagnosis and early cessation of treatment are advisable, as this provides a better prognosis and lower mortality.

*Keywords:* *gliptins, blisters, pemphigoid*

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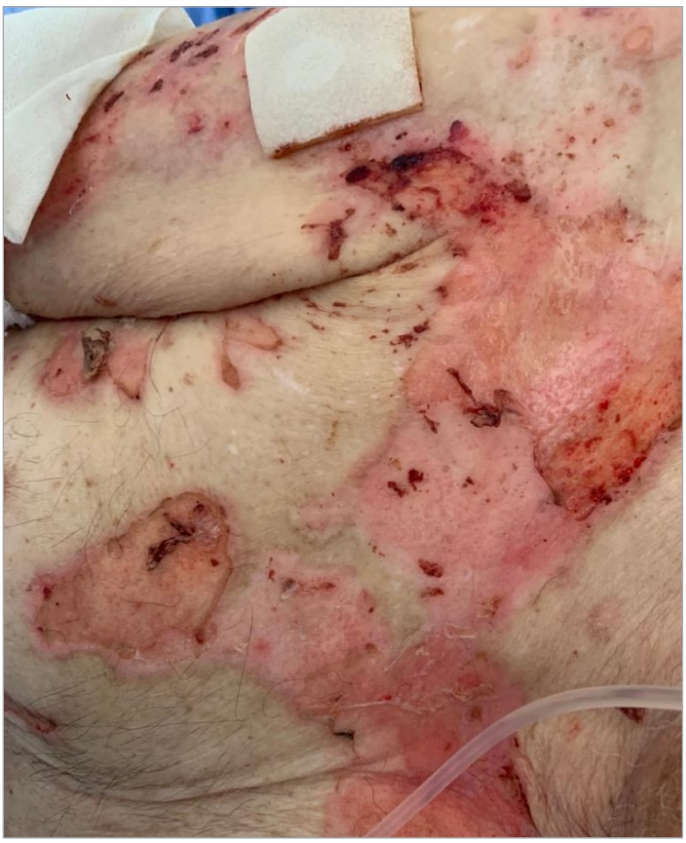

*Figure 1. Bullous pemphigoid.*

[Abstract:0773]

## EXTREME POLYPHARMACY IN PATIENTS ADMITTED TO INTERNAL MEDICINE. ARE WE DOING IT WELL?

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**Summary:** STOPP/START criteria were created to optimize prescriptions and avoid adverse effects related to polypharmacy.

**Purpose:** To describe extreme polypharmacy in patients admitted to Internal Medicine and whether it´s associated to adverse effects, as well as to analyse benzodiazepines (BZD) and acetylsalicylic acid (ASA) use.

**Methods:** A retrospective study of 412 patients was conducted. A descriptive and bivariate analysis were carried out between those with extreme polypharmacy (10 or more drugs) and those who do not using the Chi-square test for qualitative variables and Student´s T-test for quantitative ones, as well as the Fisher and Wilcoxon tests, respectively, if the variables didn´t adjust to normality. Alpha error was<5%.

**Results:** The number of drugs was recorded in 382 patients. 211 (55.2%) received >10 drugs. 70 (18.3%) were taking ASA and 91 (23.8%) benzodiazepines.

Those with extreme polypharmacy were older compared to those who did not (82.11±11.1 years vs 75.4±17.04, p<0.001) and had greater functionality (49.8% were independent vs 18% dependent, p=0.012). Also, extreme polypharmacy is more frequent in comorbidities such as heart failure (79.2% vs 20.8%, p<0.001) or chronic obstructive pulmonary disease (74.7 vs 25.3%, p<0.001), without reaching statistical significance in other pathologies, like dementia. 110 (28.8%) patients suffered respiratory failure and 63.6% of them were polymedicated (p=0.036). In addition, extreme polypharmacy is related to higher readmission rate (17.5% vs 11.7%, p=0.115).

Taking BZD and AAS is more frequent in those with >10 drugs (29.4% vs 17%, p=0.005)(20.4% vs 17.5%, p=0.515).

ASA was correctly indicated in 74.3% patients.

BZD consumption was higher in those with respiratory failure (30% vs 21.3%, p=0.071) and in those who were readmitted (31.6% vs 22.5%, p=0.136).

**Conclusions:** Extreme polypharmacy is a frequent problem associated with adverse effects. Therapeutic optimization should be done during hospital admission using STOPP/START criteria.

*Keywords: extreme polypharmacy, elderly, STOPP/START criteria*

[Abstract:0957]

## NUTRITIONAL AND FUNCTIONAL STATUS, BETTER PREDICTORS OF MORTALITY THAN COMORBIDITY IN VERY ELDERLY PATIENTS

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**Objectives:** To analyse the prognostic value of nutritional status compared to functional and mental status, frailty and comorbidity in hospitalized patients aged 85 years or older.

**Methods:** We conducted a prospective observational study including patients aged 85years or older admitted to Internal Medicine over a period of one year who underwent Mini Nutritional Assessment (MNA) during admission. Sociodemographic, clinical and analytical characteristics, functional (Barthel), cognitive (Pfeiffer), and frailty (Frail) assessment scales, treatment, in-hospital evolution and at one-year follow-up were collected. Factors independently related to mortality were evaluated by Cox regression analysis.

**Results:** Of 360 patients, 192 (53.3%) were female and the mean age was 89 years (SD: 3.1). Of these, 96 patients (26.7%) had normal nutritional status, 191 (53.1%) were at risk of malnutrition and 73 (20.3%) were malnourished. During admission, 83 (17.5%) patients died and 202 (42.5%) during the first year of follow-up.

A worse nutritional status assessed by MNA we related with female sex (p<0.001), worse functional status (<0.001), worse cognitive status (p=0.021) and higher frailty score (p<0.001). However, it

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was not related to age (p=0.32) or comorbidity assessed by the Charlson index (p=0.833). Mortality was significantly related to worse nutritional (p<0.001), functional (p<0.001) and cognitive (p=0.043) status, greater frailty (p=0.012), greater comorbidity according to the Charlson (p<0.001) and almost significantly with older age (p=0.059). In the multivariate analysis, only nutritional status [OR:0.89; CI95% (0.81-0.98); p=0.021] and functional status [OR:0.99; CI95% (0.97-0.99); p=0.001] had a significant independent relationship with survival

**Conclusions:** Survival in very elderly patients is independently related to nutritional and functional status and not to higher comorbidity.

*Keywords: very elderly patients, mini nutritional assessment, MNA, nutritional status, comorbidity*

[Abstract:0971]

## BEYOND THE SURFACE: UNRAVELING TUBERCULOUS PYOMYOSITIS IN AN ELDERLY PATIENT PRESENTING AS FRAILTY

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This case report describes a unique clinical presentation of a 67-year-old postmenopausal female with a complex medical history. The patient, a known case of pulmonary tuberculosis at the age of 6, presented with a two-year history of intermittent moderate-grade fever with progressive dyspnoea over six months, accompanied by significant weight loss, loss of appetite, and easy fatigability. A prior diagnosis of interstitial lung disease was established two years ago, in an outside centre with limited improvement despite ongoing treatment. She presented to the OPD with complaints of left-sided dull aching knee pain of insidious onset and gradual progression and painful restriction of movements for 45 days.

Physical examination revealed frailty, emaciation, tender swelling in the left knee joint, and non-tender swellings over the dorsum of the right forearm and left thigh, with smooth shiny skin. Chest auscultation revealed fine inspiratory crepts, while neurological examination demonstrated generalized wasting, 4-/5 power in all limbs. Rheumatoid arthritis and sarcoidosis were ruled out. HRCT and induced sputum did not reveal any features of active tuberculosis. Further investigations unveiled a collection of pus in the left thigh, positive for acid-fast bacilli (AFB) and GeneXpert for tuberculosis. Patient was diagnosed with Tubercular pyomyositis with post-tubercular sequelae in lungs and was started on anti-tuberculous therapy after which she improved clinically.

This case emphasizes recognizing Tuberculosis reactivation and clinical examination's crucial role in unravelling complex conditions. It sheds light on the broader burden of TB reactivation in the elderly with varied presentations.

*Keywords: tubercular pyomyositis, tuberculosis reactivation, frailty*

[Abstract:1005]

## FROM FEVER ETIOLOGY TO GASTROINTESTINAL BLEEDING: AORTOENTERIC FISTULA

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[2] Department of Geriatrics, Ankara Bilkent City Hospital, Ankara, Turkey

**Introduction:** Aortoenteric fistula (AEF) is a fistula formed by adhesion of the aorta to the adjacent gastrointestinal tract. It is a rare but fatal cause of gastrointestinal bleeding. Here we report a case with a history of aortic graft, presenting with hematemesis and hematochezia.

**Case:** A 72-year-old male patient with known chronic kidney disease, hypertension, coronary artery disease (2 stents: abdominal aorta and carotid) and atrial fibrillation was interned to investigate the aetiology of fever, he had gastrointestinal bleeding during the research process. Endoscopy showed that the graft material was fistulized into the duodenum (Figure 1). The patient was transferred to the cardiovascular surgery department for the operation.

**Discussion:** AEF is the formation of a fistula between the aorta and the gastrointestinal tract. Primary AEF is rare, the fistula typically occurs in elderly patients due to an aneurysm developing as a result of atherosclerosis. Secondary AEF can develop at any time after previous aortic surgery(1) and is more common and occurs 3-5 years after aortic surgery(2). Contrast-enhanced abdominal computed tomography scan and endoscopy are useful in the diagnosis. Bleeding due to AEF is mostly fatal if not diagnosed rapidly and treated with emergency surgery(3).

**Conclusions:** When investigating the aetiology of fever, the patient should be screened for foci of infection if there is a history of graft in the patient's anamnesis. It is vital to take the earliest possible and most appropriate operation decision in case of AEF diagnosis.

Sources:

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(2) https://endoskopi.tgv.org.tr/index.asp?islem=makaledetay&sayfa=20

(3) https://dergIpark.org.tr/tr/download/artIcle-fIle/674138

*Keywords: aortoenteric fistula, bleeding, fever, fistula, gastrointestinal bleeding*

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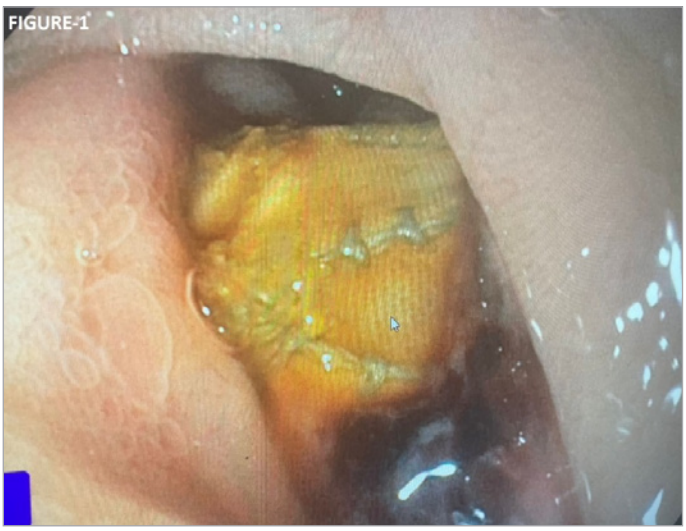


***Figure 1.*** *Endoscopic image of aortoenteric fistula.*

[Abstract:1062]

## STEROID-INDUCED PSYCHOSIS: A CASE REPORT

*Irene Barroso Benayas, Andoni Regueira Acosta, Enrique Albert López, Federico Moran Cuesta, Julen Agirre Castillero, Brais Fernández Francisco, Iñigo De Serra Tejada, Paula Balbin Caminero, Garazi Araña Monedero, Mikel Mañas Senderos, Alma Borrell Repollés, Elna De Ciurana Montiel, Raquel García Blanco, Marta Copado Bocero, Fernando Andrés Elgueta Tapia*

Servicio de Medicina Interna del Hospital Universitario de Basurto, Bilbao, Spain

**Summary:** Case report on steroid-induced psychosis with complete remission after treatment withdrawal.

**Purpose:** The use of corticosteroids is becoming increasingly widespread, so we must be aware of the adverse effects associated with them, including neuropsychiatric symptoms.

**Methods:** Case report and literature review.

**Findings:** A 79-year-old woman with no previous cognitive impairment with a history of arterial hypertension and recently diagnosed giant cell arteritis on treatment with high prednisone dose. One month after starting this treatment, she presented frequent memory lapses, slowness and disorganisation of thought as well as aggressive behaviour. Physical examination revealed disorientation and incoherent speech. No significant alterations were observed in the complementary tests. After having reasonably ruled out other clinical entities we reduced the dose of corticosteroid and replaced it with Tocilizumab. The patient presented progressive and complete remission of the symptoms assessed one month after the event.

Steroid-induced psychosis is included among the dose-dependent substance-induced psychosis with acute or subacute onset. The treatment of this pathology consists of the reduction of corticosteroids doses and their subsequent withdrawal. During this process, pharmacological treatment with antipsychotics and benzodiazepines may be associated.

**Conclusions:** Steroid-induced psychosis is a dose-dependent substance-induced psychosis which treatment is based on the suspension of corticosteroids.

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***Keywords:*** *corticosteroids, psycosis, substance-induce*

[Abstract:1076]

## PROMOTING GERIATRIC MEDICINE IN COUNTRIES WHERE IT IS STILL EMERGING (PROGRAMMING) COST ACTION: IMPORTANCE FOR INTERNAL MEDICINE PERSPECTIVE

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**Background:** It is the predictable result of worldwide population ageing that internists are and will be more frequently encountering with the individuals with complex medical needs, often associated with aging or the presence of multiple chronic conditions. A broader understanding of geriatric medicine (GM) principles by non-geriatrician specialists becomes essential in addressing the diverse health challenges associated with the increasing demand for healthcare services tailored to the unique needs of older individuals.

**Methods:** Programming is a cost action which aims encouraging the integration of fundamental principles of GM into the attitudes and practices of healthcare professionals (HCPs) via developing a pragmatic set of possibilities for continuous professional education, particularly in the countries where GM is under-development.

**Findings:** The initiative, which completed its inaugural year in November-2023, has engaged 290 participants from 40 countries. Of all, 129 (44.4%) are <40 years old and 209 are (72%) female. The shared and specific educational needs of HCPs across various disciplines and settings in the participant countries regarding the GM principles will be assessed through a survey that is currently being circulated.

Once the educational needs are mapped, the content and the delivery method(s) of post-graduate training courses will be defined for ambulatory, acute/subacute, long-term care settings and home-care networks, accordingly.

**Conclusions:** Considering the critical overlap areas between internal medicine and GM, filling the educational gaps about the basic principles of GM equips internists with the knowledge and

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skills necessary to provide a more effective and patient-cantered holistic care for the older adults.

*Keywords:* *geriatric medicine, patient-cantered care, geriatric syndromes, European Cooperation in Science and Technology, post-graduate education*

[Abstract:1084]

## INAPPROPRIATE MEDICATION USE IN OLDER INPATIENTS ACCORDING TO THE TIME CRITERIA: A MULTICENTER, CROSS-SECTIONAL STUDY FROM TURKEY

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**Objectives:** The Turkish Inappropriate Medication Use in the Elderly (TIME) criteria set is an internationally validated tool developed to help management of pharmacotherapy in older adults. There are 112 criteria on the potentially harmful medications (TIME-to-STOP) and 41 on the potentially beneficial but often overlooked medications (TIME-to-START). Here, we aimed to reveal the criteria most common causing hospitalization in older adults.

**Methods:** This is a cross-sectional study conducted on 13 inpatient clinics in Turkey (January 2020-April 2021). Participants aged ≥ 60 were evaluated in terms of baseline characteristics and geriatric syndromes. "IMU causing hospitalization" was assessed by using the TIME criteria on the first day of their admission.

**Results:** In total, 405 older inpatients were included (mean age: 77±8, 55.2% female). The prevalence of "IMU causing hospitalization" was 34.1% (n=138). The most common TIME-to STOP criterion causing hospitalization was "Strict blood pressure control (<140/90 mmHg) in patients with orthostatic hypotension/ cognitive impairment/functional limitation/ low life expectancy (<2 years)/ high risk of falling" (2.5%, n=10). The most common IMU according to the TIME-to-START was "ONS with MN or MNR if nutritional counselling/dietary supplementation are not sufficient to achieve nutritional goals." (11.6%, n=47).

**Conclusions:** Our findings suggest that the prevalence of IMU resulting in hospitalization is both remarkably high in older inpatients. Since the criteria leading to hospitalization of the older adults in particular point to the frail and malnourished individuals, the more frequent use of the TIME criteria in validated populations has the potential to protect risky groups from adverse outcomes.

*Keywords:* *frailty, hospitalization, pharmaceutical preparations, polypharmacy*

[Abstract:1092]

## EXAMINING THE RELATIONSHIP BETWEEN OBESITY AND METABOLIC DISEASES IN OLDER ADULTS: IS OBESITY OR SARCOPENIC OBESITY THE PROBLEM?

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**Objectives:** Although the concept of sarcopenic obesity (SO) has been around for many years, the first consensus report on its definition was published in 2022. In our study, we aimed to evaluate the relationship of SO, which was determined by the consensus algorithm, with metabolic diseases, i.e., diabetes and dyslipidaemia.

**Methods:** Our study was a retrospective, cross-sectional study. Outpatients aged ≥60 years admitted to the university hospital were included. Handgrip strength was measured to assess muscle function. Skeletal muscle mass and fat percentage were measured via a bioimpedance analyzer (BIA). Cases were grouped into 4 phenotypes according to their body composition: Non-

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sarcopenia+Non-obesity (non-S+non-O); Sarcopenia+Non-obesity (only S); Non- sarcopenia+Obesity (only O); sarcopenia + obesity (SO). Non- S+Non-O group was taken as reference.

**Results:** There were 672 participants (69.3% women). Median age was 76 (61-99). The prevalence of diabetes and dyslipidaemia were 31.5% and 30.8%, respectively. Among participants, 55.8% had non-S non-O; 1.8% had only S; 39.3% had only O; and 3.1% had SO phenotype. Among the body phenotypes in multivariate analyses, only SO was independently associated with diabetes [OR (95%CI)=4.1 (1.6-10.7), p=0.004] and dyslipidaemia [OR (95%CI)=2.7 (1.1-6.8); p=0.04].

**Conclusions:** This is the first report using the SO definition and diagnostic criteria suggested by ESPEN&EASO when examining its association with metabolic diseases. Our study suggests that obesity is significantly associated with metabolic diseases only in the presence of accompanying sarcopenia. When examining the deleterious effects of obesity on metabolic health, sarcopenia should be taken into account as an important determinant.

*Keywords:* *aged, diabetes mellitus, dyslipidaemia, obesity, sarcopenia*

| | Diabetes mellitus | Dyslipidemia |
|---|---|---|
| | Odds Ratio (95% Confidence Interval) | Odds Ratio (95% Confidence Interval) |
| Body composition phenotypes | | |
| Non-S+Non-O | Reference | Reference |
| Only S | 1.4 (0.4-4.8), 0.6 | 0.97 (0.3-3.7), 0.96 |
| Only O | 1.4 (0.9-2.1), 0.2 | 1.5 (0.9-2.4), 0.08 |
| SO | 4.1 (1.6-10.7), 0.004 | 2.7 (1.1-6.8), 0.04 |

***Table 1.*** *Multivariate logistic regression analysis regarding the association of different body composition phenotypes with diabetes mellitus and dyslipidemia.*

[Abstract:1216]

## PHENOTYPES AND PROGNOSTIC VALUE OF DYNAMIC CLUSTERING OF GAIT SPEED TO PREDICT ONE YEAR MORTALITY IN AGED PATIENTS WITH CANCER

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Gait speed is a robust measure to evaluate frailty in elderly. Several studies demonstrate correlation between gait speed and mortality or morbidity in aged population however few studies identify prognostic groups related to changes in gait speed through time.

