Geriatric Syndromes

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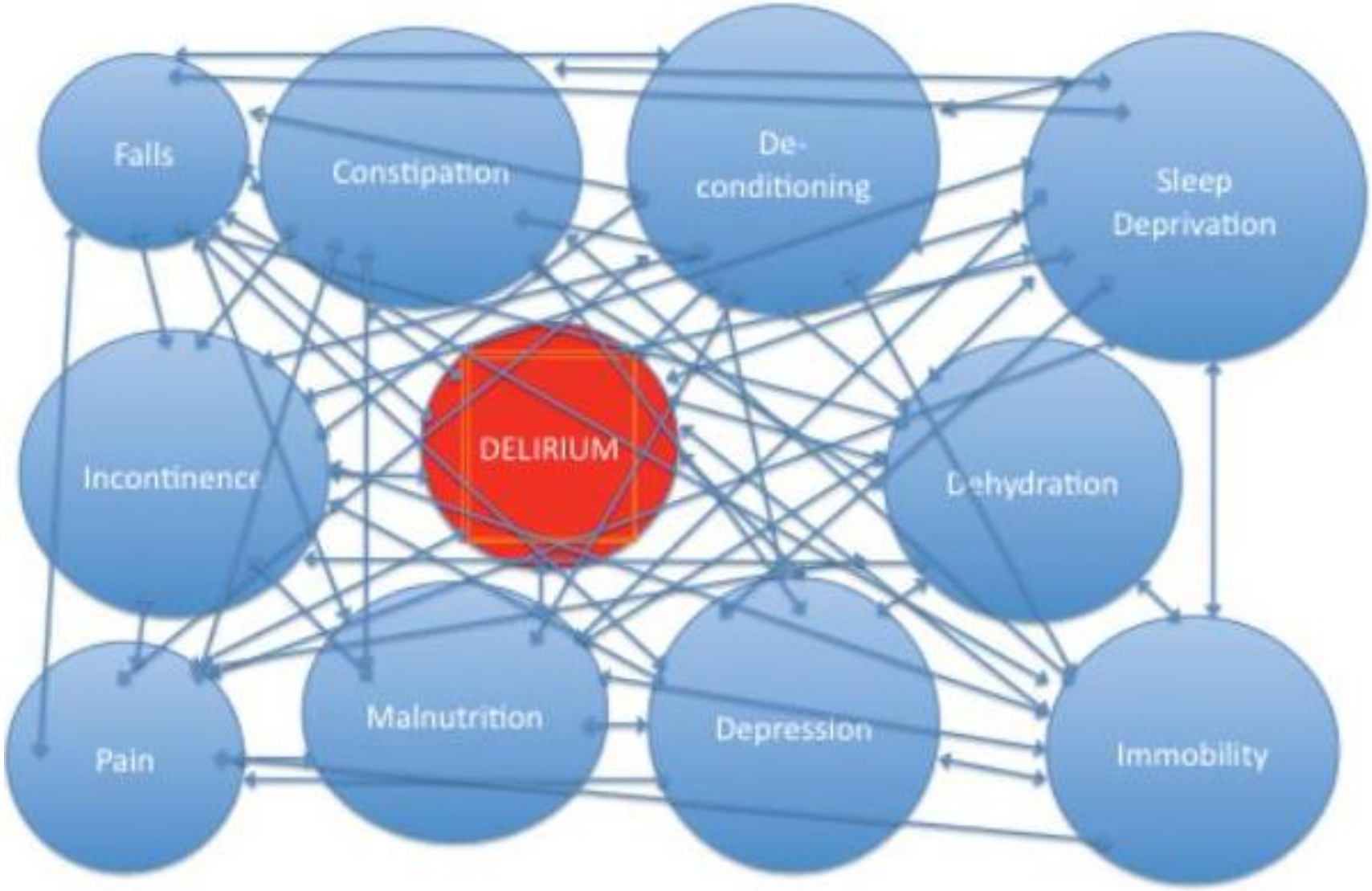
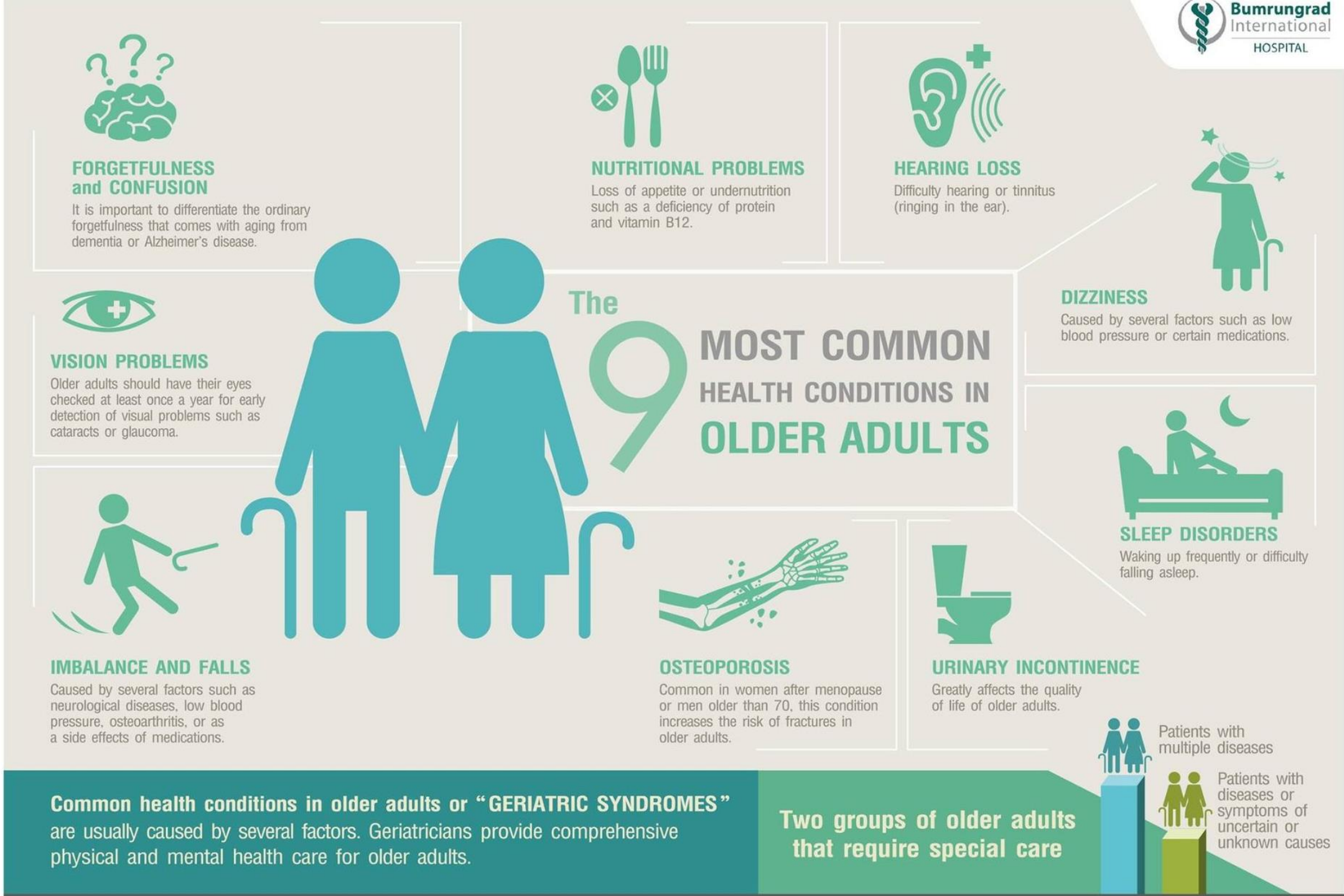
