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Decrease Treatment Burden following the Application of ADCES7 and WHO-ICOPE in a Diabetic Frail Elderly Lady with Multimorbidity

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Introduction

We are living in a world of aging, and the elder population is increasing rapidly. According to the World Health Organization (WHO), the number of people aged 60 or older is about 1 billion in 2019. The numbers are expected to rise to 1.4 billion by 2030 and 2.1 billion by 2050 [1]. Elderlies are frail and they are prone to many diseases, including psychological disorders. Diabetes is also a global problem, and its prevalence increases after middle age [2]. To help clinical health providers to get better pictures of the frail diabetic elderly subjects holistically, many programs or models have been developed. One of the most used assessment and management tools is the integrated care for older people (ICOPE) guideline developed by the WHO [3]. ICOPE was set with person-centered goals, screening for loss in a range of domains of intrinsic capacity and assessing health and social care needs to develop a personalized care plan. The Association of Diabetes Care & Education Specialists 7 Self-Care Behaviors (ADCES7 Self-Care Behaviors®) is also a person-centered approach to diabetes by acknowledging the whole person in the context of their life and relationships which form the framework for diabetes care to deal with people with diabetes [4]. By using the ICOPE and ADCES 7 Self-Care Behaviors®, we were able to evaluate the patient rapidly and further help manages their problems. Here, we present a frail diabetic elderly subject with multimorbidity who had recent medical deterioration. This case is also a good demonstration of holistic care to minimize the disease and treatment burden in a primary care setting.

Case Presentation

Basic Personal Profile

The patient is an 88-year-old widowed woman who has two sons and two daughters. She lives alone and has finished her primary school education. She has type 2 diabetes mellitus (DM), chronic kidney disease, hypertension, sleep disorders, and cataract. She has long-term follow-ups at our endocrinology, neurology, and ophthalmology polyclinics. Her baseline activities of daily living (ADLs) score was 100, and instrumental activities of daily living (IADLs) showed abnormal function in “shopping” only. Physical examination/Biochemistry profiles- Body height 156cm, body weight 53Kg, BMI=21.7. Her latest biochemistry profile includes: HbA1C=11.6%, eGFR=62.7, UACR=93.6, LDL-C=67. Her annual fundoscopy test reveals no obvious retinopathy, but both feet had decreased sensory filament test. Current treatment- The patient has been on basal-bolus insulin injection by herself to control her DM for 10 years.

Diagnosis/Problems encountered

We summarized her problem and our assessment in Table 1.

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Table 2 and 3 shows the complete ADCES-7 and ICOPE evaluation of the patient respectively.

MMSE- Mini-Mental State Examination; SPPB- Short Physical Performance Battery; MNA- Mini Nutritional Assessment; GDS-15- Geriatric Depression Scale.

Management and Follow-up

Table 4 summarizes the short-term and long-term goals and management for the patient. The cooperation between the family, the medical staff, and the community health long-term care services are the key points of holistic person-centered integrated health service.

Discussion and Conclusions

We presented a typical elderly with multimorbidity and frailty who we probably encounter every day during our clinical practices. The focus of this case is on how to find her problem in a systemic approach. During our daily practices in our clinic, we have ADCES 7 screening at least once every 3 months. Well-trained medical personnel can go through the ADCES 7 items quickly and evaluate the patient's situation and needs in a short amount of time. This is how we found her wound and she stopped checking her blood glucose at home. After acquiring this information, we contacted her family promptly and were able to intervene in a timely manner. Nevertheless, we need a more comprehensive questionnaire or guideline which can cover a broader spectrum to assess an elderly individual. The ICOPE consists 6 domains: vitality, visual capacity, hearing capacity, cognitive capacity, psychological capacity, and locomotor capacity. ICOPE focuses on the functionality of each individual rather than diseases. Tavassoli et al. used ICOPE for screening at a large population, and the follow-up rate is high, proving this is feasible and not troublesome in clinical practice [5]. Zhao et al proved that a function-centered approach (ICOPE) has better predictability in disability than a disease-based

Table 1: Problem detection with two approaches: the diseased-based ADCES-7 and function-centered ICOPE.

Problem: Deterioration of blood glucose control in the recent year.	
Assessment: ADCES-7 (Diseased-based) and ICOPE (function-centered)	
ADCES-7 (listed abnormal results only) 1. Monitoring: decreased self-monitor blood glucose frequency 2. Reducing risk: peripheral neuropathy, wound on her foot	ICOPE (listed abnormal results only) 1. Cognitive: impaired, may lead to irregular insulin injection 2. Depression: severe depression issue. 3. Mobility: ambulatory, but decreased lower limb muscle power

Table 2: The patient's most recent ADCES 7 behavior assessment.