We aim to identify and describe homogeneous cluster of patients with same gait speed trajectories and their prognostic value.

We included 603 aged subjects with cancer. 20 months median follow up, 47% mortality rate. We recorded 9 repeated measures of gait speed and evaluated baseline geriatric assessment.

In order to identify the dynamic trajectories we used latent class mixed models. Secondly, joints models to estimate the prognostic value of each dynamic cluster.

In this longitudinal study, we identified four latent dynamic class of gait speed with significantly different prognostic value.

Class four is the most frail group.

Baseline geriatric assessment, haemoglobin rate and the therapeutic strategies are the variables associated with those trajectories.

At baseline, each one meter per second gain in gait speed is associated to mortality decline (three times) and we estimate a 3.6 mortality risk when gait speed decline through time (1 cm/ month)

Gait speed trajectories have a prognostic value in a population of aged patients with cancer. The dynamic clusters help to a better acknowledgment of frailty groups.

Early detection of frail patients using gait speed measurement hence apply preventive interventions such as nutritional and physical rehabilitation may improve the prognosis. Randomized controlled trials are needed to assess the impact of those interventions.

*Keywords:* *gait speed, aging, cancer, clustering, oncology*

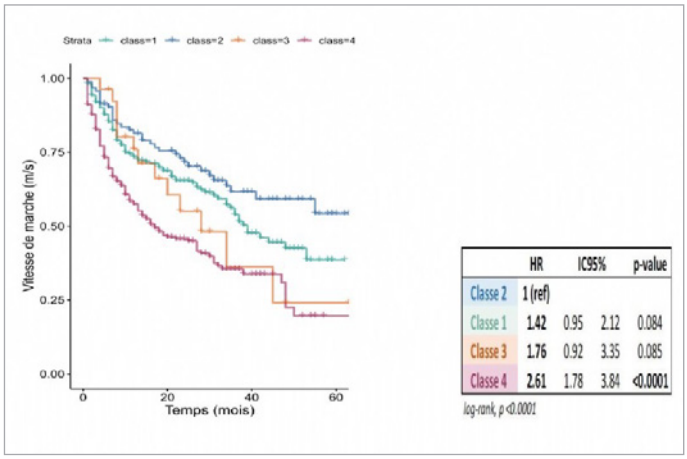


***Figure 1.*** *Kaplan Meir survival curves.*



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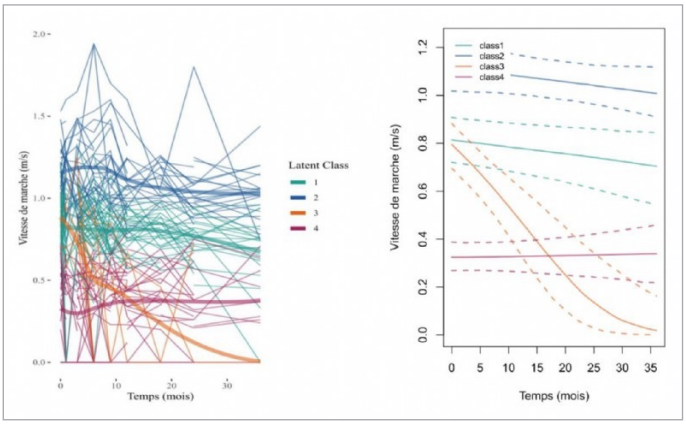


***Figure 2.*** *Observed dynamic clusters.*
*We distinguish 4 gait speed trajectories: Two groups with normal gait speed at inclusion and a low decline through time (class 1 and 2) Class 4 with an impaired gait speed at baseline and global stability through time. Class 3: A rapid decline in gait speed.*

[Abstract:1218]

## FRAGILITY AND SKIN ULCERS

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We present the case of an 85-year-old male, totally independent, who walks unaided. He presents arterial hypertension, diabetes mellitus II and chronic renal insufficiency.
The reason for admission was deterioration of general condition and skin ulcers in the pretibial area of both lower limbs. In one year he was admitted three times due to poor evolution of these lesions, which prevented him from carrying out his daily activities due to severe pain. This caused the patient to be permanently bedridden. The pretibial skin ulcers were necrotic plaques with anfractuous borders, presence of slough and friable erythematous background. Laboratory tests showed elevation of acute phase parameters. During the three admissions, ulcer cultures were requested on numerous occasions, with isolation of multiple microorganisms. A vascular cause was also ruled out.
The initial diagnostic suspicion was of superinfected ischemic ulcers, receiving targeted antibiotic treatment and cures by specialized nursing. Despite this, the ulcers presented a torpid evolution, so a skin biopsy was performed, with findings of *Pyoderma gangrenosum*. Corticosteroid therapy was started, improving considerably and progressively.
Pyoderma gangrenosum is a disease characterized by the presence of very painful, disabling and rapidly evolving ulcers. They are more frequent in the lower limbs, especially in the pretibial area. It can appear spontaneously or due to the phenomenon of patergia.
A torpid evolution of a skin ulcer should make us suspect this lesion and request a skin biopsy. Early diagnosis and treatment avoid deterioration of quality of life, especially in frail patients.

**Keywords:** *Pyoderma gangrenosum, skin ulcers, fragility*

[Abstract:1304]

## HYPONATREMIA AS A PREVENTABLE LEADING CAUSE OF HOSPITALISATION

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**Purpose:** Hyponatremia (serum sodium concentration <135 mmol/L) is the most common electrolyte disorder and accounts for 20% to 35% of hospitalised patients. However, literature is deprived of information on hyponatremia as an admission diagnosis. The purpose of this study is to identify the most common causes of hyponatremia among admitted patients.
**Methods:** A year-long registration was conducted (08/2022-08/2023) and 100 patients (6% of total admissions), who were admitted to our department with hyponatremia were included. Demographics, symptoms at admission, cause and treatment of hyponatremia were studied. Special focus was placed on the clinical frailty scale score and patients' residence (family or own home/institution).
**Findings:** Our sample consisted of 62% females. Mean age was 78 years and mean hospitalisation 7,6 days. Two thirds (68 %) presented with severe hyponatremia (serum sodium <125 mmol/L). 80% were symptomatic, with altered mental status being the most prevalent clinical manifestation (33%), followed by falls (28%), which are associated with fractures and prolonged hospitalisation. In most cases (56%) hyponatremia was attributed to prescribed medication for chronic conditions and derangement of chronic health issues (26% thiazides, 11% acute decompensated heart failure, 10% selective serotonin reuptake inhibitors, 7% other diuretics, 2% antipschycotics). The majority (88%) lived in their family/own home and almost half (47%) were functional outdoor (clinical frailty scale score < =4/9).
**Conclusions:** Inadequate medication optimisation and follow-up of chronic conditions are leading causes of hospitalisation due to hyponatremia, which puts the health of geriatric patients at risk and burdens the healthcare system.

**Keywords:** *hyponatremia, admission, medication optimisation, geriatric patients*

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[Abstract:1342]

## PSYCHOLOGICAL IMPACT ON LIMA'S ELDERLY CAREGIVERS DURING THE 2022 COVID-19 PANDEMIC

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**Introduction:** Caring for an elderly person represents one of the jobs with the greatest burden. Therefore, it is common for the primary caregiver, an individual who maintains frequent contact with the patient and is responsible for him/her, to suffer from physical and/or mental exhaustion, depression, and anxiety. In addition, the COVID-19 pandemic created a context in which these symptoms increased. This grouping of symptoms is known as Psychological Impact.

**Objectives:** To determine the psychological impact on caregivers of older adults during the COVID-19 pandemic and associated factors.

**Materials and Methods:** Cross-sectional-analytical study of 325 participants. A 48-question questionnaire was used that included the independent variables age, gender, kinship, death of family member due to COVID-19, type of caregiver, and patient's disease. Scales were then included to measure the dependent variables such as Zarit to measure caregiver overload, PHQ9 score for levels of depressive symptoms and GAD7 score for anxiety symptoms. The significant presence of at least one of these variables was considered as psychological impact.

**Results:** 229 were female (70.46%) and 96 (29.54%) were male. The mean age was 41.8 years. The number of caregivers who presented psychological impact was 165 (50.7%). Being an older adult caregiver was associated with presenting psychological impact (p=0.039).

**Conclusions:** Half of the caregivers studied (50.7%) had a psychological impact during the COVID-19 pandemic. Being an older adult caregiver (age older than 60 years) was associated with psychological impact.

*Keywords:* *caregiver overload, COVID-19, psychological impact, depression, anxiety*

[Abstract:1418]

## YEDITEPE UNIVERSITY APPROACH TO THE PATIENT WITH MULTIMORBIDITY

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Multimorbidity is the presence of more than three diseases in the same individual. In our diagnostic approach, the patient's demographic characteristics, previous and current diseases, past operations, screening test results, immunoprophylaxis and mental health status are recorded in detail. This detailed history is an essential step in understanding the patient's clinical condition and creating an appropriate treatment plan.

Then a systemic interrogation is made and a physical examination is performed. Life-threatening emergencies of the patient are detected and necessary emergency interventions are initiated immediately.

In patients with multimorbidity, the severity of active disease is evaluated. This evaluation is made together with both the physician, the patient and their relatives, and is essential for determining treatment priorities. The treatment plan is personalized based on the patient's specific needs and existing diseases.

Laboratory results play an important role in the treatment process. These results are interpreted meticulously and interventions are made when necessary. Additionally, the patient's polypharmacy status is reviewed, drug interactions are monitored, and medications are reduced when necessary.

As a part of the treatment, with FAST HUG BID application, important issues such as patient nutrition, analgesia, sedation, thromboembolism prophylaxis, bedside elevation, glycemia control, spontaneous breathing trials, intestinal motility, removal of the source of infection and antibiotic de-escalation are carefully addressed and implemented.

As a result, our approach to patients with multimorbidity focuses on their individual needs. It uses a patient-cantered approach, not a disease-cantered approach. This approach aims to improve patients' sustainable quality of life and achieve optimal health outcomes.

*Keywords:* *multimorbidity, elderly, Yeditepe*

[Abstract:1422]

## EVOLUTION OF PATIENTS' DEPENDENCY LEVEL IN THEIR LAST YEAR OF LIFE

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**Aim:** To describe patients' dependency evolution throughout their last year of life based on Barthel Index and to identify prognostic factors.

**Methods:** An observational retrospective study was conducted between 01.2018 and 01.2019 at a tertiary hospital. Demographic

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and clinical data were collected, recorded in REDCap software and analysed in SPSS24.

**Results:** 666 patients were included, 268 (40.2%) were females with a median age of 74 years-old. In the previous admission year, 19 (2.9%) were totally dependent (Barthel Index < 20); 25 (3.8%) were severely dependent (Barthel 20-35); 54 (8.1%) exhibited moderate dependency (Barthel 40-55); 124 (18.6%) had mild dependency (Barthel 60-99) and 444 (66.7%) were independent (Barthel 100).

394 (59.2%) were hospitalized during an average of 16 days and 72 (10.8%) patients required convalescent care. Analysing the dependency evolution in the previous year of death, 9 (36%) with severe dependency worsened to total dependency; in the moderate dependency group, 21 (39%) worsened; 46 (38%) of the mild dependency group and 129 (29%) of the independents ones also did. Pearson correlation analysis revealed a moderate positive correlation (0.75 with significant bilateral significance, confidence level 0.01). In the regression analysis to assess Barthel-modifying factors, an unstandardized coefficient of-0.607 (p 0.000) was found for CSS admission. This also emerged as the strongest relative weight factor (standardized beta coefficient-0.223). Significant associations were found between dependency level and Charlson Index (-0.030, p0.007) and age (-0.005, p0.018).

**Conclusions:** Dependency worsens in the last year of life. Age and comorbidity seem to be prognostic factors. The association between dependency and sociosanitary centre admissions needs further studies in order to understand if it's linked with sociosanitary admissions or hospitalization itself.

*Keywords:* *dependency, Barthel index, comorbidity*

[Abstract:1466]

## IRON BALANCE DISORDERS IN ELDERLY SUBJECTS ON CHRONIC HEMODIALYSIS

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**Introduction:** Iron balance disorders are prevalent among older adults, particularly those on chronic haemodialysis. Their clinical consequences and their impact on their prognosis justify prevention and appropriate treatment.

Our objective was to determine the iron status and prevalence of anaemia in chronic dialysis patients.

**Materials and Methods:** This is a retrospective descriptive study, carried out in the haemodialysis department of Taher Sfar University Hospital in Mahdia, over a period of 1 year. We included patients aged over 65 years, chronically dialyzed in this centre. We analysed the prevalence of anaemia and the iron profile in these patients.

**Results:** 34 patients were included. Their average age was 72.35 ± 5.89 years with a sex ratio of 0.65. Half of the patients were diabetic, 88.2% were hypertensive and 23.5% suffered from heart failure. The initial nephropathy was diabetic nephropathy in 35%, indeterminate in 23.5%, vascular in 20.6% and tubulo-interstitial in 20.9% of cases. The average length of time in haemodialysis was 1.62 ± 2.015 years [0.3-9]. Anaemia was found in 92.9% of patients with a mean haemoglobin of 8.6 ± 1.71 g/dl [5.2-11.3]. It was macrocytic in 14.3% and microcytic in 4.8% of cases. Low serum ferritin was noted in 83.3% of these patients. Folic acid dosage was abnormal in 5.8% of patients and vitamin B12 dosage was abnormal in 11.7% of patients.

**Conclusions:** Anaemia and iron deficiency are common in elderly patients receiving chronic haemodialysis. Treatment of this anaemia could improve the prognosis of these patients.

*Keywords:* *anaemia, iron deficiency, haemodialysis*

[Abstract:1476]

## CHARACTERISTICS OF NONAGENARIAN PATIENTS CARED FOR IN A CONTINUITY OF CARE UNIT (UCA)

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**Purpose:** Clinical frailty and complex pluripathology in most cases are associated with older ages. We have an important number of patients 90 years old in our unit. we found to describe the characteristics of the population over 90 years of age served in our UCA.

**Methods:** real life study. We evaluate the total number of patients 90 years old treated in our UCA in the period between March 1 and 31, 2023. We assess: total number of patients, total number of people 90 years old, age and sex distribution, cause of follow-up, consultations, admissions, polypharmacy and comorbidities.

**Findings:** Of the total of 166 patients treated in our UCA in the month of March 2023, 46 of them were over 90 years old (27% of the total). Regarding sex, we served 24 women and 22 men. The main cause of follow-up was heart failure (18 patients) followed by anaemia (13). The average number of consultations in the unit was 12. Admissions before follow up in UCA were more frequents. 25 of the patients consumed 10 or more drugs daily. we represent the comorbidities in graph1.

**Conclusions:** 1. Our study population have a high number of patients 90 years old.

2. A decrease in the admissions have been found in these patients, after de contact whit UCA.

3. Heart failure was the most common reason for follow-up.



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4. Polypharmacy continues to be present in more than half of the study subjects.

*Keywords:* *older, nonagenarian, frailty, comorbidities, chronic*

[Abstract:1477]

## ANTICOAGULATION IN NONAGENARIAN PATIENTS CARED FOR IN A CONTINUITY OF CARE UNIT (UCA)

*Victoria Palomar Calvo, Pablo Garcia Carbo, Sara Pintos Otero, Andrea María Moreno Gonzalez, Mehamed Mohamed Mehamed, Miguel Moran Sanchez, Pablo Rodriguez Lopez, Luis Jimenez Jurado, Francisco Josue Cordero Perez, Clara De Diego Cobos, Miriam Ferrero Flores, Francisco Javier Martin Morales, Nuria García Martínez, María Montserrat Chimeno Viñas*

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**Purpose:** Clinical frailty and complex pluripathology in most cases are associated with older ages. Frequent pathologies such as atrial fibrillation (AF) or thromboembolic disease (TED) will be present in a large number of patients, making the decision to anticoagulate sometimes controversial. We found to determine the presence of anticoagulation in the population over 90 years of age treated in our unit.

**Methods:** real life study. We evaluate the total number of patients over 90 years of age treated in our ACU in the period of time between March 1 and 31, 2023, and the presence of AF or TED, use of anticoagulation and drugs.

**Findings:** Of the total of 166 patients treated in our UCA in the month of March 2023, 46 of them were over 90 years old (27% of the total). Of them, 25 patients presented AF and 2 VTE. Regarding the use of anticoagulation, 18 of the patients with atrial fibrillation were anticoagulated and 7 were not anticoagulated. The two patients with VTE were prescribed anticoagulation with acenocoumarol. Regarding the drugs used in patients anticoagulated for AF, we present the total numbers in graph 1.

**Conclusions:** 1. a high number of our patients had pathology with an indication for anticoagulation.

2. of them, 74% were anticoagulated despite their advanced age.

3. Atrial fibrillation was the main cause of anticoagulation indication in our sample.

4. Despite the greater use of direct-acting anticoagulants and among them, factor X inhibitors, acenocoumarol is still present in a high percentage.

*Keywords:* *anticoagulation, nonagenarian, older, atrial fibrillation.*

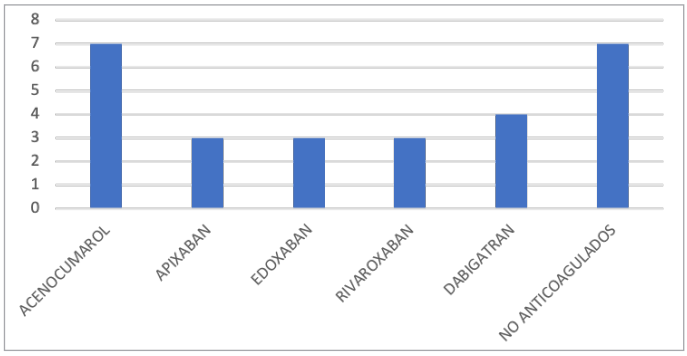


***Figure 1.*** *Graph 1.*

[Abstract:1519]

## CLINICAL AND SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS FROM THE NONAVASC-2 REGISTRY ADMITTED TO A TERTIARY HOSPITAL

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**Objectives:** To analyse the characteristics of patients from Marqués de Valdecilla Universitary Hospital included in the NONAVASC-2 registry, a Spanish multicentric registry of nonagenarian patients with documented cardiovascular disease.

**Methods:** Retrospective descriptive analysis of patients included in the NONAVASC-2 registry for presenting documented vascular disease on admission. Demographic data, risk factors, comorbidity, functional status, previous admissions, cognitive status, level of dependence, anticoagulant and antiplatelet therapy were collected.

**Results:** Thirty-four patients (50% woman) with a mean age of 93.12 years were included. The prevalence of risk factors was high: hypertension (94.1%), dyslipidaemia (58.8%) and diabetes mellitus (17.6%). Severe chronic kidney disease was found on 44.1%. The mean Charlson comorbidity index was 3.47.

From the patients with documented sarcopenia, 57.14% had severe sarcopenia. Only 2.9% lived alone. Falls in the last year were registered in 20.6%, with a mean of 2.71 falls. 91.2% had previously admissions: 58.8% one, 20.6% two and 11.8% three. Cognitive impairment was found in 79.4%. The mean CHADS2-VASc score was 5.53 and the mean HASBLED score 2.91.

The percentage of dependence was high: totally dependent (32.26%), severely dependent (38.71%) and moderately dependent (25.81%). 58.9% received antiplatelet therapy, and 26.5% anticoagulant therapy.

**Conclusions:** Nonagenarian patients with vascular disease have multiple risk factors and high comorbidity, dependence and cognitive impairment. They are often readmitted to hospital. Despite the high CHADS2-VASc score, only a few are anticoagulated. This may be caused by the fact that most of them

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are severely dependent, which often makes questionable the benefit of this therapy.