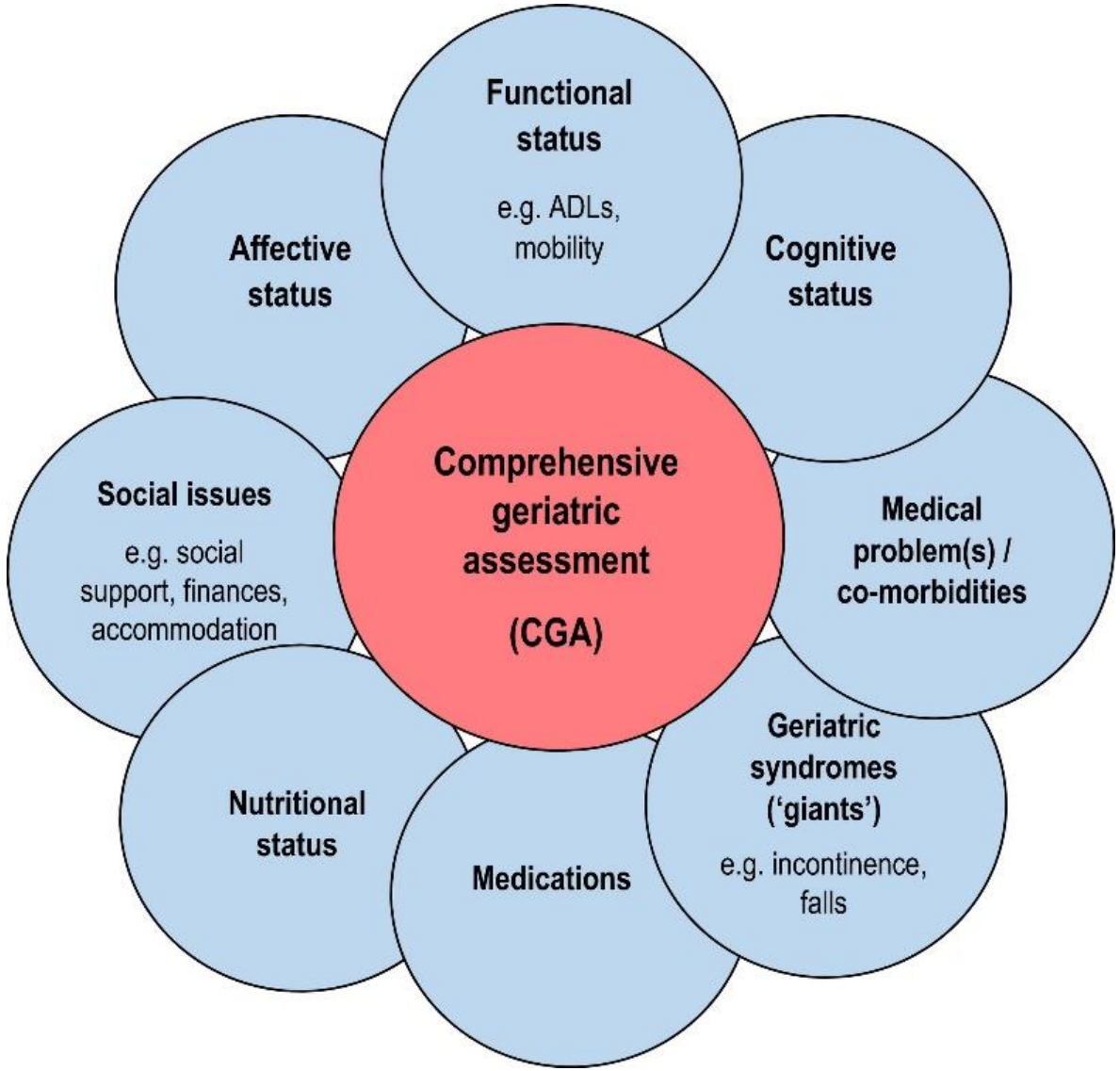
Geriatric Vicious Circles