ADCES 7 behaviors	Patient's results
Healthy eating	Normal teeth, no chewing problem
Being active	Ambulatory, no regular exercise
Monitoring	No regular monitoring now. (She had finger-tip glucose checked about twice/week in the previous record.)
Taking medication	Regular follow-up. The family said she missed medication sometimes.
Problem solving	No hypoglycemia symptoms. She denied discomfort, and did not know how to adjust insulin when high blood glucose level was noted.
Reducing risk	Vaccination: updated. Fundoscopy: normal, updated with annual exam. Filament test: abnormal. Wound also seen during the filament test.
Health coping	She felt fine, and was not aware of her deteriorating condition.

Table 3: The patient's most recent ICOPE assessment.

Intrinsic Capacities	**Assessment tool**	**Result**
1. Cognition	MMSE	Score 18, abnormal
2. Mobility	SPPB	Score 1, normal, but weakness noted in her lower limbs
3. Vitality	MNA	Normal
4. Sensory Function		
Vision	Asking whether there was reading obstacles or recent eye problems.	Normal
Hearing	Ask the patient to repeat what medical staff had said.	Normal
5.Psychological	GDS-15	Score 11, severe depression, referral to specialists.

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Table 4: Goals and management for the patients.

Short-term goal: blood glucose control. Mainly treating diseased-based problems and dealing with the anomalies found by ADCES-7 assessment.	
Executers	Approaches
Family	1. Key hub. 2. Check if the patient's necessities were met (wound care, checking blood sugar, medication compliances) 3. Keep the patient company. 4. Keep in touch with the medical staff and long-term care service.
Medical team	1. Arrange more frequent visits. 2. Wound care (including teaching the family, and long-term care service how to care for it). 3. Contact the family if anomalies were noted
Long-term care service	1. Home services can help check her medication use and blood sugar monitoring. 2. Report the patient's condition frequently to the family.
Long-term goal and management: mainly function-centered and the goal is to avoid rapid decline. Dealing with the anomalies found by ICOPE assessment.	
Executers	Approaches
Family	1. Create a safe environment for the patient. Set up a home monitoring system, install handrails, and place non-slip mats..etc. 2. Keep the patient company and happier.
Medical team	1. Timely referral to a neurologist or psychologist. 2. If her condition deteriorates more, may consider simplifying her medication. 3. Nutrition and exercise education to deal with sarcopenia.
Long-term care service	1. Day-care service: keep her social abilities and prevent rapid decline. 2. If her condition deteriorates more, may need help with medication use (eg: daily basal insulin injection).

approach [6]. The combination of ADCES 7 and ICOPE covers both the disease-based and function-center domains which are especially important in the elderly because they are usually bothered by both multimorbidity and functional decline. The patient's main necessities were met with the cooperation of our medical staff, the family, and the long-term care services provided by the Taiwanese government. The case is just a tip of the iceberg, and many more await to be found and intervened.

References

1. Ageing, World Health Organization website, Health topics (2022).
2. Cho N, Shaw J, Karuranga S, et al. IDF Diabetes Atlas: Global estimates of diabetes prevalence for 2017 and projections for 2045. Diabetes Research and Clinical Practice 138 (2018): 271-281.
3. Integrated Care for Older People: Guidelines on Community-Level Interventions to Manage Declines in Intrinsic Capacity; Licence: CC BY-NC-SA 3.0 IGO; World Health Organization: Geneva, Switzerland (2017).
3. Association of Diabetes Care & Education Specialist (ADCES). An Effective Model of Diabetes Care and Education: The ADCES Self-Care Behaviors®. The Science of Diabetes Self-Management and Care 47 (2021): 30-53.
4. Tavassoli N, Souto Barreto P, Berbon C, et al. Implementation of the WHO integrated care for older people (ICOPE) programme in clinical practice: a prospective study. Lancet Healthy Longevity 3 (2022): e394-404.
5. Zhao J, Chhetri JK, Chang Y, et al. Intrinsic Capacity vs. Multimorbidity: A Function-Centered Construct Predicts Disability Better Than a Disease-Based Approach in a Community-Dwelling Older Population Cohort. Frontier in Medicine 8 (2021): article 753295.