*Keywords:* *NONAVASC-2 registry, cardiovascular disease, nonagenarian*

[Abstract:1549]

## REASONS FOR ADMISSION TO A TERTIARY HOSPITAL OF PATIENTS INCLUDED IN THE NONAVASC-2 REGISTRY

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**Objectives:** To analyse the reasons for admission to the Internal Medicine Department of patients from Marqués de Valdecilla University Hospital included in the NONAVASC-2 registry, a Spanish multicentric registry of nonagenarian patients with documented cardiovascular disease.

**Materials and Methods:** Retrospective descriptive analysis of patients included in the NONAVASC-2 registry for presenting documented vascular disease on admission to our Department. We collected the cardiovascular disease, the reason for admission and the comorbidity.

**Results:** Thirty-four patients were included (50% female), with a mean age of 93.12 years and with documented vascular disease: cerebrovascular disease (70.6%), symptomatic peripheral arterial disease (8.8%), ischemic heart disease (32.4%). Many of them were admitted for a cardiovascular cause (38.2%): one for ischaemic heart disease (acute coronary syndrome), four for cerebrovascular diseases (one transient ischaemic accident and three strokes) one for symptomatic peripheral arterial disease (critical ischaemia), one for venous thromboembolic disease and eight for heart failures. Atrial fibrillation was found in 26.6% of the patients. Chronic kidney disease (CKD) on admission was registered: 11.8% had stage 3b CKD and 14.7% had stage 4 CKD. 66.67% had cognitive impairment.

**Conclusions:** Half of the patients were included in the NONAVASC-2 registry for a stroke, and a third for ischaemic heart disease. Many of them were admitted for a cardiovascular cause: stroke the most frequent (stablished stroke), followed by ischaemic heart disease (acute coronary syndrome) and peripheral arterial disease. Therefore, the control of risk factors is important in these patients in order to reduce cardiovascular disease.

*Keywords:* *NONAVASC-2 registry, nonagenarian, cardiovascular disease*

[Abstract:1551]

## SURVIVAL ANALYSIS OF PATIENTS INCLUDED IN THE NONAVASC-2 REGISTRY

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**Objectives:** To analyse the survival of patients from Marqués de Valdecilla Universitary Hospital included in the NONAVASC-2 registry, a Spanish multicentric registry of nonagenarian patients with documented cardiovascular disease.

**Materials and Methods:** Retrospective descriptive analysis of patients included in the NONAVASC-2 registry for presenting documented vascular disease on admission. Survival up to 3 years was described and analysed according to vascular involvement and cause of death.

**Results:** Thirty-four patients (50% woman) with a mean age of 93.12 years were included. During the first admission 14.7% died. Within the first year after admission 52.9% were dead, while 69.7% were dead up to the second year (one patient was lost to follow-up). Three years after admission, only 6.06% of the patients remained alive. Median survival was 424.61 days. Survival was different ($p<0.05$) in polyvascular involvement (187 days) from single territory involvement (457.38). There were not significant differences ($p=0.67$) on survival according to the affected territory: cerebrovascular (320.4 days), coronary (200.5 days), peripheral arterial disease (60 days) and polyvascular (306.5 days). Survival in patients who died of cardiovascular diseases (310.33 days) was not statistically significant ($p=0.19$) from survival in patients who died of non-cardiovascular diseases (452.65 days).

**Conclusions:** Nonagenarian patients with vascular disease have a median survival after admission of 1.16 years. Survival appears to be lower in patients with vascular involvement in multiple territories, but this result may be limited by the small number of patients. Survival does not seem to depend on the vascular territory affected or the cause of death.

*Keywords:* *NONAVASC-2 registry, nonagenarian, cardiovascular disease*

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[Abstract:1569]

## FRAILTY PREDICTS ONE-YEAR SURVIVAL AND READMISSIONS IN VERY ELDERLY PATIENTS BETTER THAN COMORBIDITY

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Internal Medicine Department, Hospital Universitario de Gran Canaria Doctor Negrín, Las Palmas de Gran Canaria, Spain

**Objectives:** To analyse the prognostic value of frailty (using the FRAIL scale) in very elderly patients.

**Methods:** Prospective study, in patients hospitalized at the Internal Medicine Department of a tertiary hospital for one year. Demographic characteristics, comorbidities (including Charlson Index), mental status (Pfeiffer test) and frailty (FRAIL scale) were included. After one year of follow-up factors related to readmissions and mortality were evaluated using a Cox regression analysis.

**Results:** A total of 475 patients were included, with a mean age of 89 years (SD ± 3.15), 223 males (46.9%). Most common comorbidities were hypertension (89.7%), diabetes mellitus (48%), heart failure (HF) (52.6%), atrial fibrillation (46.9%) and chronic kidney disease (CKD) (44.4%).One-year mortality was 60% (285 patients), and 213 patients (44.8%) were readmitted.

Mortality was related with age (p=0.013), frailty (p=0.035), Chalson index (p<0.001), Pfeiffer test (p=0.048). In multivariate analysis mortality was independently related to frailty (p=0.007), but not with comorbidity (p= 0.08) or age (p=0.31).

Readmissions were related to the presence of frailty (p=0.045) and comorbidity Charlson index (p=0.002), but not with age (p=0.53) or sex (p=0.84). Readmissions were also associated with the diagnoses of HF (p=0.001), CKD (p<0.001) and chronic obstructive pulmonary disease (COPD) (p=0.036). In the multivariate analysis, frailty remained statistically significantly associated with one-year hospital readmissions (p=0.019), but non Charlson index (p=0.186) or age (p=0.517).

**Conclusions:** According to our study, in very elderly patients, frailty is a better predictor than comorbidity and age of one-year mortality and readmissions, reaffirming the need for structured approach to improve prognosis.

*Keywords: frailty, comorbidity, FRAIL scale, Charlson index*

[Abstract:1604]

## URINARY INCONTINENCE AND THE ASSOCIATION WITH DEPRESSION IN GERIATRIC POPULATIONS

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**Introduction and Aim:** Urinary incontinence (UI) is a geriatric syndrome that becomes more prevalent with age. UI is defined as any involuntary loss of urine and constitutes an important medical and social problem. In addition, UI can lead to psychological problems, such as depression. In this study, we aimed to examine the frequency of depression and the other factors associated with UI in the geriatric population experiencing urinary incontinence.

**Methods:** This is a retrospective, cross-sectional study including older outpatients ≥60 years admitted to a university hospital between November 2012- October 2023. Patients were categorized as having UI if they answered "yes" to the UI screening question. Depression symptoms were measured by Geriatric Depression Scale. According to this scale, patients with a total score of 14 and above were coded as having depression.

**Results:** A total of 681 patients were included in the study. Demographic information, prevalence of depression and univariate analysis results are summarized in Table 1. In the univariate analysis, several variables showed significant differences between the groups. These included gender (p<0.001), education (p=0.002), smoking (p=0.003), alcohol consumption (p=0.004). Furthermore, binary logistic regression analysis indicated that female gender (95% CI:1.72-4.13) and the presence of depression (95% CI:1.4-2.8) were significantly associated with UI (Table 2).

**Conclusions:** Depression is a major public health problem all over the world. There may be many organic reasons underlying depression. When investigating the causes of depression in the geriatric patient population, urinary incontinence should also be taken into consideration.

*Keywords: depression, older people, urinary incontinence*

 **DOI:** 10.12890/2024_V11Sup1

| Urinary Incontinence | | No N(%) | Yes N(%) | P value |
|---|---|---|---|---|
| Age(years) | | 74±7 | 75±7 | .235 |
| Gender | Male | 152(74.5) | 52(25.5) | <.001* |
| | Female | 229(48) | 248(52) | |
| | Total | 381(55.9) | 300(44.1) | |
| Education | Illiterate | 49(42.6) | 66(57.4) | .002* |
| | Literate | 39(47.6) | 43(52.4) | |
| | Elementary school | 151(58.1) | 109(41.9) | |
| | Middle school | 19(47.5) | 21(52.5) | |
| | High School | 50(64.9) | 27(35.1) | |
| | University | 64(68.1) | 30(31.9) | |
| | Postgraduate | 7(63.6) | 4(36.4) | |
| | Total | 379(55.8) | 300(44.2) | |
| Smoking | No | 234(51.7) | 219(48.3) | .003* |
| | Yes | 29(63) | 17(37) | |
| | Left | 111(66.1) | 57(33.9) | |
| | Total | 374(56.1) | 293(43.9) | |
| Alcohol | No | 301(53.3) | 264(46.7) | .004* |
| | Yes | 25(67.6) | 12(32.4) | |
| | Left | 37(75.5) | 12(24.5) | |
| | Total | 363(55.8) | 288(44.2) | |
| BMI (kg/m²) | Underweight | 5(83.3) | 1(16.7) | .290 |
| | Normal | 29(64.4) | 16(35.6) | |
| | Overweight | 14(56) | 11(44) | |
| | Obese | 303(54.1) | 257(45.9) | |
| | Total | 351(55.2) | 285(44.8) | |
| Depression | No | 286(62.4) | 172(37.6) | <.001* |
| | Yes | 95(42.6) | 128(57.4) | |
| | Total | 381(55.9) | 300(44.1) | |

*Table 1. Sociodemographic characteristics and depression according to presence of urinary incontinence.*

| | OR | 95% CI | P value |
|---|---|---|---|
| Gender | 2.664 | 1.72-4.13 | <.001* |
| Smoking | 0.77 | 0.38-1.54 | 0.461 |
| Alcohol | 1.04 | 0.49-2.25 | 0.92 |
| Depression | 1.989 | 1.4-2.8 | <.001* |
| Education | 0.9 | 0.81-1 | 0.60 |

*Table 2. Binary logistic regression analysis results.*

[Abstract:1634]

# THE RELATIONSHIP BETWEEN DEMENTIA SUBTYPES AND DEHYDRATION IN OLDER PATIENTS

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**Purpose:** There are a few studies showing how dehydration is affected according to dementia subtypes. The aim of this study was to investigate the prevalence and risk factors of dehydration in older adults with and without dementia and there were any differences between different dementia subtypes.

**Methods:** This study included 1377 older adults in a geriatric outpatient clinic. Dehydration was defined as a calculated [1.86 x (Na+K) + 1.15 × glucose + urea + 14] plasma osmolarity of >295 mOsm/L. Clinical characteristics and measures of comprehensive geriatric assessments of patients with dehydration and normohydration were compared.

**Findings:** Of the 1377 patients (575 of whom had dementia) included, 72% were female, and the mean age was 80±8. 575 individuals. Dehydration was higher in patients with dementia (PwD) than those without dementia (58% versus 53%, p=0.044). Dementia subtypes included Alzheimer's disease (n=281), Parkinson's disease (n=42), fronto-temporal dementia (n=28), Lewy-body dementia (n=126), vascular dementia (VaD) (n=47), mixt type or unclassified (n=51). PwD had a significant risk of dehydration compared to those without dementia (OR 1.26, 95% CI 1.01-1.57) (p=0.037). Dehydration was insignificantly more common in VaD than the others. The presence of hypertension, diabates mellitus (DM), chronic kidney disease (CKD), and dysphagia were higher and MMSE score is lower in the dehydrated group compared to non-dehydrated group among PwD (p<0.05).

**Conclusions:** Dehydration was observed in half of the PwD and 1.26 times higher in PwD than those without dementia. Hypertension, DM, CKD, dysphagia, and cognitive dysfunction was associated with dehydration in PwD. No differences in prevalence of dehydration dementia subtypes.

*Keywords: dementia, dehydration, dementia subtypes*



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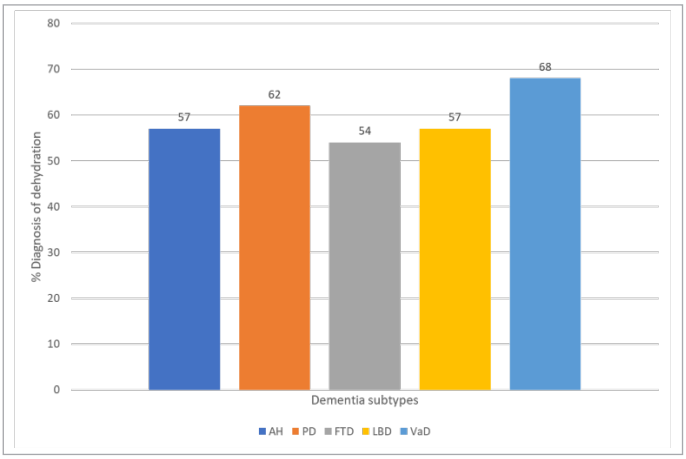


***Figure 1.*** *The prevalence of dehydration in dementia subtypes.*

[Abstract:1724]

## PHARMACEUTICAL DEPRESCRIPTION IN POLYMEDICATED PATIENTS HOSPITALIZED IN INTERNAL MEDICINE

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Polypharmacy in elderly patients affects their health and has a great economic impact. The aim of this study is to analyse the results of a pharmaceutical deprescribing project in patients with polypharmacy hospitalized in Internal Medicine in a tertiary hospital.

A longitudinal and prospective study was carried out between December 2022 and February 2023 in an Internal Medicine Department. All patients hospitalized under the care of an internist physician who had at least 5 chronic treatments and whose vital prognosis was not less than 6 months were included.

The pharmacist prepared a deprescription proposal and a consensus was reached with the treating physician and the patient about the discontinuation of drugs considered unnecessary or contraindicated.

21 treatment reviews were carried out in 20 patients whose mean age was 87 ± 9 years. 12 patients (60%) were male. A total of 202 treatments were reviewed. Deprescription was performed in 15 patients (75%) in which 33 treatments were discontinued (16.3%). 6 dose adjustments were made (3%). Altogether, 63 recommendations were proposed and 55 (87.3%) were implemented. The main deprescribed drugs were omeprazole (3 patients), cholecalciferol (3 patients), gabapentin (2 patients), sitagliptin (2 patients) and trazodone (2 patients).

Regarding the economical aspect, the intervention resulted in a monthly saving of €264.87 (€13.24/month per patient) and annual saving of €3178.39 (€158.92/year per patient).

The high rate of implementation of the proposals shows a good valuation of the pharmaceutical contributions by the Internal Medicine team and a willingness to create multidisciplinary teams by both professionals.

*Keywords:* *polypharmacy, deprescription, internal medicine*

[Abstract:1752]

## THE OTHER PANDEMIC: POLYPHARMACY IN NURSING HOME RESIDENTS

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Background and AIMS: Polypharmacy is defined by WHO as the habitual consumption of 5 to 10 drugs, and excessive polypharmacy involves the prescription of more than 10 medications. There is very little data on the population of nursing home centres.

**Objectives:** Describing the polypharmacy and its classification, as well as the types of drugs most commonly used in patients admitted to the hospital from nursing homes.

**Methods:** Descriptive, retrospective and observational study of patients admitted to a first-level hospital from nursing homes between January-June 2021.

**Results:** 175 patients were included (64.6% women); mean age 84 (47.4% higher than 85).

Prescribed drug count: median 10; p75 13 drugs. Most consumed pharmacological groups: PPIs 76.2%, psychotropic drugs 88.8%, and opioids 19.9%. No differences between sex. By specific drugs: 24% on anticoagulants (62.2% with vitamin K antagonists; 37.8% with DOACs), 46.1% on antiplatelets. Among psychotropic drugs, ordered by consumption: benzodiazepines 70.1%, trazodone 19.5%, ACE inhibitors 19.5% (with memantine being the most common), quetiapine 18.8%, and haloperidol 15.5%. 16.9% were taking oral opioids, and 23.2% were using transdermal opioids.

**Conclusions:** The majority of patients from nursing homes are polypharmacized, with 25% of our sample even exhibiting excessive polypharmacy. Polypharmacy is a reality in the elderly population, and we must consider it due to the numerous issues related to it, especially geriatric syndromes and pharmacological interactions.

*Keywords:* *polypharmacy, nursing home, geriatric*


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[Abstract:1771]

# PREDICTORS OF MORTALITY AND READMISSION IN MULTI-MORBID PATIENTS ADMITTED TO INTERNAL MEDICINE

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**Objectives:** Describe the characteristics of multi-morbid patients admitted to Internal Medicine and determine, through the most frequently used scales, the risk of mortality and readmission within 30 days.

**Methods:** A retrospective study of 412 multi-morbid patients admitted to Internal Medicine during March 2023. Clinical variables were collected, along with scores on the Barthel and Norton scales upon admission. We carried both a descriptive and correlation analysis of the sample.

**Results:** The most prevalent comorbidity collected in the Charlson index in our group was heart failure, with 137(33.3%) patients. Mortality according to the Barthel index was higher in the total-dependent group (31.5% vs.2.4% independent, 15.9% slightly-dependent, 13% moderately-dependent, and 14.3% severely-dependent, p<0.001), as well as in patients in the high-risk subgroup according to Norton (47.6% vs. 5.7% no-risk, 16.7% low-risk, and 21.2% medium-risk, p<0.001). There were no statistically significant differences in readmission rates. Within Charlson index, higher mortality was demonstrated in patients with chronic kidney disease (22.6%vs.11.9%, p<0.001), as well as dementia (23.4%vs.10.3%, p=0.001); and metastatic neoplasia (31.6%vs.13.2%, p=0.037).

**Conclusions:** Within the Charlson comorbidity index, chronic kidney disease and dementia carry more prognostic weight, along with metastatic neoplasia. The Norton scale has proven to be a good independent predictor of short-term mortality, just like the Barthel Index, where we observe a correlation between the degree of dependence and patient prognosis. Further studies are needed to establish the role of these tools in staging, determining courses of action for patients with high-risk health conditions and assessing the palliative needs of said groups.