The Most important Geriatric Syndromes



Comprehensive Geriatric assessment

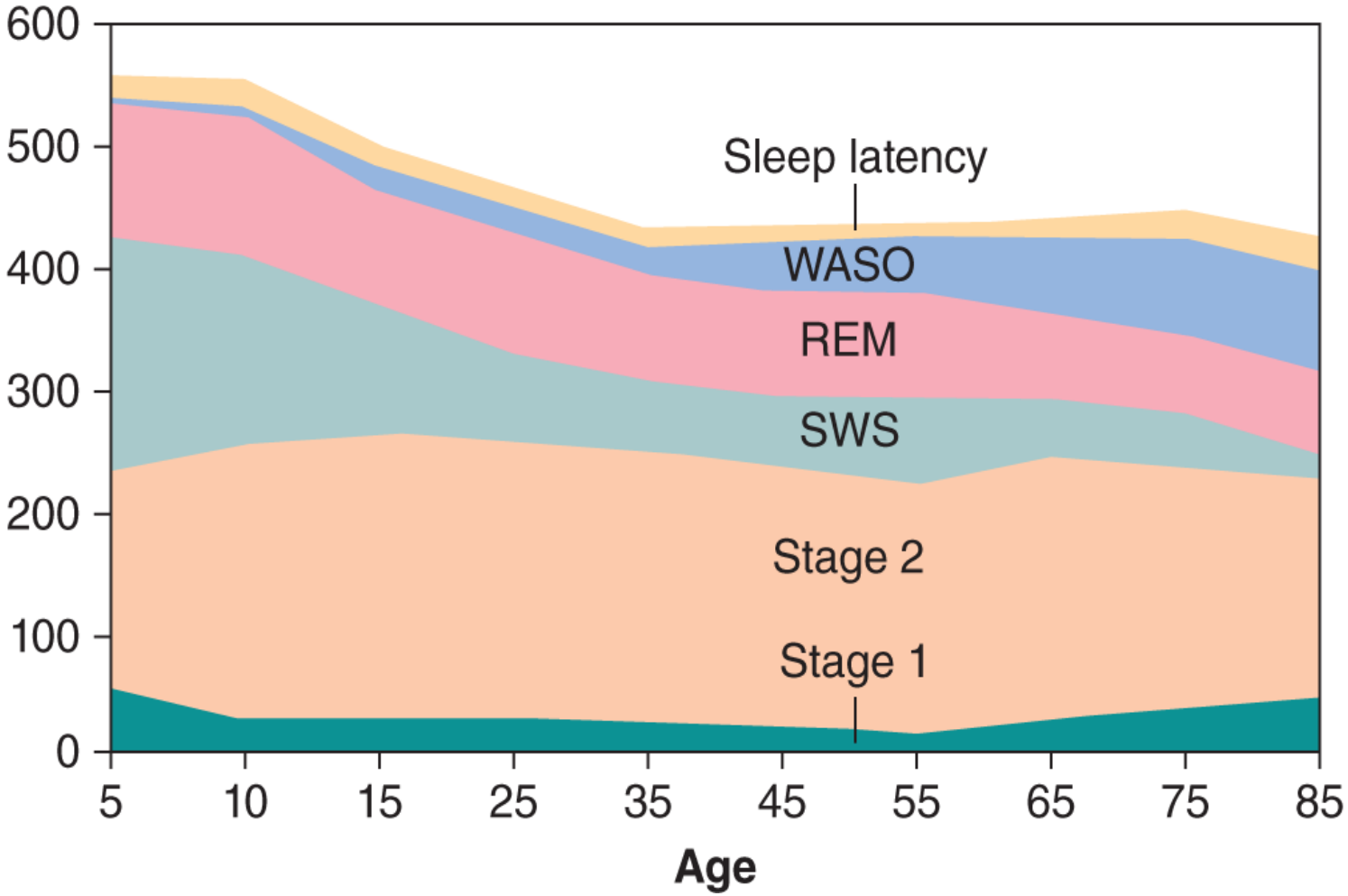


- The likelihood of possessing two or more significant conditions is approximated to be **٦٠% by the ages of ٧٥ and ٧٩ years and exceeds ٧٥% between the ages of ٨٥ and ٨٩ years**

Sleep problems

Poor sleep is common in older adults, and is more closely associated with comorbidities than with chronological age.

Many important health outcomes are associated with poor sleep in older adults, including cognitive decline, increased medication use, and higher health care utilization.



Incontinence

The prevalence of incontinence increases with age and with increasing frailty, and is ۱,۳ to ۲,۰ times greater in older women than in older men.

Among community-dwelling older women, the prevalence of any urinary incontinence is approximately ۳۵%; among older men, it is approximately ۲۲%.

The prevalence of daily urinary incontinence in older community-dwelling persons is approximately ۱۲% for women and ۵% for men.

Pain

Epidemiologic studies suggest three in five persons over age ۶۵ report pain that lasted a year or more, and more than ۱۵% report daily pain.

In general, the most common causes of pain in older persons are probably related to musculoskeletal disorders such as back pain and arthritis.

Dizziness & Syncope

Falls

Depressive symptoms

Fatigue

Anorexia

Weight loss

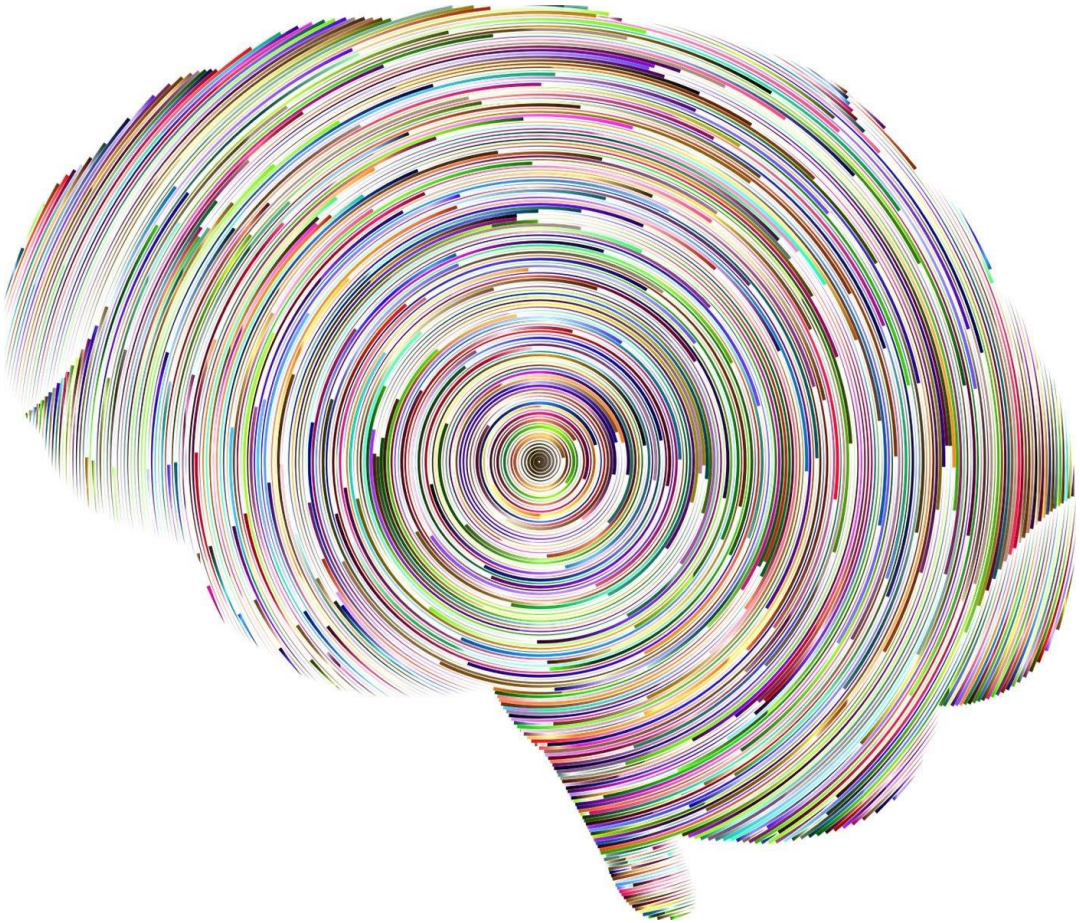
ADL & IADL

- Difficulty, degree of dependence, and change in ability in both self-care or basic activities of daily living and instrumental activities of daily living are also integral components of the history in older persons.
- These functional activities often are the primary outcomes targeted in the treatment of older patients.