*Keywords:* *Barthel, Norton, Charlson, multi-morbid, mortality*

| CHARLSON INDEX | | Total | Exitus Yes | Exitus No | Sig. |
|---|---|---|---|---|---|
| Myocardial infarction | Sí | 45 (10,9%) | 9 (20%) | 36 (80%) | NS (p=0,162) |
| | No | 367 (89,1%) | 49 (13,4%) | 318 (86,6%) | |
| Congestive heart failure | Sí | 137 (33,3%) | 20 (14,6%) | 117 (85,4%) | NS (p=0,47) |
| | No | 275 (66,7%) | 38 (13,8%) | 237 (86,2%) | |
| Peripheral vascular disease | Sí | 28 (6,8%) | 5 (17,9%) | 23 (82,1%) | NS (p=0,35) |
| | No | 384 (93,2%) | 53 (13,8%) | 331 (86,2%) | |
| Cerebrovascular disease | Sí | 88 (21,4%) | 14 (15,9%) | 74 (84,1%) | NS (p=0,43) |
| | No | 324 (78,6%) | 44 (13,6%) | 280 (86,4%) | |
| Dementia | Sí | 112 (27%) | 26 (23,4%) | 86 (76,6%) | p =0,001 |
| | No | 300 (73%) | 31 (10,3%) | 269 (89,7%) | |
| COPD | Sí | 80 (19,5%) | 12 (15%) | 68 (85%) | NS (p=0,46) |
| | No | 331 (80,5%) | 46 (13,9%) | 285 (86,1%) | |
| Peptic ulcer disease | Sí | 31 (7,5%) | 4 (12,9%) | 27 (87,1%) | NS (p=0,55) |
| | No | 381 (92,5%) | 54 (93,1%) | 327 (85,8%) | |
| Diabetes | Sí | 102 (24,8%) | 17 (29,3%) | 85 (83,3%) | NS (p=0,24) |
| | No | 310 (75,2%) | 41 (13,2%) | 269 (86,8%) | |
| DM with end organ damage | Sí | 21 (5,1%) | 3 (14,3%) | 18 (85,7%) | NS (p=0,58) |
| | No | 391 (94,9%) | 55 (14,1%) | 336 (85,9%) | |
| Mild liver disease | Sí | 13 (3,2%) | 1 (7.7%) | 12 (92,3%) | NS (p=0,43) |
| | No | 399 (96,8%) | 57 (14,3%) | 342 (85,7%) | |
| Moderate or severe liver disease | Sí | 6 (1,5%) | 1 (16,7%) | 5 (83,3%) | NS (p=0,60) |
| | No | 406 (98,5%) | 57 (14%) | 349 (86%) | |
| Connective tissue disease | Sí | 18 (4,4%) | 3 (5,2%) | 15 (83,3%) | NS (p=0,48) |
| | No | 394 (86%) | 55 (14%) | 339 (86%) | |
| Hemiplegia | Sí | 11 (2,7%) | 2 (18,2%) | 9 (81,8%) | NS (p=0,48) |
| | No | 400 (97,3%) | 56 (14%) | 344 (86%) | |
| Moderate or severe renal disease | Sí | 84 (20,4%) | 19 (22,6%) | 65 (77,4%) | p=0,012 |
| | No | 328 (79,6%) | 39 (11,9%) | 289 (88,1%) | |
| Malignant tumor | Sí | 63 (15,3%) | 11 (17,5%) | 52 (82,5%) | NS (p=0,65) |
| | No | 348 (84,5%) | 47 (13,5%) | 301 (86,5%) | |
| Solid metastatic tumor | Sí | 19 (4,6%) | 6 (31,6%) | 13 (68,4%) | p=0,037 |
| | No | 393 (95,4%) | 52 (13,2%) | 341 (86,8%) | |
| Leukemia/Lymphoma | Sí | 12 (2,9%) | 1 (8,3%) | 11 (91,7%) | NS (p=0,48) |
| | No | 400 (97,1%) | 57 (14,2%) | 343 (85,8%) | |
| AIDS | Sí | 1 (0,2%) | 0 | 1 (100%) | NS (p=0,48) |
| | No | 411 (98,9%) | 58 (14,1%) | 353 (85,9%) | |

*Table 1.* *Charlson Comorbidity index and mortality.*

| | Categoría | Total | Éxitus Sí | Éxitus No | Significación |
|---|---|---|---|---|---|
| SEX | Female | 227 | 27 (11,9%) | 200 (88,1%) | NS (P=0,102) |
| | Male | 185 | 31 (16,8%) | 154 (83,2%) | |
| AGE | <90 years old | 315 | 39 (12,4%) | 276 (87,6%) | NS (P=0,06) |
| | >90 years old | 97 | 19 (19,6%) | 78 (80,4%) | |
| BASELINE SITUATION | Independent for ADL | 221 | 17 (7,7%) | 204 (92,3%) | P <0,001 |
| | Partially dep. for ADL | 115 | 19 (16,5%) | 96 (83,5%) | |
| | Dependent for ADL | 76 | 22 (28,9%) | 54 (71,1%) | |
| INSTITUTIONALIZED | Yes | 37 | 9 (24,3%) | 28 (75,7%) | NS (P=0,06) |
| | No | 375 | 49 (13,1%) | 326 (86,9%) | |
| BARTHEL CATEGORY | Independent (100) | 125 | 3 (2,4%) | 122 (97,6%) | P <0,001 |
| | Slight dep. (91-99) | 63 | 10 (15,9%) | 53 (84,1%) | |
| | Moderate dep (61-90) | 46 | 6 (13%) | 40 (87%) | |
| | Severe dep. (21-60) | 35 | 5 (14,3%) | 30 (85,7%) | |
| | Total dep. (0-20) | 54 | 17 (31,5%) | 37 (68,5%) | |
| NORTON CATEGORY | No risk (>15) | 245 | 14 (5,7%) | 231 (94,3%) | P <0,001 |
| | Low risk (13-14) | 48 | 8 (16,7%) | 40 (83,3%) | |
| | Medium risk (10-12) | 57 | 12 (21,2%) | 45 (78,9%) | |
| | High risk (5-9) | 42 | 20 (47,6%) | 22 (52,4%) | |

*Table 2.* *Descriptive, Barthel, Norton and mortality.*



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[Abstract:1793]

## ASESSMENT OF THE APLICABILITY OF MULTIDIMENSIONAL ASESSMENT SCALES IN A MONOGRAPHIC CONSULTATION FOR PLURIPATHOLOGICAL AND COMPLEX CHRONIC PATIENTS

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**Objectives:** 1. To investigate the outcomes of multidimensional assessment using scales in a specialized consultation for patients with multimorbidity and complex chronic conditions.

2. Calculate the mortality rate of patients followed in this consultation throughout the study period.

**Methods:** This is a descriptive study in which the results of multidimensional assessment scales were collected, along with the age, gender, and final outcome (exitus) of patients treated in a multimorbidity consultation during the period from 2021 to 2023.

**Results:** A total of 219 patients were followed, with an average age of 84.79 years, comprising 44.7% males and 55.3% females. Throughout the follow-up period, 24.6% of the patients passed away. The mean scores for the Profund, Barthel, Frail, and Pfeiffer scales were 7.38, 71.98, 2.01, and 2.25, respectively. Moreover, 41% were at risk of malnutrition, 20% experienced falls requiring healthcare, and 42% had a significant walking disorder. Additionally, 27% required a caregiver.

**Discussion:** Patients reviewed in our specialized consultation for multimorbidity and complex chronic conditions are of very advanced age with a high mortality rate, significant functional dependency, and frailty, yet with preserved cognitive function. We observe an elevated risk of malnutrition and a prevalent reduction in mobility. The considerable number of patients requiring a caregiver should not be overlooked.

**Conclusions:** The implementation of multidimensional assessment through scales in patients with multimorbidity and complex chronic conditions provides a better understanding of our patients' reality, enabling us to respond more effectively to their needs, irrespective of their specific pathologies.

*Keywords: multimorbidity, multidimensional assessment, scales*

[Abstract:1828]

## PROGNOSIS IN HOSPITALIZED COMPLEX CHRONIC POLYPATHOLOGICAL PATIENTS WITH SARCOPENIA

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**Objectives:** This study aims to associate findings from clinical muscular ultrasound with diagnosis of sarcopenia and prognosis of complex chronic polypathological (CCP) patients.

**Materials and Methods:** We conducted an observational study of hospitalized internal medicine CCP patients, using an ultrasound machine to quantify muscle mass both rectus femoris and medial gastrocnemius muscles in patients with sarcopenia (by dynamometry). Images were analysed with ImageJ® program (Figure 1-2).

**Results:** We enrolled 41 patients, with a mean age of 84.93 +/- 9.87; 56% were women. In-hospital mortality was 17.1%, and at 6 months, it was 12.2%. 53.7% were readmitted in less than 6 months, with 19 (43.3%) 6-months new admissions (35.7% readmitted in less than 30 days).

A lower pennation angle was significantly associated with higher in-hospital mortality (p=0.036). Regarding 6-month mortality, thickness (X) (p=0.000002), diameter (Y) (p=0.014), their ratio (X/Y) (p=0.045) and area (p= 0.000082) were significantly related to increased mortality (table 1). Furthermore, a smaller area was associated with a higher admission frequency.

Although not statistically significant, a lower ratio between thickness and diameter was associated with an increase length of hospital stay.

**Discussion:** Sarcopenia measurement through ultrasound enables us to predict mortality, especially in the medium term (6 months) and is related to new admissions. Although not significantly demonstrated, there are a certain relationship between length of stay and sarcopenia. However, no association with echogenicity has been found.

**Conclusions:** Muscular ultrasound is a simple, inexpensive, and easily accessible technique that allows quantifying sarcopenia and establish a prognosis in CCP patients.

*Keywords: sarcopenia, ultrasound, complex chronic polypathological (CCP) patients*

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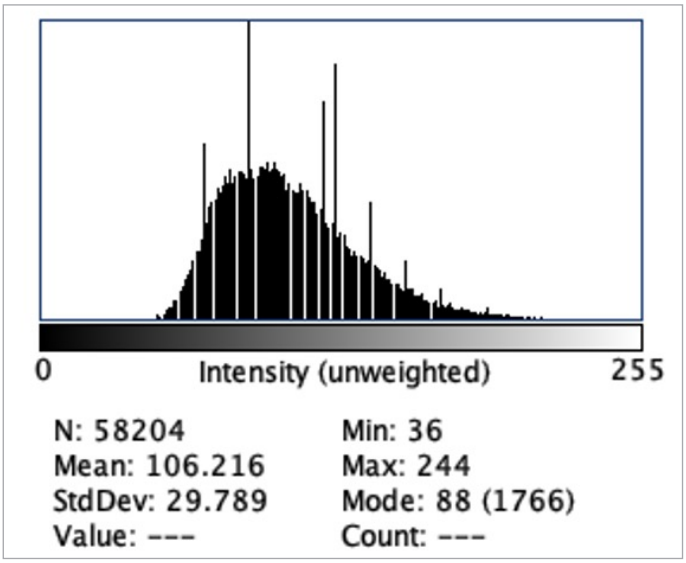


*Figure 1. Histogram of echogenicity (ImageJ® program).*

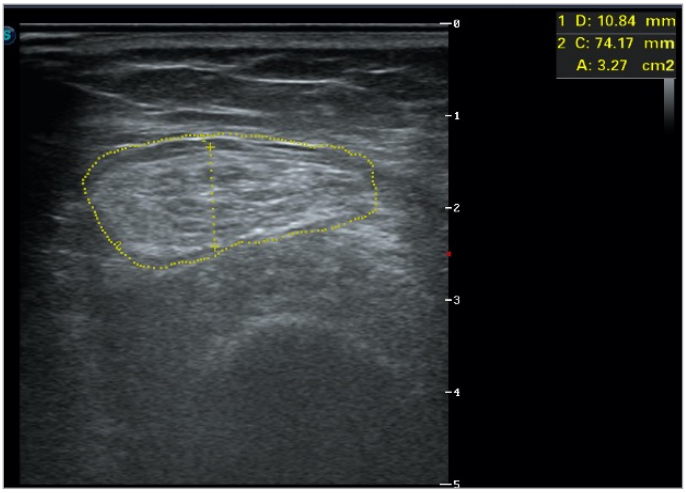


*Figure 2. Measurement of ultrasound parameters in rectus femoris muscle.*

| Ultrasound variables | In-hospital mortality p-value | -months mortality p-value | Length of hospital stay p-value | 6-months admission p-value |
|---|---|---|---|---|
| Diameter (X) | 0.247 | 0.014 | 0.687 | 0.306 |
| Thickness (Y) | 0.188 | 0.000002 | 0.345 | 0.106 |
| X/Y ratio | 0.467 | 0.045 | 0.053 | 0.521 |
| Area | 0.187 | 0.000082 | 0.674 | 0.044 |
| Pennation angle | 0.036 | 0.461 | 0.730 | 0.785 |
| Echogenicity | 0.896 | 0.170 | 0.641 | 0.909 |

*Table 1. Relationship between ultrasound parameters and mortality upon admission, at 6 months, hospital length of stay and 6-month admission.*

[Abstract:1839]

# CHARACTERISTICS AND COMORBIDITIES OF PLURIPATHOLOGICAL PATIENTS ADMITTED TO A SPANISH TERTIARY HOSPITAL

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**Summary:** With the rising number of pluripathological patients, understanding contributing factors to hospital admissions is crucial for improving their care.

**Purpose:** This study aimed to describe and compare characteristics of patients enrolled in the pluripathological program at a Spanish tertiary hospital based on their hospitalization needs.

**Methods:** A descriptive study including 2885 patients meeting Olleros's pluripathology criteria during 2022. Excluded cases: patients with active cancer, haemodialysis, in palliative care, or those institutionalized with a personal physician. Characteristics and comorbidities of admitted and non-admitted patients were compared using chi-square analysis.

**Findings:** Of registered patients, 58.65% visited the emergency department. Among 1125 admitted patients, 9.16% were homebound, 6.58% frail, 32.89% dependent, and 92.98% lived in residences. Of these, 96.44% visited their primary care physician and 82.67% attended specialist consultations at least once. Among 1862 non-admitted patients, 5.42% were homebound, 4.62% frail, 13.1% dependent, and 5.48% lived in residences. Of these, 90.28% visited their primary care physician, and 72.18% attended specialist consultations.

Comparing comorbidities, admitted patients showed a significant increase ($p<0.05$) in stroke, chronic anaemia, peripheral artery disease, ischemic heart disease, dementia, diabetes, liver disease, hypertension, heart failure, chronic kidney disease, hip fracture, and osteoporosis. No statistically significant differences were observed in COPD, inflammatory bowel disease, connective tissue disorders, and portal hypertension

**Conclusions:** Most pluripathological patients visit the hospital annually, with nearly 40% requiring admission. Comorbidities like ischemic heart disease, chronic kidney disease, peripheral artery disease, hypertension, liver disease, diabetes, heart failure, hip fracture, and osteoporosis independently increase hospitalization risk.

*Keywords: pluripathology, Ollero's pluripathology criteria, comorbidity*



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[Abstract:1958]

# EMPAGLIFLOZIN IN FRAIL DIABETIC ELDERS WITH CHRONIC KIDNEY DISEASE

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[4] University of Naples "Federico II", Naples, Italy

**Summary:** Type 2 diabetes mellitus drives the onset of chronic kidney disease (CKD) with diabetic kidney disease, particularly in older adults increasing the risk of frailty with cognitive and physical impairment. Empagliflozin is a sodium glucose cotransporter 2 inhibitor with pleiotropic effects and a strong impact on CKD.

**Purpose:** We evaluated the effect of empagliflozin on cognitive impairment in frail older adults with diabetes and CKD.

**Methods:** We enrolled frail older adults with a previous diagnosis of diabetes and CKD with GFR>30. All of them fulfilled the following inclusion criteria: previous diagnosis of diabetes, frailty, and CKD with glomerular filtration rate (GFR)> 30 and < 60; age > 65 years; Montreal Cognitive Assessment (MoCA) Score< 26. We evaluated global cognitive function at baseline and after 3 months using the MoCA test.

**Findings:** We evaluated 166 frail elders with diabetes and CKD but 119 patients entered the study. We divided our population in 2 groups based on the antidiabetic treatment: empagliflozin in addition to standard therapy (59 patients) and no empagliflozin treatment (60 patients). We tested the MoCA scores in the 2 groups at baseline and 6 months follow-up: 19.7 ±3.68 vs. 21.4±3.66 (p: 0.009) in the empagliflozin group; 19.4±3.76 vs. 19.5±3.67 (p: 0.119) in the untreated group.

**Conclusions:** We are the first group to highlight this effect of empagliflozin on cognitive impairment in frail older adults with diabetes and CKD. This is a great catch because empagliflozin may be considered an anti-frailty drug for its pleiotropic effects beyond diabetes.

*Keywords:* *frailty, older adults, diabetes, CKD, SGLT2 inhibitors.*

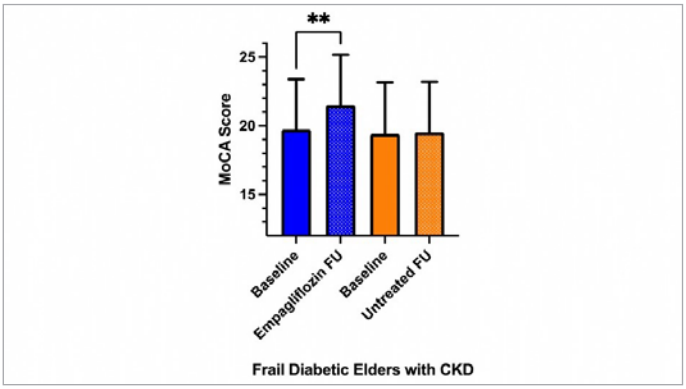


*Figure 1.*

[Abstract:1988]

# FACTORS RELATED TO MORTALITY AND READMISSION IN PATIENTS OVER 75 YEARS ADMITTED TO INTERNAL MEDICINE

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The study focused on evaluating mortality patterns in patients aged over 75 years admitted to internal medicine. Analysis included hospital mortality, deaths during admission or within 30 days of admission, and all-cause mortality over 1 year.

**Methods:** A retrospective descriptive study was conducted on individuals over 75 years of age admitted in October 2021 and followed for one year. Statistical tools such as chi-squared tests were used to compare qualitative variables, while Kaplan-Meier curves were used for survival analysis.

Out of 151 patients, 11 died during admission (7.3%), with 8 additional deaths within the first month, making a total of 19 (12.6%). Factors significantly associated with mortality were severe dependency (Barthel <60), high comorbidity (Charlson index ≥3), increased risk of death within one year (PROFUND ≥7), dysphagia on admission and elevated C-reactive protein (>10 mg/l). Kaplan-Meier analysis showed significant associations with severe dependence, PROFUND score ≥7, and high comorbidity. History of ischaemic heart disease negatively influenced survival. Elevated C-reactive protein, anaemia (Hb <10 g/dl) and high uraemia on admission were associated with reduced survival.

During follow-up, there were 36 deaths (25.7% per year), mainly related to moderate to severe dependency, comorbidity and the PROFUND index, in particular 50% mortality in patients with a score ≥11. Patients with ischaemic heart disease or heart failure showed strong associations with readmission.

In conclusion, dependency, comorbidity, previous admissions and specific markers negatively influenced survival. Similar factors influenced 12-month mortality and readmissions, highlighting the importance of comprehensive patient data for tailored in-hospital care.

*Keywords:* *mortality, elderly, comorbidity*



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[Abstract:1996]

# CAN URINE AMINO ACID LEVELS BE AN INDICATOR OF SARCOPENIA?

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**Aim:** Sarcopenia is a syndrome that causes falls, fractures, and morbidity in geriatric patients. It is important to detect sarcopenia early, as it is known that muscle functions are improved with early treatment. There is no information about which amino acid is increased in urine in sarcopenia. We investigated the relationship between sarcopenia and urinary amino acid (UAA).

**Methods:** 91 patients aged 45-65 were included in the study. 16 different UAA's of the patients were analysed. Anthropometric measurements and muscle mass were measured. Muscle strength and physical performance were evaluated. Patients were divided presarcopenic, sarcopenic, severe-sarcopenic and nonsarcopenic, according to EWGSOP2. P<0.5 was considered significant.

**Results:** 53-women and 38-men were included in the study. 3 patients were presarcopenic, 11 patients were sarcopenic, 2 patients were severely sarcopenic, and 75 patients were nonsarcopenic. The comparison was made in the sarcopenia and nonsarcopenia groups (Table 1). A significant difference was detected in glutamine (p<0.00) and valine (p<0.001). In ROC analysis, the cut-off values of glutamine and valine levels in detecting sarcopenia were determined as 492 µmol/L and 209 µmol/L (Figure 1). There was a negative correlation between muscle strength and glycine (r:-0.225, p:0.032), alanine (r:-0.224, p:0.033), leucine (r:-0.219, p:0.037) and threonine (r:-0.276, p:0.008). Also there was a negative correlation between muscle mass and leucine (r:0-.218, p:0.038) and taurine (r:-0.230, p:0.028).

**Conclusions:** We provide evidence that some UAA levels may be markers of sarcopenia. We found that patients with sarcopenia had high urinary glutamine and valine levels, and that urinary leucine level was related to both muscle strength and muscle mass.