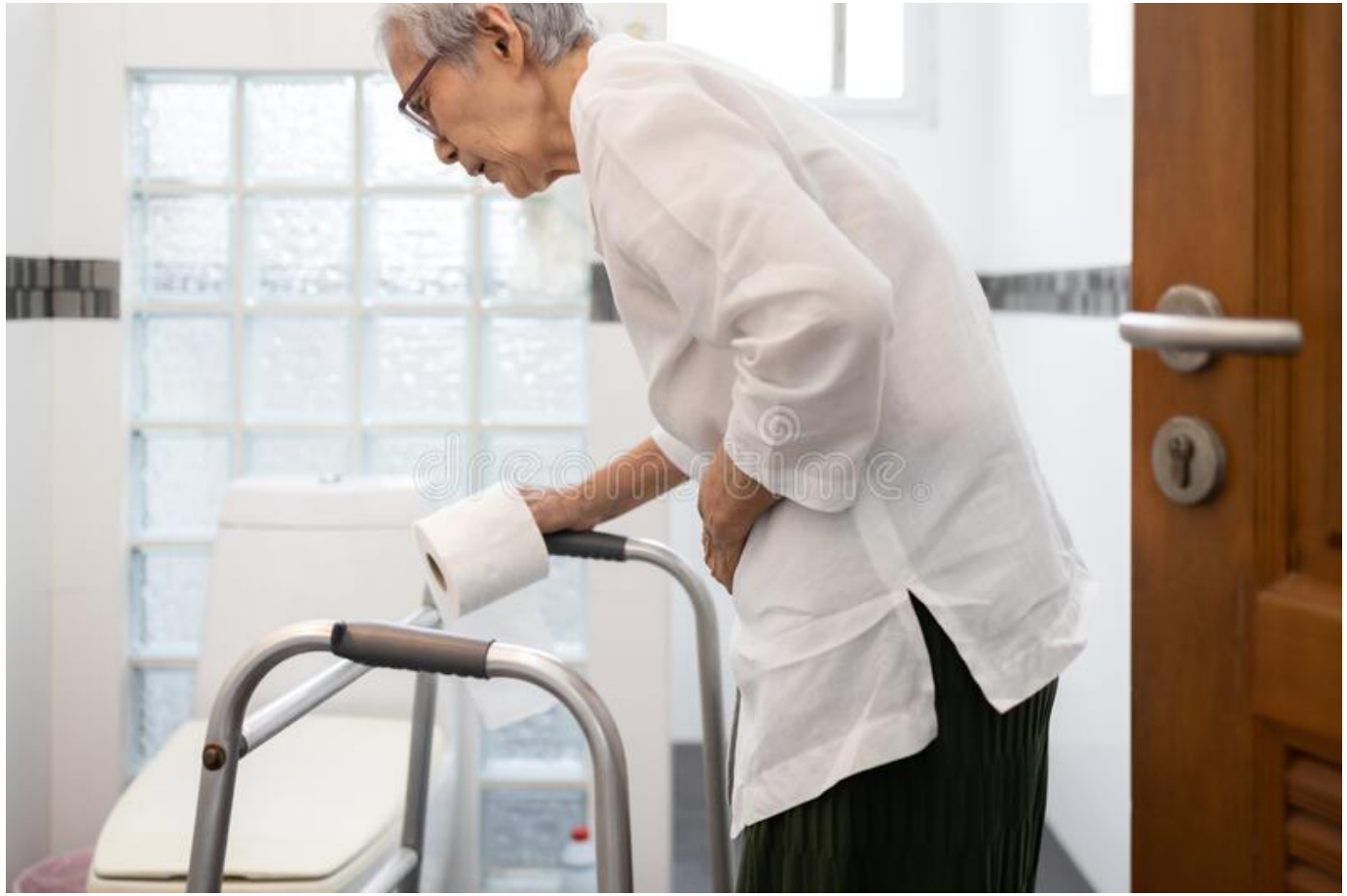
ADL & IADL

ADL	IADL
Eating	Taking medication
Dressing	Handling finances
Grooming	Using transportation
Bathing	Preparing meals
Toileting	Housekeeping
Transferring	Communicating outside the home
	Shopping