*Keywords: sarkopeni, idrar, amino asit, biyobelirtec*

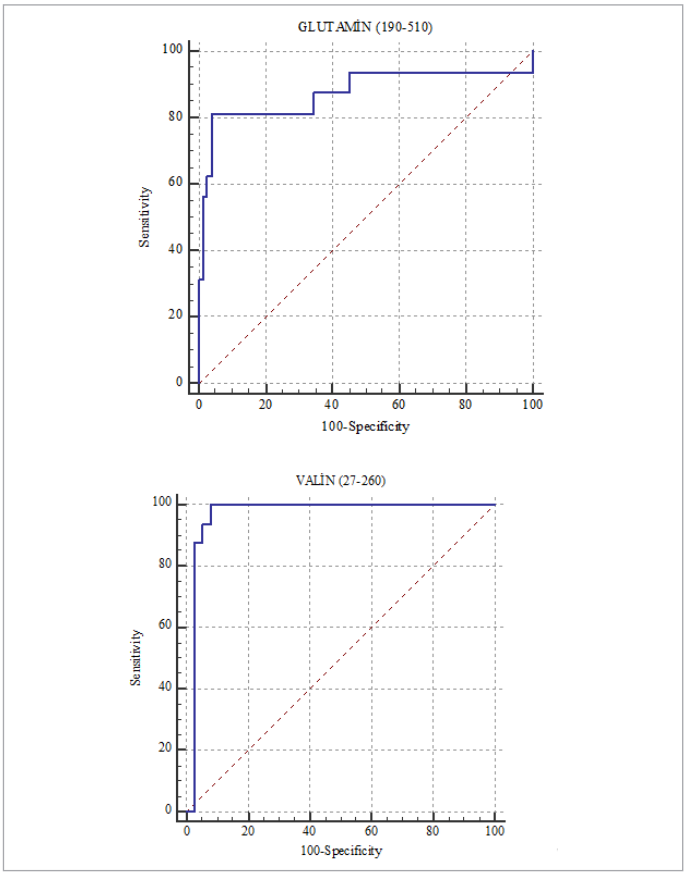


*Figure 1. The cut-off values of glutamine and valine levels in detecting sarcopenia.*

| | Non-sarcopenic Patient (N:75) | Sarcopenic Patient (N:11) | |
|---|---|---|---|
| | Mean±SD | Mean±SD | P value |
| Age (years) | 59±6 | 61±4 | 0,583 |
| Height (cm) | 162±7 | 166±7 | 0.066 |
| Weight (kg) | 50±11 | 50±13 | 0.751 |
| BMI (kg/m²) | 19.17±4.58 | 17.89±3.84 | 0.386 |
| Get Up and Go Test | 2±1 | 1±1 | 0.35 |
| Upper Arm Circumference (cm) | 23±5 | 23±4 | 0.785 |
| Calf Circumference (cm) | 29±4 | 26±6 | 0.092 |
| Muscle strength (kg) | 25±7 | 22±4 | 0.259 |
| Muscle Mass (kg) | 37.9±8.3 | 32.1±8.7 | 0.037 |
| SMMI Index | 12.53±2.21 | 7.34±2.08 | <0.001 |
| Glutamine (190-510 µmol/L) | 298.5±105.9 | 580.8±125 | <0.001 |
| Aspartic Acid (60-240 µmol/L) | 64.42±15.2 | 61.55±4.9 | 0.974 |
| Glutamic Acid (39-330 µmol/L) | 78.81±111.76 | 60.18±22.25 | 0.689 |
| Glycine (730-4160 µmol/L) | 510±525 | 415±411 | 0.756 |
| Alanine (240-670 µmol/L ) | 357.5±544.99 | 309.99±181.11 | 0.938 |
| Valine (27-260 µmol/L ) | 202±304 | 378±95 | <0.001 |
| Leucine (30-150 µmol/L) | 97.37±103.46 | 101.23±40.3 | 0.205 |
| Serine (240-670 µmol/L ) | 304.96±108.77 | 302.97±49.59 | 0.596 |
| Threonine (130-370 µmol/L) | 212.95±86.81 | 188.91±41.65 | 0.232 |
| Methionine (38-210 µmol/L) | 60.87±56.53 | 54.46±13.71 | 0.851 |
| Taurine (380-1850 µmol/L ) | 419.59±43.06 | 436.89±84.62 | 0.66 |
| Phenylalanine (51-250 µmol/L) | 100.51±90.05 | 90.11±36.3 | 0.959 |
| Histidine (460-1430 µmol/L) | 488.47±65.91 | 476.38±20.81 | 0.548 |
| Citrulline (8-50 µmol/L) | 24.5±16.2 | 16.6±6.7 | 0.112 |
| Ornithine (20-91 µmol/L) | 92.06±39.93 | 99.05±43.16 | 0.596 |
| Arginine (10-90 µmol/L) | 62.68±124.47 | 52.85±55.33 | 0.816 |

*Table 1. Comparison of All Parameters in Sarcopenic and Non-sarcopenic Groups.*



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[Abstract:2004]

## THE COMPLEXITY OF THE ELDERLY PATIENT: ANALYSIS OF COMORBIDITY AND PROGNOSIS IN PATIENTS OVER 75 YEARS OF AGE ADMITTED TO INTERNAL MEDICINE

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The study aimed to analyse baseline characteristics of patients over 75 admitted to a secondary-level hospital's Internal Medicine service. It focused on prevalent comorbidities and the degree of patient dependency, utilising validated scales like Charlson and Profund.

The study included patients over 75 admitted to the Internal Medicine service in October 2021. Statistical tests like $\chi 2$ (Chi-square) for qualitative variables and Student's t-test

A total of 151 patients over 75 were admitted during the study, with 60.3% being women. Their median age stood at 83 (79-87) years. Notably, 60.9% displayed moderate to severe dependency (Barthel <60), and primary caregiving was primarily undertaken by children (42.4%). Regarding prognosis measured by the Profund index, about 31% exhibited a high risk (≥11 points), whilst merely 14% had a low risk (<2 points). Comorbidity analysis showed that 90.7% had hypertension, over 50% had diabetes and dyslipidaemia.

Heart failure emerged as the most common comorbidity, affecting roughly 60% of patients, followed by chronic kidney disease (43%) and chronic respiratory disease (32%). The primary cause of admission (64%) was cardiopulmonary failure, prominently decompensated heart failure, followed by renal failure (11%) and digestive failure (10%).

In conclusion, this analysis illustrates that this elderly population presents significant complexity, with a high prevalence of multipathology and dependency levels, as well as uncertainty in prognosis for over half of the cases. Hospital admissions were notably influenced by heart failure, especially its decompensation. These findings emphasise the need for improved care strategies and further research to enhance healthcare quality.

*Keywords: elderly, comorbidity, retrospective study*

[Abstract:2010]

## ASSOCIATION OF URINARY INCONTINENCE WITH PHYSICAL FRAILTY AND FACTORS AFFECTING FRAILTY

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**Objectives:** The aim of this study was to examine the relationship between urinary incontinence (UI) and physical frailty (PF) and the factors affecting frailty.

**Methods:** 1266 patients who were followed up in Istanbul University Geriatrics Clinic between 2012 and 2023 were divided into two groups according to the presence or absence of UI. The primary outcome was to investigate the association between PF and UI, and the secondary outcome was to investigate the association between factors affecting PF and UI.

**Results:** Of the 1266 participants, 537 had a history of UI. Demographic characteristics of the participants are presented in Table 1. When the patients were analysed as nonfragile, prefrail and frail by FRAIL Questionnaire Screening Tool, prefrailty and frailty were associated with UI ($p<0.001$, OR: 1.62, 95% CI: 1.26-2.08 and OR: 3.3, 95% CI: 2.38-4.64, respectively). The association of UI with frailty-related factors was evaluated by univariate logistic regression, the results are presented in table 2. The risk of UI was increased in those with a history of falls, low hand grip strength, low gait speed and longer Timed Up & Go (TUG) test, and the risk of UI decreased as physical activity increased.

**Conclusions:** There is a significant relationship between frailty and urinary incontinence. At the same time, the presence of falls, physical activity, decreased walking speed, hand grip, longer TUG test was associated with frailty were also associated with urinary incontinence. Screening for UI in frail and prefrail patients and improving interventions may be useful for this common comorbidity.

*Keywords: Frailty, Urinary incontinence, falls, walking speed, muscle strength*

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| Table 1 – Demographic characterics of participants and according to presence or absence of urinary incontinance history | | History of urinary incontinence No n = 729 counts, (%) | Yes (n = 537) counts, (%) |
|---|---|---|---|
| Age | 60-64 | 30 (4.1) | 20 (3.7) |
| | 65-70 | 153 (21) | 103 (19.2) |
| | 70-75 | 181 (24.8) | 121 (22.5) |
| | 75-80 | 200 (27.4) | 136 (25.3) |
| | >80 | 165 (22.6) | 157 (29.2) |
| Gender | Male | 297 (40.7) | 107 (19.9) |
| | Female | 432 (59.3) | 430 (80.1) |
| Body mass index (kg/m2) | 18.5 | 7 (1.0%) | 1 (0.2%) |
| | 18.5 25 | 150 (20.6%) | 74 (13.8%) |
| | 25 30 | 285 (39.1%) | 175 (32.6%) |
| | 30 35 | 202 (27.7%) | 173 (32.2%) |
| | 35 | 85 (11.7%) | 114 (21.2%) |
| Education level | None/Elementary | 557 (76.4) | 449 (83.6) |
| | Middle/High | 76 (10.4) | 45 (8.4) |
| | University | 96 (13.2) | 43 (8) |
| No. of chronic disease | 0-1 | 183 (25.1) | 73 (13.6) |
| | 2-4 | 393 (53.9) | 306 (57.0) |
| | ≥5 | 153 (21.0) | 158 (29.4) |
| No. of current medication | 0-1 | 45 (6.2) | 19 (3.5) |
| | 2-4 | 207 (28.4) | 110 (20.5) |
| | ≥5 | 477 (65.4) | 408 (76.0) |
| Smoking | Never | 363 (63.8) | 311 (75.7) |
| | Current | 45 (7.9) | 23 (5.6) |
| | Past | 161 (28.3) | 77 (18.7) |

*Table 1 Demographic characterics of participants and according to presence or absence of urinary incontinance history.*

| Table 2. Results of the univariate logistic regression analysis. Frailty related factors were examined according to presence or absence of the urinary incontinance. | | History of UI No | Yes | Total | p values, odds ratios and confidence intervals |
|---|---|---|---|---|---|
| Hand grip strength | Low | 399 (54.7%) | 339 (63.1%) | 738 (58.3%) | .003 OR :1.416 %95 CI:1.127-1.779 |
| | Normal | 330 (45.3%) | 198 (36.9%) | 528 (41.7%) | |
| Walking speed (m/sn) | Low | 178 (24.4%) | 239 (44.5%) | 417 (32.9%) | <.001 OR: 2.483 %95 CI :1.953-3.156 |
| | Normal | 551 (75.6%) | No | 849 (67.1%) | |
| Timed up & go (TUG) | High | 26 (3.6%) | 399 (54.7%) | 83 (6.6%) | <.001 OR:3.211 %95 CI:1.991-5.179 |
| | Normal | 703 (96.4%) | 330 (45.3%) | 1183(93.4%) | |
| Weight loss in the last 3 months | No | 402 (85.5%) | 178 (24.4%) | 674 (84.9%) | |
| | Yes | 68 (14.5%) | 52 (16.0%) | 120 (15.1%) | 0.541 OR: 1.130 %95 CI :0.763-1.673 |
| Weight loss in the last 6 months | No | 215 (74.7%) | 162 (72.6%) | 377 (73.8%) | |
| | Yes | 73 (25.3%) | 61 (27.4%) | 134 (26.2%) | 0.609 OR:1.109 %95 CI 0.746-1.649 |
| Fall history in the last year | No | 495 (67.9%) | 293 (54.6%) | 788 (62.2%) | |
| | Yes | 234 (32.1%) | 244 (45.4%) | 478 (37.8%) | <.001 OR:1.762 %95 CI 1.399-2.218 |
| Physical activity | Never | 71 (12.4%) | 92 (22.3%) | 163 (16.5%) | |
| | Sometimes | 17 (3.0%) | 13 (3.2%) | 30 (3.0%) | .188 OR:0.590 %95 CI:0.269-1.295 |
| | 1-2 times a week | 172 (30.0%) | 140 (34.0%) | 312 (31.6%) | .017 OR:0.628 OR:.429-0.920 |
| | Everyday | 314 (54.7%) | 167 (40.5%) | 481 (48.8%) | <.001 OR:.410 %95 CI:0.286-0.590 |

*Hand grip strength was accepted low below the 32 kg for men, 22 kg for women. Walking speed accepted as low below the 0.8 m/s. Time up & go (TUG) test was accepted as high when test duration was ≥20 seconds.

*Table 2. Results of the univariate logistic regression analysis. Fragility related factors were examined according to presence or absence of the urinary incontinence.*

[Abstract:2038]

## RECONCILIATION OF TREATMENT AS A KEY STRATEGY TO PREVENT FALLS

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**Objectives:** To analyse the risk factors related to falls in an Internal Medicine ward.

**Materials and Methods:** A prospective observational study conducted from 15/04/2023 to 15/06/2023 in the Internal Medicine ward. The study examined the number of falls during hospitalization and the associated risk factors.

**Results:** Eight patients experienced falls with an average age of 75 years. Most patients had more than one fall, mostly occurring during the night and early morning in the context of agitation or bathroom transfers. There was a clear increase in fall frequency at the beginning and end of the week.

Regarding pharmacological treatments, a high frequency of night-time administration of diuretics, laxatives, aerosols, and corticosteroids was observed.

**Discussion and Conclusions:** Two profiles of patients who experienced falls were identified: elderly individuals with cognitive impairment and a history of falls who presented with a confusional syndrome, and younger patients without cognitive impairment who fell while getting up to go to the bathroom. Night-time administration of aerosols and corticosteroids in the first group and diuretics and laxatives in the second group were identified as possible contributors. Based on these findings, we believe that collecting a history of falls and agitation in the medical records, as well as reconciling and optimizing the dosage of the main implicated drugs, are fundamental strategies for preventing these events.

*Keywords: f, risk factors, night-time drugs intake*

[Abstract:2090]

## PRESCRIBE OR DEPRESCRIBE, THAT IS THE QUESTION. RECOMMENDATIONS FOR THE NON-USE OF BENZODIAZEPINES IN PATIENTS OVER 80 YEARS OLD AND DEPRESCRIPTION CRITERIA

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**Background:** Several criteria recommend deprescribing benzodiazepines in prolonged use, in people likely to fall (STOPP/START) as well as the absence of anxiety or insomnia events in the previous month (LESS-CHRON). We propose to study the



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conditions of benzodiazepine use in elderly patients with complex pluripathology.

**Methods:** Descriptive, cross-sectional, analytical study in 43 patients over 80 years admitted to C.A Segovia (May 2023). We studied the use of benzodiazepines before, during and after admission.

**Results:** 43 patients (88 median age, 51% male). 45% came from nursing-homes. 47.5% presented total dependence (Barthel), 80% presented a high risk of falls (Downton), 95% met the criteria for multi-pathological patients (72.5% complex chronic patients) and 67.4% had polymedication (57.5% extreme).

28% were prescribed benzodiazepines for insomnia (13.9%), anxiety (13.9%), confusional syndrome (27.9%) and untypified reason (44.3%). 50% were maintained on admission. Confusional syndrome was present in 30.2% of the patients (23% use of benzodiazepines).

Were prescribed in 21% of the patients after discharge (67% of these met STOPP or LESS-CHRON criteria). However, they were not withdrawn in any case.

STOPP criteria for deprescription for duration >1 month (33.3%), falls in the last 3 months (11.1%) and LESS-CHRON criteria for insomnia and anxiety without episodes in the last month were found in 55.5% and 11.1%, respectively.

**Conclusions:** The integration into routine clinical practice of tools for non-prescription and deprescription, such as the STOPP/START and LESS-CHRON criteria, should be used routinely to adjust medication in our patients and thus avoid the undesirable effects of unnecessary polymedication.

*Keywords:* *polymedication, complex pluripathology, deprescription, benzodiazepines*

[Abstract:2114]

## IS SARC-F QUESTIONNAIRE BE USED TO DETECT FRAILTY IN OLDER ADULTS?

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**Aim:** Frailty is a geriatric syndrome characterized by an age-related decrease in physiological reserve and functionality in organ systems. The physical frailty phenotype defined by Fried et al. overlaps significantly with sarcopenia. EWGSOP2 recommends the SARC-F questionnaire for sarcopenia screening. Therefore, we aimed to investigate whether the SARC-F assessment tool is a safe and valid method to evaluate and screen for frailty.

**Methods:** This study is a retrospective, cross-sectional study performed in the internal medicine inpatient unit of Koc University Hospital. Frailty was assessed with the modified Fried scale. The SARC-F questionnaire was applied to screen for sarcopenia. A receiver operating characteristics (ROC) curve was used to obtain SARC-F cut-off values to detect frailty, and the area under the curve and 95% confidence interval were calculated.

**Results:** 255 inpatients were included in this study. Demographic data is in Table 1, and geriatric assessment results are in Table 2. According to the modified Fried frailty questionnaire, 63.9% of the patients were frail. A SARC-F cut-off of ≥3.5 had 97.5% sensitivity and 96.7% specificity to identify frailty (area under curve: 0.993; 95% confidence interval: 0.98-1, p<0.001) (Figure 1). This optimal cut-off value had the best balance between high sensitivity and a low false-positive rate.

**Discussion:** This study proposes that the SARC-F, with a cut-off value of ≥3.5, can be used to recognize frailty with markedly high sensitivity and specificity. Simultaneously evaluating frailty and sarcopenia would be a practical and beneficial approach for the community, as it would save time and effort.

*Keywords:* *sarcopenia, frailty, screening, diagnosis, internal medicine practice.*

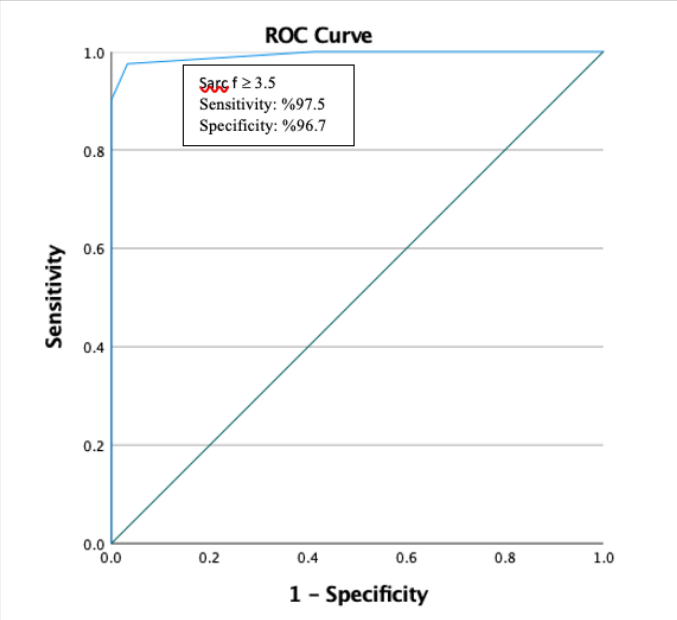


***Figure 1.*** *Receiver operating characteristic curve (ROC) analysis of the SARC-F to identify frailty. AUC (95% CI)*=0.993 (0.98-1).*
**AUC: Area under the curve, CI: Confidence Interval.*

| | Male (n=101) | Female (n=154) | Total (n=255) |
|---|---|---|---|
| Age (years) | 76.2 ±9.1 | 76.9 ±9.7 | 76.6 ±9.5 |
| BMI (kg/m2) | 24.3±4.9 | 25.2±6.6 | 24.6±6.0 |
| Calf circumference (cm) | 34±5.1 | 32±5.6 | 33±5.5 |
| Number of illnesses | 4±1.6 (2) | 4±2.1 (3) | 4±1.9 (2) |
| Number of regular drugs | 6±3.4 (5) | 7±3.7 (6) | 7±3.6 (5) |
| Hypertension | 79.2% | 76.6% | 78.8% |
| Diabetes mellitus | 40.6% | 47.4% | 44.7% |
| Coronary heart disease | 46.5% | 38.8% | 41.9% |
| Congestive heart failure | 19.8% | 22.7% | 21.6% |
| COPD | 25.7% | 9.7% | 16.1% |
| Hypotiroidism | 7% | 27.3% | 19.3% |
| CKD | 21.8% | 8.4% | 13.7% |

***Table 1.*** *Demographic characteristics of the study population.*
*COPD: Chronic Obstructive Pulmonary Disease; BMI: Body Mass Index; CKD: Chronic Kidney Disease.*



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| CGA parameters | Male | Female | Total | p |
|---|---|---|---|---|
| Frailty | 37.4% | 62.6% | %63.9 | p< 0.01 |
| Urinary incontinence | 24.8% | 46.1% | %37 | p< 0.01 |
| Falls in the past year | 38.6% | 47.4% | %43.9 | 0.1 |
| Dysphagia | 18.8% | 21.8% | %20 | 0.5 |
| Chronic pain | 24.8% | 37.7% | %32.5 | 0.03 |
| ADL* | 6 (4) | 5 (6) | 5 (5) | 0.06 |
| IADL* | 5 (7 | 3 (6) | 3 (7) | 0.06 |
| MNA* | 9 (7) | 9 (6) | 9 (6) | 0.4 |
| Total SARC F score* | 5 (5) | 6 (5) | 5 (5) | 0.1 |
| EQD skor* | 10 (5) | 10(4) | 10(5) | 0.1 |

***Table 2.*** *Comprehensive Geriatric Assessment Results.*
*CGA: Comprehensive Geriatric Assessment; ADL: Activities in Daily Living; IADL: Instrumental Activities in Daily Living; MNA: Mini-Nutritional Assessment, * Interquartile range.*

[Abstract:2122]

## USING THE MODIFIED CHARLSON COMORBIDITY INDEX TO PREDICT THE RISK OF DEATH IN ELDERLY AND SENILE PATIENTS WITH CHRONIC KIDNEY DISEASE

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**Background and Aims:** The "renal parameter" of original Charlson comorbidity index is included the serum creatinine level of higher 265 μmol/L, renal replacement therapy, and kidney transplantation, but stage 3 CKD is not included. The aim of this study was to investigate predictive value of the modified Charlson comorbidity index, taking into account CKD with eGFR <60 ml/min/1.73 $m^2$ in older patients with chronic kidney disease.
**Methods:** 472 older patients with cardiovascular diseases (241 females, mean age 69,6±7,3 years) were examined. Arterial hypertension was observed in 452 (95.8%), CHF - in 335 (70.1%), diabetes mellitus - in 129 (27.3%) patients. CKD was diagnosed and classified according to the KDIGO guidelines (2012). eGFR was determined using the CKD-EPI equation (2011). CKD with an eGFR <60 ml/min/1.73 $m^2$ was additionally included in the parameter «moderate, severe kidney disease» when we calculated the Charlson comorbidity index. The follow-up period was 12 months; the primary endpoint was total mortality.
**Results:** CKD was observed in 302 (63.9%) older patients. CKD with eGFR less than 60 ml/min/1.73 $m^2$ was observed in 277 (91.7%) of 302 patients with CKD. An increase in the CKD-modified Charlson comorbidity index of more than 6 points was associated with the risk of annual mortality in older patients with stable cardiovascular diseases (RR 4.7; 95% CI 1.4-15.2; p=0.01 versus RR 1.6; 95% CI 1.08-3.35; p=0.02 using original comorbidity index).
**Conclusions:** Usage of the modified Charlson comorbidity index more accurately assess the prognosis of annual mortality in older patients with cardiovascular comorbidity and CKD.

***Keywords:*** *comorbidity, chronic kidney disease, Charlson comorbidity index, older patients*

[Abstract:2190]

## ANALYSIS OF ALL PATIENTS ADMITTED TO AN INTERNAL MEDICINE WARD FOR 30 DAYS AT A TERTIARY-LEVEL HOSPITAL

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**Objectives:** To characterize the population admitted to Internal Medicine, assess their clinical status upon admission, and delineate the course of hospitalization.
**Methods:** Case series of 412 adult patients admitted to Internal Medicine at San Carlos Clinical Hospital (Madrid) in March 2023 was analysed for epidemiological and clinical variables, mortality, and readmission within one month post-discharge.
**Findings:** The enrolled patients had a mean age of 79.6 years, with 55.1% females. Pre-admission, 61.3% showed some degree of dependence: 41.7% scored below 55 points on the Barthel scale, and 16.7% scored below 20. The predominant diagnostic group was infectious diseases. The average length of hospitalization was 9.75 days. At discharge, the mean number of prescribed medications by the attending physician was 10. Within 30 days, 20.9% revisited the Emergency Department, with a readmission rate of 14.9%. The one-month mortality rate was 14.1%, higher in men (10% died during admission and 7% within the month, compared to 6% of women who died during hospitalization and 6% within the first 30 days).
**Conclusions:** In our sample the profile of the admitted patient is an elderly individual with numerous comorbidities and varying degrees of dependency. Women exhibited higher dependency levels than men, while the male population demonstrated a higher prevalence of comorbidities and increased cardiovascular risk. The predominant primary diagnosis is infectious disease. Polypharmacy is a common feature in the vast majority of patients. Mortality was higher in men.

***Keywords:*** *aging, dependency, comorbidities, polypharmacy*


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[Abstract:2222]

# RELATIONSHIP BETWEEN SLEEP DISORDERS AND OTHER GERIATRIC SYNDROMES IN OLDER ADULTS

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**Introduction:** Sleep disorders are common conditions in older adults and could either be a consequence of morbidities or exist as a primary condition(1).

**Objectives:** Our aim is to reveal the prevalence of sleep disorders in older adults and study its association with other geriatric syndromes.

**Materials and Methods:** Data from 2140 patients aged 60 and above, who presented to the Geriatrics outpatient clinic of a tertiary care hospital between November 2012 and October 2023, were retrospectively analysed. Patients' demographics, including age, sex, education level, marital status, urinary/faecal incontinence, polypharmacy, falls, smoking-alcohol use, cognitive impairment, depression, chronic pain, and anxiety, were extracted from medical records. Cognitive impairment was defined as Minimental Test (MMSE) scores <24, depression as geriatric depression scale scores>14, and polypharmacy as the use of≥5 medications.

**Results:** Among 1151 participants with sleep data, median age was 75 (range 60–99), with 31.2% (359) identified as male (Table 1). A total of 533 patients (46.3%) reported insufficient sleep. Patients with sleep disorders tended to have statistically higher frequency in polypharmacy, urinary incontinence, depressive mood, chronic pain (Table 2). Univariate analyses were conducted to identify factors independently associated with insufficient sleep, and logistic regression analyses were performed. Independent factors associated with insufficient sleep were older age [OR=1.025,95% CI (1.008-1.042), p=0.004], depressive mood [OR=1.885, 95% CI (1.176-3.022), p=0.008] (Table 3).

**Conclusions:** Our study demonstrated an independent relationship between insufficient sleep and depressive mood and RBD. Although a causa-effect relationship cannot be claimed, accompanying depression and RBD should be questioned in older adults presenting with insufficient sleep.

Ref:

1. Crowley K. Sleep and sleep disorders in older adults. Neuropsychology review. 2011;21(1):41-53.

*Keywords:* *sleep disorder, depressive mood, older adult*

| | Male (n= 359) | Female (n= 792) | Total (n= 1151) | *p* value |
|---|---|---|---|---|
| | %31.2 | % 68.8 | %100 | N/A |
| Age* | (60-93) | (60-99) | 75 (60 – 99) | <0.001● |
| Insufficient Sleep | 144 (%40) | 389 (%49.1) | 533 (%46) | 0.018● |
| Education status (n, %) ∇ | | | | |
| Illiterate | 11 (%3.2) | 195 (%25.7) | 206 (%18.8) | |
| Literate | 26 (%7.6) | 108 (%14.2) | 134 (%12.2) | |
| Primary school | 138 (%40.7) | 256 (%33.7) | 394 (%35.9) | <0.001● |
| Middle school | 33 (%9.7) | 51 (%6.7) | 84 (%7.7) | |
| High school | 47 (%13.8) | 80 (%10.5) | 127 (%11.6) | |
| Associate degree-College | 73 (%21.5) | 62 (%8.1) | 135 (%12.3) | |
| Master's - Doctorate | 11 (%3.2) | 6 (%0.7) | 17 (%1.5) | |
| Marital Status (n, %) ∴ | | | | |
| Single | 3 (%0.9) | 22 (%3.0) | 25 (%2.4) | |
| Married | 263 (%79.9) | 293 (%40.0) | 556 (%52.4) | <0.001● |
| Divorced | 5 (%1.5) | 13 (%1.7) | 18 (%1.7) | |
| Widow | 58(%17.6) | 402 (%54.9) | 460 (%43.4) | |
| Polypharmacy | 216 (%60) | 516 (%65) | 732 (%63.6) | 0.103 |
| Urinary incontinence (n, %) | 101 (%28.1) | 399 (%50.4) | 500 (%43.5) | <0.001● |
| Fecal incontinence (n, %) | 11 (%3.0) | 54 (%6.8) | 65 (%5.6) | 0.011● |
| Fall | 113 (%31.5) | 330 (%41.8) | 443 (%38.7) | <0.001● |
| Smoking ϒ | 27 (%8.2) | 41 (%5.7) | 68 (%6.5) | <0.001● |
| Alcohol abuse Π | 34 (%11.8) | 13 (%1.9) | 47 (% 5) | <0.001● |
| Cognitive impairment ε | 41 (%15) | 115 (%20.0) | 156 (%13.6) | 0.160 |
| Depressive mood φ | 39 (%19.4) | 183 (%39.1) | 222 (%19.3) | <0.001● |
| Chronic pain | 151 (%42.0) | 501 (%63.4) | 652 (%56.7) | <0.001● |
| Anxiety | 6 (%1.8) | 20 (%0.2) | 26 (%2.5) | 0.373 |

● Statistically significant p value
*Median data is given for marked values.
∴ The number of patients with marital status data is 1061.
ε The number of patients with MMSE data is 830.
∇The number of patients with education data is 1097.
φ The number of patients with GDS data is 669.
ϒ The number of patients with smoking data is 1042.
Π The number of patients with alcohol data is 946.

*Table 1. Demographic data of patients according to gender.*

| | Sleep disorder present (n= 533) | Sleep disorder absent (n= 618) | Total (n= 1151) | *p* value |
|---|---|---|---|---|
| | % 46.3 | % 53.6 | %100 | N/A |
| Age | 76.0 (60 – 99) | 75.2 (60 – 99) | 75.8+7.0 (58 – 99) | 0.016● |
| Sex (n, %) | | | | |
| Male | 43 (27.7 %) | 214 (31.8 %) | 257(31.0%) | 0.018● |
| Female | 112 (72.2 %) | 458 (68.1 %) | 570 (68.9%) | |
| Education status (n, %) ∇ | | | | |
| Illiterate | 106 (%19) | 188 (%30.4) | 206 (%18.8) | |
| Literate | 63 (%11) | 71 (%11.4) | 134 (%12.2) | |
| Primary school | 185 (%34.7) | 209 (%33.8) | 394 (%35.9) | 0.056 |
| Middle school | 43 (% 8.0) | 41 (%6.6) | 84 (%7.7) | |
| High school | 52 (%9.7) | 75 (%12.1) | 127 (%11.6) | |
| Associate degree-College | 53 (%9.9) | 82 (%13.2) | 135 (%12.3) | |
| Master's - Doctorate | 7 (%1.3) | 10 (%1.6) | 17 (%1.5) | |
| Marital Status (n, %) ∴ | | | | |
| Single | 10 (%1.8) | 15 (%2.4) | 25 (%2.4) | |
| Married | 229 (%42.9) | 327 (%52.9) | 556 (%52.4) | 0.003● |
| Divorced | 10 (%1.8) | 8 (%1.2) | 18 (%1.7) | |
| Widow | 235 (%44.0) | 225 (%36.4) | 460 (%43.4) | |
| Polypharmacy | 216 (%60) | 516 (%65) | 732 (%63.6) | 0.013● |
| Urinary incontinence (n, %) | 255 (%47.9) | 245 (% 39.6) | 500 (%43.5) | 0.013● |
| Fecal incontinence (n, %) | 33 (%6.1) | 32 (%5.1) | 65 (%5.6) | 0.721 |
| Fall | 220 (%41.2) | 223 (% 36.0) | 443 (%38.7) | 0.155 |
| Smoking ϒ | 27 (%5.0) | 41 (%6.6) | 68 (%6.5) | 0.356 |
| Alcohol Π | 20 (%4.5) | 27 (%5.3) | 47 (% 5) | 0.413 |
| Cognitive impairment ε | 63 (%11.8) | 93 (%15.0) | 156 (%13.6) | 0.187 |
| Depressive mood φ | 121 (%22.7) | 101 (%16.3) | 222 (%19.3) | <0.001● |
| Chronic pain | 334 (% 62.7) | 318 (% 51.5) | 652 (%56.7) | <0.001● |
| Anxiety | 10 (%2.0) | 16 (%2.7) | 26 (%2.5) | 0.597 |

● Statistically significant p value
*Median data is given for marked values.
∴ The number of patients with marital status data is 1061.
ε The number of patients with MMSE data is 830.
∇The number of patients with education data is 1097.
φ The number of patients with GDS data is 669.
ϒ The number of patients with smoking data is 1042.
Π The number of patients with alcohol data is 946.

*Table 2. Relationship between Sleep disorders and other geriatric syndromes in univariate analyses.*



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| | p | OR | 95 %CI Lower | Upper |
|---|---|---|---|---|
| Age | 0.004* | 1.025 | 1.008 | 1.042 |
| Sex | 0.477 | 0.863 | 0.452 | 1.450 |
| Marital status | 0.063 | 1.248 | 0.988 | 1.578 |
| Polypharmacy | 0.315 | 1.277 | 0.792 | 2.058 |
| Urinary incontinence | 0.073 | 1.522 | 0.961 | 2.411 |
| Depressive mood | 0.008* | 1.885 | 1.176 | 3.022 |
| Chronic pain | 0.854 | 1.033 | 0.733 | 1.455 |

CI: Confidence Interval, OR: Odds ratio
* Statistically significant p value.

*Table 3. Results of Multivariate Regression Analysis: Factors Independently Associated with Insufficient Sleep in Older Adults After Adjusting for Age, Gender, Marital Status, Urinary Incontinence, Polypharmacy, Depressive Mood, Chronic Pain.*

[Abstract:2290]

## THE IMPORTANCE OF PROTEINURIA IN THE DIFFERENTIAL DIAGNOSIS OF CHRONIC KIDNEY DISEASE, A CASE REPORT

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The aetiology of chronic kidney disease (CKD) in elderly is often attributed to hypertension and diabetes, were uncontrolled hypertension and uncontrolled diabetes play definitive role in CKD(1). It's highly important to investigate the aetiology of CKD in patients whose comorbidity history is not supportive of CKD and to investigate proteinuria with suspicion for this purpose.

In this report, we share our case in which we reached underlying aetiology of CKD based on proteinuria.

68-year-old female patient with history of hypertension presented to our clinic for evaluation of high creatinine levels. Hypertension was controlled by a single calcium channel blocker. No feature other than fatigue was detected in the patient's system query. On examination, no abnormality other than pale skin and bilateral 1+ pitting pretibial oedema was observed.

The lab tests (Table 1) resulted with normocytic anaemia, low eGFR, high creatinine, and mild hypercalcemia. However, urine analysis showed no erythrocytes-leukocytes, there was proteinuria, which was mainly consistent with non-albuminuria protein. Urinary ultrasonography revealed bilateral renal parenchymal echogenicity increase with normal kidney sizes.

The serum immunofixation electrophoresis test resulted with monoclonal kappa light-chain dominance (Table 2). Bone marrow biopsy, performed three days after the patient's admission, was resulted with multiple myeloma.

In evaluation of CKD, it's highly important to examine proteinuria as albuminuria or non-albumin proteinuria in order to elucidate the aetiology of CKD, and the underlying pathology can be found by directing focused history taking, knowing that whether the comorbidities are regulated.

References

1-Chen TK, Knicely DH, Grams ME. Chronic Kidney Disease Diagnosis and Management: A Review.JAMA.2019;322(13):1294–1304. doi:10.1001/jama.2019.14745

*Keywords:* *Multiple myeloma, Proteinuria, Chronic kidney disease*

| | | |
|---|---|---|
| Creatinine | 6.3 | mg/dL |
| Glomerular Filtration Rate (eGFR) | 6 | mL/min/1.73m2 |
| Blood Urea Nitrogen (BUN) | 54 | mg/dL |
| Albumin | 45 | g/L |
| Total Protein | 75 | g/L |
| Serum Calcium | 10.9 | mg/dL |
| Spot Urine Protein | 552 | mg/dL |
| Spot Urine Albumin | 82.2 | mg/L |
| Spot Urine Albumin / Creatinine Ratio | 132 | mg/g creatinine |
| Spot Urine Protein / Creatinine Ratio | 8832 | mg/g creatinine |
| White Blood Cells (WBC) | 9.55 | K/uL |
| Haemoglobin (HGB) | 7.9 | g/dL |
| Thrombocyte (PLT) | 223 | K/uL |
| Mean Corpuscular Volume (MCV) | 95 | fL |

*Table 1. Lab Results.*

| | | |
|---|---|---|
| IgA, serum | 0.27 | g/L |
| IgG, serum | 6.27 | g/L |
| IgM, serum | 0.05 | g/L |
| Kappa light chain, total | 6110 | mg/L |
| Lambda light chain, total | 592 | mg/L |

*Table 2. Immunofixation Serum Electrophoresis.*

[Abstract:2304]

## EFFECTIVENESS OF LEGO® THERAPY AGAINST LONELINESS AND FRAILTY IN THE ELDERLY

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**Purpose:** We aimed to evaluate the effectiveness of LEGO® therapy against loneliness and frailty.

**Methods:** A clinical essay on 70 geriatric inpatients admitted to the Frailty Unit of our University Hospital during the year 2022 has been undertaken. At admission, information on clinical variables was collected. Baseline-measurements included FRAIL criteria, data about functional, emotional, cognitive, socio-economic status and quality of life through an accorded protocol

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for complete geriatric assessment. Likewise, the presence of loneliness was screened by means of the UCLA scale. A 12-months intervention based on a highly structured process of expressing ideas and feelings and interpersonal communication, by 6 colourful LEGO® Six-Bricks pieces was developed. Patients taking part in it were considered cases, and the rest, as controls. Frailty status and loneliness were the end-point variables. Measurements of association were performed (p-value 0.05).

**Results:** Out of 70 patients (51.4% female, 37.1% living alone, mean age 81.8 [SD 7.3] years old), 61.4% was classified as frail patients. Loneliness was reported by 75.7% of patients. Out of them, 28 (52.8%) were frail patients. 32 patients (45.7%) were assigned to the intervention group (IG). Baseline-measurements were homogeneous within both groups. After the intervention, following mean measurements (SD) were reported (IG vs controls): UCLA 30.4 (3.9) vs 23.7 (6.1), p <0.05. 8/32 patients meet the FRAIL criteria within the IG vs 21/38 within controls, p<0.05.

**Conclusions:** After taking part in LEGO® therapy, patients feel significantly not so alone than those in the control group, with a lower incidence of frailty.

*Keywords:* *loneliness, frailty, LEGO®*

[Abstract:2361]

## RAPID MALNUTRITION ASSESSMENT WITH QUESTIONING ANOREXIA OF AGING AND WEIGHT LOSS: HOW USEFUL ARE THE KEYSTONES OF MALNUTRITION IN OLDER ADULTS IN DETECTING GLIM-DEFINED MALNUTRITION?

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**Introduction:** Malnutrition is recommended to be screened with validated tools. Most validated tools for screening require time and equipment and rapid assessment with simply asking about loss of weight or appetite is rather preferred when malnutrition is suspected, especially in primary care and settings with high demand. We aimed to study whether the presence of at least one of these components of malnutrition is sufficient enough to detect older outpatients with malnutrition identified by the GLIM criteria.

**Methods:** We assessed anorexia by using the self-reported question about decreased food intake and asked whether they suffered from weight loss in the past three months. We used the GLIM criteria for diagnosis.

**Results:** We included 200 older adults ≥60 years (mean age: 73.8±6.9, 67.5% female). According to the GLIM criteria, the malnutrition prevalence was 28%.The anorexia of aging prevalence was 15%, 16,5% had weight loss in the past three months, and 9% of them had both anorexia and weight loss. Having at least one component positive demonstrated a low performance in identifying malnutrition according to the GLIM (sensitivity: 37.6%) but showed a high level of specificity (95.1%). The PPV and NPV were 61.1% and 77.1%, respectively.

**Conclusions:** Our study suggests that rapid inquiry may overlook individuals with malnutrition according to the GLIM criteria, even if the keystones already exist. This finding can be attributed to the fact that the GLIM panel did not limit the malnutrition concept to appetite or weight loss and offered a broader perspective by implementing muscle health or disease burden.

*Keywords:* *GLIM, malnutrition, weight loss, anorexia*

[Abstract:2383]

## RELATIONSHIP BETWEEN COMORBIDITIES, PROTON PUMP INHBITOR USE AND FREQUENCY OF SHORT-TERM ASPIRATION PNEUMONIA AFTER PERCUTANEOUS ENDOSCOPIC GASTROSTOMY IN THE GERIATRIC PATIENT GROUP, A SINGLE CENTER DESCRIPTIVE STUDY

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**Introduction:** Percutaneous endoscopic gastrostomy (PEG) is a procedure, providing enteral feeding for patients cannot complete oral intake for any reason. Perioperative aspiration pneumonia is one of the main complications(1).

Here, periprocedural aspiration pneumonia was evaluated in line with comorbidities and proton pump inhibitor (PPI) use in our hospital.

**Methods:** Patients with any indication that applied PEG between May 2022-May 2023, was collected from medical records within hospital. The data was analysed SPSS28.0.0.0 from IBM Statistics.

**Results:** The demographic information of 74 patients was presented in Table-1.

We observed 35 of 74 patients was complicated with aspiration pneumonia within 0-3 months after PEG procedure.

26 of 35 patients complicated with aspiration pneumonia was using PPI.

**Discussion:** Perioperative aspiration pneumonia was associated with multiple comorbidity and PPI use. Neurological diseases were especially correlated with aspiration pneumonia after PEG procedure.

PPI use is found significantly associated with aspiration pneumonia. The PPI use is known for associated with decrease in gastric acidity protection and this brings tendency for pneumonia(2). Nevertheless, the patients with high comorbidities have higher tendency for polypharmacy and this patient group is known with

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higher risk for complications due to increased frailty. These results warrant further need for randomized controlled studies regarding PEG, PPI use and aspiration pneumonia.

References

1-Complications and early mortality in percutaneous endoscopic gastrostomy placement in lombardy: A multicenter prospective cohort study. Anderloni, Andrea et al. Digestive and Liver Disease,Volume 51,Issue10,1380-1387

2-Proton pump inhibitor use and risk of pneumonia: a self-controlled case series study. Maret-Ouda J.,et al. J Gastroenterol 58,734–740

*Keywords:* *proton pump inhibitors, aspiration pneumonia, percutaneous endoscopic gastrostomy, geriatrics*

| Variable | Aspiration pneumonia + | Aspiration pneumonia- | Total |
|---|---|---|---|
| Age Median (min-max) | 82 (60-97) | 80 (61-98) | 74 |
| Sex: Male | 18 | 15 | 33 |
| Sex: Female | 17 | 24 | 41 |
| Diabetes | 9 | 12 | 21 |
| Hypertension | 23 | 20 | 43 |
| Atherosclerotic Heart Disease | 14 | 14 | 28 |
| Heart Failure | 7 | 3 | 10 |
| Serebrovascular Event | 16 | 15 | 31 |
| Dementia | 15 | 21 | 36 |
| PPI Use | 26 | 20 | 46 |

***Table 1.*** *Demographic information.*

| Variable | PPI Use (+) | PPI Use (-) | Total |
|---|---|---|---|
| Aspiration pneumonia (+) n,(%) | 26 (74.3) | 9 (25.7) | 35 |
| Aspiration pneumonia (-) n,(%) | 20 (51.3) | 19 (48.7) | 39 |
| | Total: 46 | Total: 28 | 74 |

***Table 2.*** *PPI Use and Aspiration Pneumonia. p-value (Pearson Chi-square)<0.05.*

[Abstract:2462]

## PROGNOSIS AFTER FIRST ADMISSION FOR ASPIRATION PNEUMONIA (AP) IN PATIENTS WITH DEMENTIA AND OROPHARYNGEAL DYSPHAGIA (DO)

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Oropharyngeal dysphagia (OD), defined as difficulty in the passage of food or liquid from the oral cavity to the oesophagus, is nowadays recognised as a geriatric syndrome and can cause serious complications in the elderly population with dementia, one of particular relevance being aspiration pneumonia. Our aim was to evaluate the clinical characteristics and prognosis (mortality) in patients with dementia and neurogenic dysphagia after their first admission for aspiration pneumonia (AP). Dysphagia was defined by previous thickener use or diagnosed by validated clinical questionnaires. 144 patients with dementia and OD hospitalised for NA were included. Median age (Q1-Q3) was 85 (79-90) years. A total of 119 (82.6%) patients showed a severe degree of dementia (GDS > or = 5) and only 54 (37.5%) were previously taking antidepressants. Acquisition of NA was predominantly community acquired (93; 64.6%) and a total of 92 (63.9%), 84 (58.3) and 58 (40.3%) patients were taking neuroleptics, antidepressants and benzodiazepines, respectively. Mortality was 78.5 % (108) with a median survival of 17 days to exitus (6-71). There was no statistically significant relationship between the use of thickening agents, use of medication, type of nutrition or degree of malnutrition, given the frailty and comorbidity of the population. It is therefore a challenge for the clinician and early diagnosis is crucial to avoid admissions for AN and improve morbidity and mortality.

*Keywords:* *aspiration pneumonia, oropharyngeal dysphagia, dementia*

| Variables | Casos (n = 142) |
|---|---|
| Género Hombre (%) | 82 (56,9) |
| Hospital Tomillar (%) | 113 (78,5) |
| Adquisición de la infección | |
| Comunitaria (%) | 93 (64,6) |
| Relación con Asistencia Sanitaria (%) | 19 (13,2) |
| Nosocomial(%) | 29 (64,6) |
| Exitus(%) | 108 (78,5) |
| Comorbilidad | |
| Hipertensión arterial (%) | 113 (78,5) |
| Diabetes Mellitus (%) | 54 (37,5) |
| Fumador (%) | 7 (4,9) |
| Ex-fumador (%) | 35 (24,6%) |
| Enfermedad Pulmonar Crónica (%) | 45 (31,3) |
| Enfermedad Renal Crónica (%) | 36 (25) |
| Accidente Cerebrovascular (%) | 42 (29,2) |
| Deterioro Cognitivo: Tipos | |
| Enfermedad de Alzheimer (%) | 53 (36,8) |
| Demencia Vascular (%) | 33 (22,9) |
| Demencia por Cuerpo de Lewis (%) | 5 (3,5) |
| Demencia Fronto – Temporal (%) | 3 (2,1) |
| Otras (%) | 20 (13,9) |
| Escala de Deterioro Global (GDS) | |
| GDS < 5 (Leve – Moderada) (%) | 19 (13,2) |
| GDS > o = 5 (Severa) (%) | 119 (82,6) |
| Tratamiento | |
| Neurolépticos / Antipsicóticos (%) | 92 (63,9) |
| Antidepresivos (%) | 84 (58,3) |
| Benzodiacepinas (%) | 58 (40,3) |
| IECA / ARA 2 (%) | 67 (46,5) |
| IBP (%) | 78 (54,2) |
| Nutrición | |
| Oral (%) | 135 (93,8) |
| Toma de Espesante (%) | 54 (37,5) |
| Sonda Nasogástrica (%) | 6 (4,2) |
| Gastrostomoía / Yeyunostomía Percutánea (%) | 1 (0,7) |
| Sindrome Confusional Agudo (%) | 46 (31,9) |
| Re- Ingresos (%) | 54 (37,5) |

***Table 1.*** *Descriptive analysis of the clinical and demographic characteristics and use of restricted polypharmacy in patients with dementia and oropharyngeal dysphagia.*



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[Abstract:2477]

## IMPACT OF STROKE ON ELDERLY: DESCRIPTIVE ANALYSIS AND INSIGHTS FROM A SINGLE-CENTER RETROSPECTIVE STUDY

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**Background:** The elderly face an escalating stroke burden, paralleling the global aging trend. Understanding and addressing this trend is crucial for effective prevention, management strategies, and economic policies.

**Methods:** We conducted a retrospective, single-centre analysis of elderly patients admitted to Internal medicine wards from 2020 to 2022, with a primary stroke diagnosis who were excluded from interventional procedures. Data were collected from electronic files, and statistical analysis was performed using SPSS.

**Results:** We analysed a sample of 326 patients (mean age 82 years), almost equally distributed among sexes and year of hospitalization. Half suffered from moderate strokes, with a mean hospital stay of 11 days and in-hospital mortality around 9%. About risk factors, more than two-thirds had hypertension, one-third had diabetes, almost half had dyslipidaemia, while one-third were already on antiplatelet therapy. Unfortunately, one-third of strokes remained of unknown aetiology as only 13.5% of patients underwent echocardiography, and 3.6% had 24h Holter monitoring. A total of 125 adverse events occurred, mainly infections (57.6% LRTI, 19.2% UTI) and secondly, haemorrhagic transformation (5%, more women with hypertension and approximately 35% mortality). As secondary prophylaxis, all patient received statin lowering therapy, 69.2% received antiplatelets, 37.5% anticoagulation and only 8% a combination of them.

**Conclusions:** In this analysis of patients over 75 years, in-hospital mortality remained low, driven mainly by infections. The high proportion of strokes with an unknown aetiology underscores the challenge of effective secondary prophylaxis, especially given the pre-diagnosis use of antithrombotic drugs, exacerbating the risk of severe disability post-stroke.

*Keywords:* *stroke, elderly, multimorbidity*

[Abstract:2479]

## CLINICAL PROFILE OF PATIENTS WITH ACUTE CONFUSIONAL STATE IN A HOSPITALIZATION WARD

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**Aim:** Analyse the clinical profile of the patients with acute confusional state (ACS) in order to prevent morbidity and mortality.

**Methods:** An observational, descriptive and retrospective study including patients with a ACS diagnosis at hospital discharge from year 2020 to 2022.

**Results:** A total of 132 patients presented ACS with a mean age of 82.89 years and with a 7.3 Charlson index (CI), 61% had cognitive impairment. Patients with visual impairment presented ACS earlier (0.72 vs 2.45 days p<0.001). The average amount of drugs was 8.8 per patient. Most of them were admitted to internal medicine and hospitalized for respiratory infection (36.4%), those admitted with any infection disease presented ACS earlier (1.58 vs 2.83 days p:0.012). 54.4% presented ACS within the first two days of admission and 75% presented it overnight, those who were accompanied presented it later (2.47 vs 1.29 days p:0.02). Mortality was 25%, rising to 67% when the patient had ACS in the first twenty-four hours, being the estimated mortality in the internal medicine service of 18.7%. For those deceased, ACS lasted longer (6.24 vs 3.61 days p:0.019) and the patient had a higher CI (8.76 vs 6.82 p<0.001).

**Conclusions:** It is important to identify the factors mentioned above for better recognition and prevention in these patients, given the high mortality associated with it, increasing when it presents in the first 24 hours. The polimedicated and cognitive impaired elderly admitted for any infection disease are the most vulnerable patients, especially if they are not accompanied.

*Keywords:* *acute confusional state, mortality, elderly*

[Abstract:2538]

## HEMORRHAGIC RISK - FROM THEORY TO PRACTICE

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**Introduction:** The anticoagulant therapeutic arsenal is in continuous development. The increasing elderly population is

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associated with a directly proportional rise in the incidence of both arterial and venous thromboses, as well as haemorrhagic complications. Oral anticoagulants such as Acenocoumarol are characterized by interindividual variability in the treatment response.

**Materials:** We present the case of a 76-year-old hypertensive, diabetic patient urgently admitted for the detection of a giant hematoma in the anterolateral and posterior thoracic regions. The patient was under chronic treatment with oral coumarinic anticoagulant.

**Results:** Under the instituted complex treatment, partial resorption of the hematoma was achieved during the hospitalization. The presence of the haemorrhagic syndrome necessitated a revaluation of the background treatment and the benefit-risk ratio, opting for antiplatelet monotherapy.

**Conclusions:** Haemorrhagic risk dominates the clinician's logic in the anticoagulant therapeutic approach to the elderly patient, to the detriment of potential benefits. Advanced age is associated with reduced treatment adherence (often due to socio-economic status), a higher risk of injuries and contusions from falls, or the difficulty of monitoring anticoagulant treatment due to patients' locomotor disorders. The use of risk scores optimizes the algorithm for recommending anticoagulant therapy in the elderly patient with extensive plurivascular impairment.

*Keywords:* *haemorrhagic risk, elderly, risk–benefit ratio, risk scores*

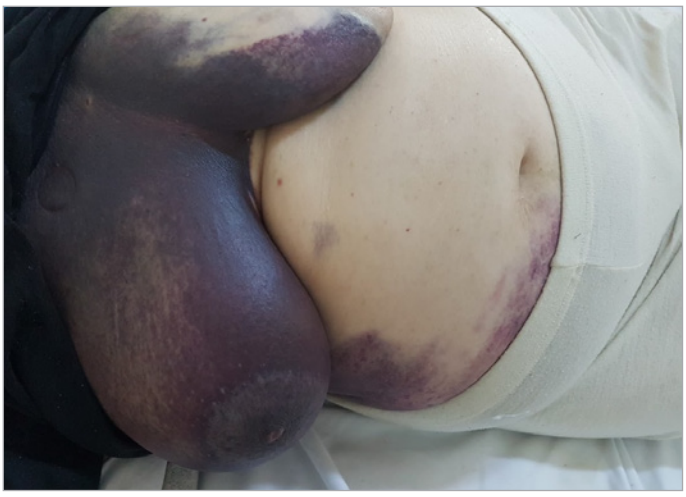

***Figure 1.*** *Hematoma.*

[Abstract:2565]

## *PASTEURELLA MULTOCIDA* PNEUMONIA: CASE REPORT OF A STANDARD AFTER 60 YEARS

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**Purpose:** To review infrequent *Pasteurella multocida* pneumoniae, its clinical picture and management.

**Methods:** Case report and review of the literature.

**Findings:** A 71-year-old male presented with two-day history of shortness of breath, yellowish sputum and chills. He was under treatment for arterial hypertension, type II DM and COPD, and used a CPAP machine for SAOS. Former smoker and dog owner. On examination he was hypotense, tachycardic and tachypnoeic, and there were crackles on right hemithorax on auscultation. Laboratory showed leukocytosis, Cr 2.66 mg/dL, Na 126 mEq/L, reactive C protein 45 mh/dL. Chest X-ray demonstrated and opacity in the right lung. Ceftriaxone was started and non-invasive mechanical ventilation was required. Thorax CT scan revealed multiple consolidations and necrosis in right lobes days after. Thus, changed to imipenem. Blood cultures grew *Pasteurella multocida*. Laboratory recommended betalactams or quinolones, not macrolides or clindamycin. Patient was discharged home and recovered six months after.

*Pasteurella multocida* is a zoonotic bacterium. About a hundred cases of pneumonia have been published. and clinical picture remains similar since 1960s. Elderly with COPD co-living with cats or dogs most affected. Usually lobar, slow-healing and complicated with bacteriemia (50%) and empyema (40%), mortality around 30%. Easy to isolate in blood cultures, often missed in sputum. Despite a benign sensitivity pattern, most physicians rather use more potent antibiotics.

**Conclusions:** 1) Do not forget pets and animal contact when pneumonia. 2) Sputum is nice, blood culture is better. 3) Choose an appropriate antibiotic. 4) Be ready for complications and severity.

*Keywords:* *zoonosis, pneumonia, pets*

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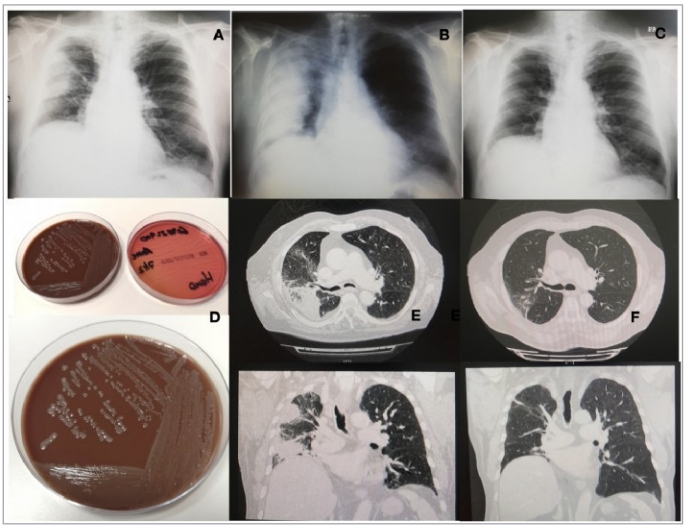


*Figure 1. Imaging and microbiological findings.*

[Abstract:2583]

## RESILIENT LONGEVITY: CHARACTERISTICS OF NONAGENARIANS PATIENTS IN AN INTERNAL MEDICINE DEPARTMENT

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**Purpose:** To describe characteristics and comorbidities in nonagenarian patients admitted to an Internal Medicine department of a tertiary hospital during March 2023.

**Methods:** This is a retrospective observational study in which we compared nonagenarian patients versus those under 90 years of age. The variables studied were analysed with chi-square and Fisher's test, defining statistical significance as p<0.05.

**Findings:** There were 412 admissions (23.5% nonagenarians), with a predominance of women. Greater dependence (64.9% vs. 40.6%) and institutionalization (10.3% vs 8.6%; p 0.684) was observed in nonagenarian patients.

Regarding severity upon arrival, there were no statistically significant differences between both groups, neither in respiratory failure (p 0.898), nor hemodynamic instability (p 0.232) nor low level of consciousness (p 1.000).

We observed a higher mortality tendency in the nonagenarian group (19.6% vs 12.4%, p 0.094) and a lower readmission rate (13.8% vs 15.3%, p 0.864).

Chronic comorbidities were more common in nonagenarian patients, such as heart failure (40.2% vs 31.1%; p 0.109), dementia (34% vs 24.8%; p 0.089), chronic kidney disease (26.8% vs 18.4%; p 0.084) and cerebrovascular disease (25.8% vs 20%; p 0.257).

Nonetheless, other comorbidities associated with higher mortality (liver disease, metastatic tumour, haematological malignancies), were more present in the younger group.

**Conclusions:** Although nonagenarians represent a significant number of admissions, they are underrepresented in the studies. This group showed a clear trend towards presenting more comorbidities, mainly heart failure, dementia and chronic kidney disease, and worse prognosis. This can have a great impact on the number of readmissions and mortality.

**Keywords:** *Nonagenarians, Comorbidities, Prognosis.*

| | |
|---|---|
| Heart failure | 40.2% vs 31.1%; p 0.109 |
| Dementia | 34% vs 24.8%; p 0.089 |
| Moderate/severe chronic kidney disease | 26.8% vs 18.4%; p 0.084 |
| Cerebrovascular disease | 25.8% vs 20%; p 0.257 |
| Mild/moderate diabetes mellitus | 23.7% vs 25.1%; p 0.893 |
| COPD | 16.5% vs 20.4%; p 0.464 |
| Peptic ulcus | 9.3% vs 7%; p 0.509 |
| Acute myocardial infarction | 7.2% vs 12.1%; p 0.199 |
| Peripheral artery disease | 5.2% vs 7.3%; p 0.645 |
| Hemiplegia | 4.1% vs 2.2%; p 0.296 |
| Connective tissue disease | 4.1% vs 4.4%; p 1.000 |
| Leukaemia or lymphoma | 2.1% vs 3.2%; p 0.740 |
| Solid tumour with metastasis | 2.1% vs 5.4%; p 0.267 |
| Diabetes mellitus with target organ damage | 1% vs 6.3%; p 0.035 |
| Mild liver disease | 1% vs 3.8%; p 0.316 |
| Moderate/severe liver disease | 0% vs 1.9%; p 0.343 |
| AIDS | 0% vs 0.3%; p 1.000 |

*Table 1. Comorbidities in nonagenarians patients vs those under 90 years of age.*

[Abstract:2631]

## CAN ACHALASIA BE A CAUSE OF DEMENTIA: THE IMPORTANCE OF COMPREHENSIVE GERIATRIC ASSESSMENT

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Achalasia is one of the most frequent causes of motor dysphagia. We report a case of achalasia that was misdiagnosed as dementia. A 78-year-old male patient was admitted to our geriatric clinic due to primary complaints of nausea, vomiting, and weight loss, which had been developing for the last 6 months. The complaint of difficulty swallowing was ambiguous. Therefore, the patient, for whom achalasia was not considered in previous evaluations, was started on trifluoperazine and medazepam for persistent complaints of nausea, insomnia, and restlessness, as the first gastroscopy and ultrasound did not provide guidance. When the complaints did not subside, the dose was increased.

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Hallucinations that occurred as side effects were accepted as the beginning of dementia, and donepezil was added. After that, the patient's complaints increased, and vomiting began as soon as she swallowed all solid and liquid foods. When the patient applied to us, the medications were discontinued, considering that the complaints were increasing due to the use of multiple anticholinergic medications. Gastroscopy revealed that the middle part of the oesophagus was severely dilated. Contrast-enhanced Pharyngo-Esophagography showed narrowing of the esophagogastric junction and the bird beak sign. The oesophagus appears significantly dilated proximal to the obstructed segment. Based on the results of the exams, we concluded the diagnosis as achalasia. The patient showed clinical improvement after treatment.

Atypical presentation in the elderly individual, the recommendation of a comprehensive evaluation, and the negative consequences of the prescription cascade were discussed.

*Keywords:* *elderly, achalasia, prescription cascade, atypical presentation*

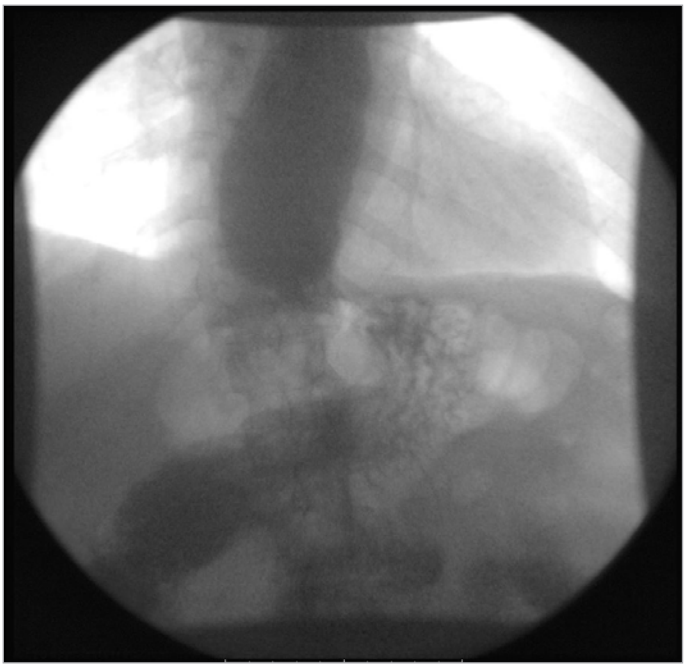

***Figure 1.*** *Pharyngo-Esophagography: dilatation of the middle and distal parts of the esophagus, narrowing of the esophagogastric junction, and the bird beak sign.*

[Abstract:2732]

## COGNITIVE PROFILE IN MULTIMORBID PATIENTS WITH ARTERIAL HYPERTENSION

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**Purpose:** To investigate cognitive functions in elderly patients with arterial hypertension (AH) and concomitant atrial fibrillation (AF) and/or chronic kidney disease (CKD).

**Methods:** Three groups were formed according to medical records data: 1) patients with AH and AF (n=55, median age 81 [75;83] years), 2) patients with AH, AF, and CKD stage 3a (n=55, median age 83 [77; 87] years), 3) patients with AH, AF, and CKD stage 3b (n=55, median age 82 [75;87] years). All the patients were examined for cognitive function using a battery of cognitive tests including the Mini-mental State Examination (MMSE), Montreal cognitive assessment, verbal fluence test (VFT), trail making test, digit symbol substitution test (DSST).

**Findings:** On the MMSE, patients with AH, AF, and CKD stage 3b had significantly lower score (26 [24;28] points) compared to group 1 (27 [25;29] points; p=0.006) and group 2 (27 [25;29] points; p=0.016). Similarly, in the DSST test, group 3 patients had significantly lower scores (19 [17;23]) compared to group 1 (22 [19;25]; p=0.030) and group 2 (21 [19;23]; p=0.038). In VFT letter fluency was significantly lower in group 3 compared to group one - 11 [9;12] and 12 [11;13] words, respectively (p=0.021).

**Conclusions:** Multimorbidity in the form of the concomitant CKD in patients with AH and AF may contribute to the development of more prominent vascular cognitive impairment, deterioration of executive function, semantic memory, as well as attention, visuoperceptual functions and working memory. These correlations may become more pronounced with the increasing severity of CKD.

*Keywords:* *multimorbidity, cognitive functions, atrial fibrillation, hypertension*

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[Abstract:2749]

# A "SIMPLE" CASE OF HYPOKINETIC SYNDROME IN A PATIENT WITH INCREASING COGNITIVE IMPAIRMENT: WHAT YOU REALLY DON'T EXPECT

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Premises: 81-year-old F enters the emergency room due to drowsiness and worsening of his general conditions.

Medical history: chronic renal failure on thrice-weekly dialysis treatment, associated pANCA vasculitis, progressive cognitive deterioration (significant worsening in the last month with progressive bed rest). In light of the investigations carried out (Table 1), empirical antibiotic therapy with ciprofloxacin was started for a suspected urinary infection (finding of torpid urine with frustules).

Description: in Internal Medicine, a physical examination is performed (Table 2). Continues dialysis sessions as per procedure and ciprofloxacin with reduction of inflammation indices; negative urine culture.

Second day: episode of shaking chills without fever after ciprofloxacin infusion: cortisone intravenously and replacement of ciprofloxacin with ceftriaxone. On blood gas analysis, slight increase in lactate; sent for a new urine test, urine culture (negative) and blood tests: white blood cells and C-reactive protein (CRP) decreasing, procalcitonin increasing.

Fifth day: pyretic patient, hypotensive (not responsive to volume filling, norepinephrine begins), procalcitonin and CRP clearly increasing, very high atrial natriuretic peptide: replacement of ceftriaxone with piperacillin/tazobactam. Chest X-ray unchanged. Echocardiogram: vegetations on the posterior leaflet of the mitral valve attributable to endocarditis with tendon rupture resulting in moderate-severe insufficiency (no surgical indications). 3 sets of blood cultures positive for *Staphylococcus epidermidis* vancomycin sensitive (Figure 1): vancomycin intravenously according to glomerular filtrate.

**Conclusions:** in frail elderly patients, the diseases can have an atypical presentation with non-specific symptoms that can mislead the clinician, being the prevalent clinical manifestation of a serious pathology, in our case infective endocarditis.

**Keywords:** *infection, atypical presentation, infective endocarditis*

**MICROBIOLOGIA**

**Materiale: Sangue intero**

**EMOCOLTURA AEROBI** **Positivo**

Isolato 1 Staphylococcus epidermidis

| | Isolato 1 | |
|---|---|---|
| *Antibiotici Saggiati* | *MIC* | *S/I/R* |
| Ampicillina | | R |
| Amoxicillina | | R |
| Amoxicillina-clavulanato (f) | | R |
| Azitromicina | | R |
| Clindamicina | >1 | R |
| Ciprofloxacina | >4 | R |
| Ceftriaxone | | R |
| Daptomicina | <=0,5 | S |
| Eritromicina | >2 | R |
| Acido fusidico | <=0,5 | S |
| Fosfomicina c/G6P | >64 | R |
| Gentamicina | >4 | R |
| Linezolid | <=0,5 | S |
| Moxifloxacina | >1 | R |
| Oxacillina | >2 | R |
| Rifampicina | >1 | R |
| Trimetoprim-sulfametoxazolo | >4/76 | R |
| Tetraciclina | 1 | S |
| Teicoplanina | <=2 | S |
| Tigeciclina | <=0,25 | S |
| Vancomicina | <=0,5 | S |

SIR = Sensibile/Intermedio/Resistente SDD = Sensibile Dose-Dipendente
IE = Insufficienti Evidenze N = Non Valutabile (-) = Non Appropriato
**Interpretazione dell'antibiogramma secondo i criteri Eucast**

EMOCOLTURA ANAEROBI **Positivo**

Isolato 1 Staphylococcus epidermidis

EMOCOLTURA MICETI **NEGATIVO**

***Figure 1.*** *Microbiology.*
*3 sets of blood cultures positive for Sphalylococcus Epidermidis vancomycin sensitive.*

**Table 1 - Emergency room investigations**

| Assessment | Report |
|---|---|
| Blood chemistry tests | Hemoglobin 7.9 g/dl, White blood cells 5600, platelets 148000, C-reactive protein 150.81 mg/l, creatinine 6.9 mg/dl, potassium 5.9 mEq/l, sodium 132 mEq/l |
| Chest x-ray | Hypodiaphania in the mid-basal area bilaterally with clouding of the pleural sinuses as a result of possible pleural effusion. No evidence of focal parenchymal alterations with bilateral activity. Diffuse accentuation of the broncho-vascular design most evident in the hilar-perilar area. Bilateral hilar prominence. Cardiomediastinal shadow projectively sized at the upper limits |
| Antigenic TNF for Sars Cov 2 research | Negative |
| Blood gas analysis | pH 7.4, Po2 100 mmhg, PCo2 26 mmhg, lat 0.7 mmol/l, spo2 99%, HCO3 16.1 mmol/l, FIO2 21% |
| Head CT | No blood layers both intra- and extra-axially. Marked hypodensity of the periventricular white matter, of the semioval centers and of the corona radiata in the context of chronic vascular suffering. Expanded ventricular system. Midline on axis. The representation of the cortical and cisternal CSF spaces is within limits in relation to age. Presence of mega cisterna magna |
| Electrocardiogram | Sinus tachycardia HR 130 bpm, poor progression of R wave V1-V3, low peripheral voltages, RV anomalies |
| Nephrology consultations | Continuation of dialysis sessions |

***Table 1.*** *Emergency room investigations.*



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| Table 2 - Physical examination at entry into the Internal Medicine department | |
|---|---|
| General physical examination | Poor general condition, apyretic, eupnoeic on room air; alert, poorly oriented and poorly cooperative; bilateral leg skin discoloration |
| Thoracic physical examination | Reduced vesicular murmur bilaterally in the absence of pathological sounds |
| Cardiological physical examination | Rhythmic cardiac activity, mild bilateral perimalleolar succulence |
| Abdominal physical examination | Within the limits of the norm |
| Neurological physical examination | Within the limits of the norm |
| Urinary system | Diuresis present, approximately 500 ml of urine with sediment and blood particles in the bladder catheter bag |

***Table 2.*** *Physical examination at entry into the Internal Medicine department*

[Abstract:2790]

## ATYPICAL TOXIC EPIDERMAL NECROLYSIS FUROSEMIDE-INDUCED

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Toxic epidermal necrolysis is a rare and severe skin disease, usually induced by drugs, that is characterized by an epidermal detachment that affects more than 30% of the total body surface. It is very important to keep it in mind, for the risk of secondary complications and high mortality. Furosemide is a diuretic of the sulphonamide group, widely used in daily clinical practice, which rarely produces this type of adverse reaction. We present an atypical clinical case of toxic epidermal necrolysis induced by furosemide. It differs from previous cases in the form of presentation, diagnosis and evolution.

**Keywords:** *toxic epidermal necrolysis, Stevens-Johnson syndrome, furosemide*

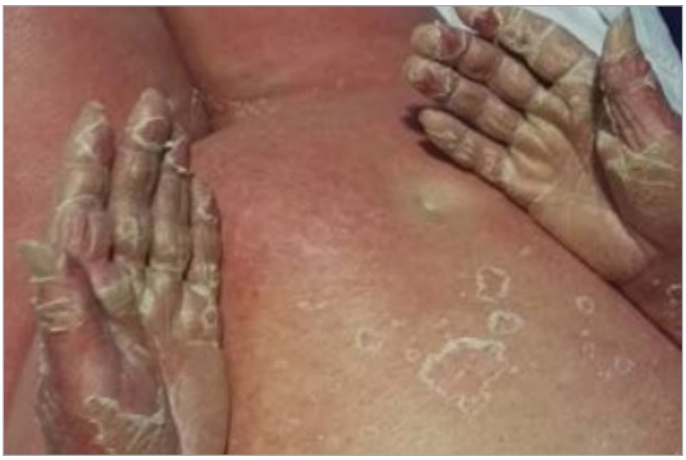

***Figure 1.*** *Bilateral palmar involvement with desquamation and Nikolsky's sign positive.*

[Abstract:2845]

## THE PREVALENCE OF FRAILTY IN OLDER ADULTS WITH HEART FAILURE ACCORDING TO THE SIMPLER MODIFIED FRIED FRAILTY SCALE AND ITS ASSOCIATION WITH MORTALITY IN FOLLOW

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**Purpose:** The primary aim of this study is to find out the prevalence of frailty (a geriatric syndrome closely associated with increased morbidity and mortality) in older patients with heart failure (HF) by using recently proposed simpler modified fried frailty scale (SMFFS). Our secondary aim is to reveal whether SMFFS is useful as a frailty assessment tool to predict mortality in follow-up.

**Methods:** This is a prospective, follow-up study including internalized and community-dwelling older adults(≥65 years) with a diagnosis of HF. SMFFS was used to subjectively assess the frailty phenotype with five items (i.e., involuntary weight loss, exhaustion, slow gait speed, poor handgrip strength, and sedentary behaviour). Presence of ≥3 items was accepted as frailty. Cox-regression analysis was performed to identify whether frailty defined by SMFFS could predict mortality in follow-up.

**Findings:** Among 101 patients included, 44 (42.8%) were female. The mean age was 75.8±7.6 and frailty prevalence was 63.4%. After a median follow-up of 580 days, 29 participants died. Among the parameters significantly associated with mortality in univariate analyses, only increased pulmonary artery pressure (PAB) and frailty defined by SMFFS were the predictors of mortality in older adults with HF (HR (95% CI) were 1.06 (1.01 – 1.09), (p=0.008) and 17.6 (1.39 – 227.69) (p=0.027); for PAB and frailty, respectively) (Table).

**Conclusions:** SMFFS succeeded in predicting mortality in older adults with HF. Our results point out that frailty is a game changer in the prognosis of HF and SMFFS can be used in cardiology and geriatric practice to identify individuals vulnerable to poor outcomes related to HF.

**Keywords:** *frailty, heart failure, mortality, older adults, sarcopenia*

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| Parameters | Hazard ratio (95% Confidence Interval), p value |
|---|---|
| Age | 1.03 (0.98 – 1.1), 0.285 |
| Cardiomegaly | 1.11 (0.40 – 3.10), 0.841 |
| PAB | 1.06 (1.01 – 1.09), 0.008 |
| Falls in the previous year | 1.50 (0.61 – 3.68), 0.385 |
| Limitation in ADL | 1.51 (0.40 – 5.68), 0.541 |
| Limitation in IADL | 0.39 (0.08 – 1.92), 0.247 |
| Quality of life | 1.27 (0.97 – 1.66), 0.081 |
| Undernutrition | 1.06 (0.24 – 4.67), 0.944 |
| Sarcopenia | 1.11 (0.40 – 3.10), 0.841 |
| Frailty | 17.6 (1.39 – 227.69), 0.027 |

***Table 1.*** *Cox regression analysis for the independent associates of mortality in older patients with HF.*

[Abstract:2934]

## WHAT DO WE DO WITH OUR ELDERLY HEART FAILURE PATIENT? DO WE FOLLOW CLINICAL PRACTICE GUIDELINES?

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**Background:** Medical practice guidelines in Heart Failure (HF) are based on clinical trials aimed at patients in the middle ages of life, but the effect of drugs in the elderly and the particularities of their management in comorbid patients with polypharmacy have not been investigated. The objective is to study these particularities in clinical practice recommendations, specifically with ISGLT-2.

**Methods:** A retrospective observational study of patients admitted to the Internal Medicine Department of a second level hospital during the month of May 2023.

**Results:** 43 patients (88 mean age, 51% men). 21 patients had a history of HF and 23 developed HF during admission (8 debut). Echocardiogram was not performed in all patients (mostly had preserved ejection fraction). 23 of patients came from a nursing home, 21 had a history of cognitive impairment of any degree and 31 had degrees of dependence (Barthel Scale) and only 3 patients were not considered multipathological. 36 of them were taking more than 5 drugs and 24 more than 10 drugs. Only 5 patients were taking iSGLT2 prior to admission, who already had a history of HF (4 preserved and only 1 reduced EF). During admission only 4 patients were prescribed iSGLT-2, only 2 introduced as a new medication and at discharge only 7 had it prescribed.

**Conclusions:** Elderly patients are underrepresented in clinical trials. Our patients have a high degree of pluripathology, comorbidity, dependency, and polypharmacy, but without application of the same recommendations as those made for younger patients.

***Keywords:*** *heart failure, ISGLT-2, comorbidity,*

[Abstract:3003]

## EARLY, DELIRIUM AND MORTALITY: A RETROSPECTIVE STUDY OF ACUTE CONFUSIONAL SYNDROME IN AN INTERNAL MEDICINE SERVICE

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**Objectives:** To describe the clinical and sociodemographic characteristics, comorbidities and polypharmacy in a cohort of patients with acute confusional syndrome (ACS) and its evolution.

**Materials and Methods:** EARLY is a descriptive and retrospective study, in patients admitted to Hospital Clínic in Internal Medicine, during 2022, diagnosed with ACS. Data were collected via Redcap and analysed with Excel.

**Results:** Of a total of 180 patients, 89 women and 91 men, the mean age was 81.6 years. 17% were robust elderly according to the clinical frailty scale and 43% were frail; 60% had an age adjusted Charlson score between 5-7 points; the mean Barthel score was 48 points. 77% percent had polypharmacy: PPIs (57%) and antipsychotics (41%). Considering comorbidities, the most important was hypertension (78%). The most frequent reason for admission was respiratory infection (32.2%). As complications, 20% had exacerbation of chronic kidney disease (CKD). For the management of ACS, 46% required mechanical restraint; the most used neuroleptic was quetiapine (61.1%). At discharge, 33% required adjustment of neuroleptic. The mean length of stay was 11 days. Exitus vitae accounted for 15.6%.

**Conclusions:** The geriatric population is the most prone to present ACS, especially those with comorbidities and polypharmacy. It is imperative to know the precipitating factors of ACS to minimize them and carry out adequate management to reduce complications and the average hospital stay; as well as to have a multidisciplinary team.

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***Keywords:*** *delirium, elderly, ACS, geriatric syndromes*

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