Delirium



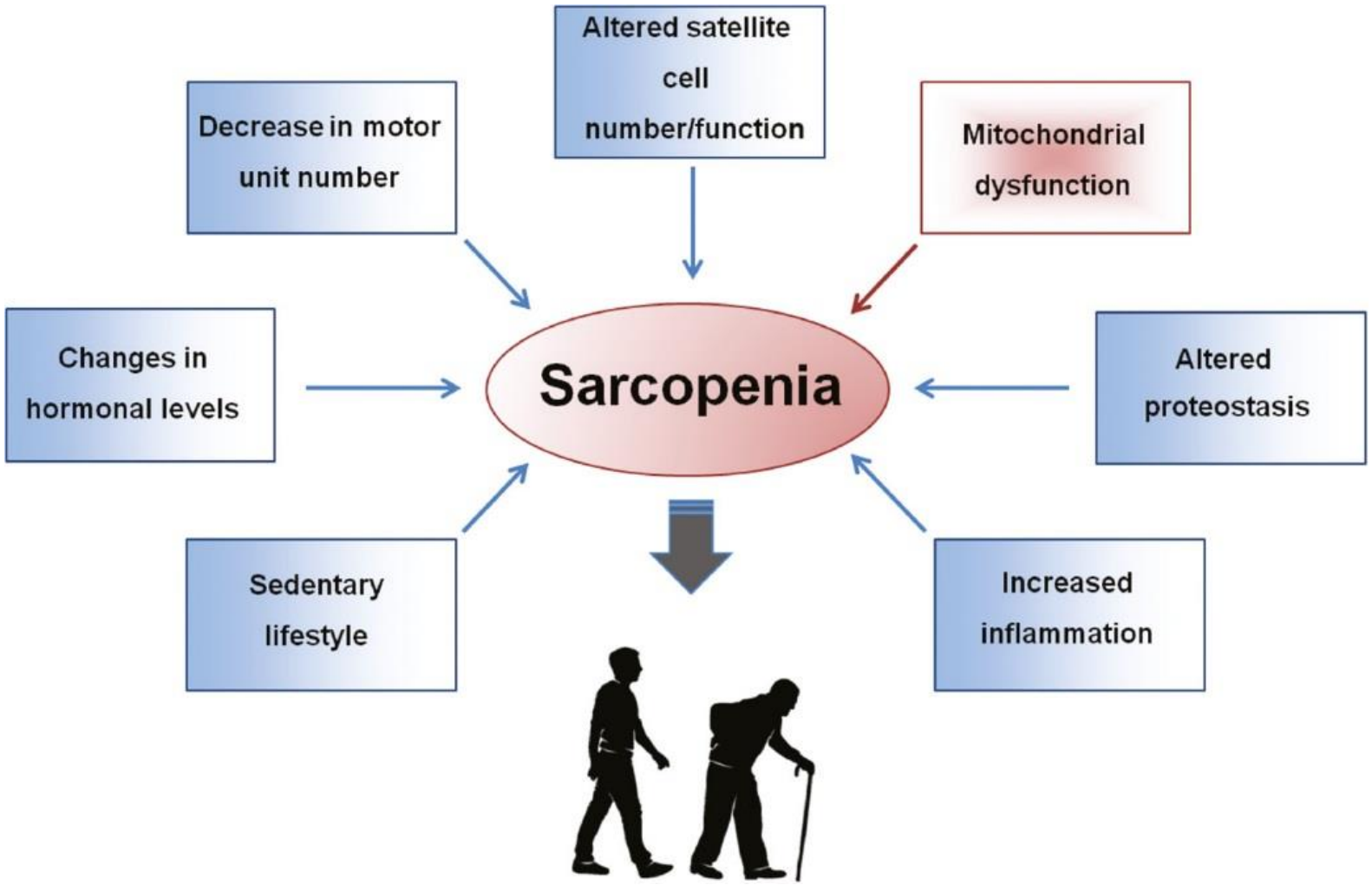
Constipation



Frailty


بسیار تندرست ۱
خوب ۲
کنترل خوب بیماری های زمینه ای ۳
آسیب پذیر ٤
فرتوتگی خفیف ٥
فرتوتگی متوسط ٦
فرتوتگی شدید ۷
فرتوتگی خیلی شدید ۸
مراحل انتهایی بیماری ۹

Sarcopenia


Altered satellite cell number/function
Decrease in motor unit number
Mitochondrial dysfunction
Changes in hormonal levels
Sarcopenia
Altered proteostasis
Sedentary lifestyle
Increased inflammation

Elderly Mistreatment

١. Psychological abuse
٢. Financial abuse
٣. Neglect
٤. Physical abuse
٥. Sexual abuse





Bedsore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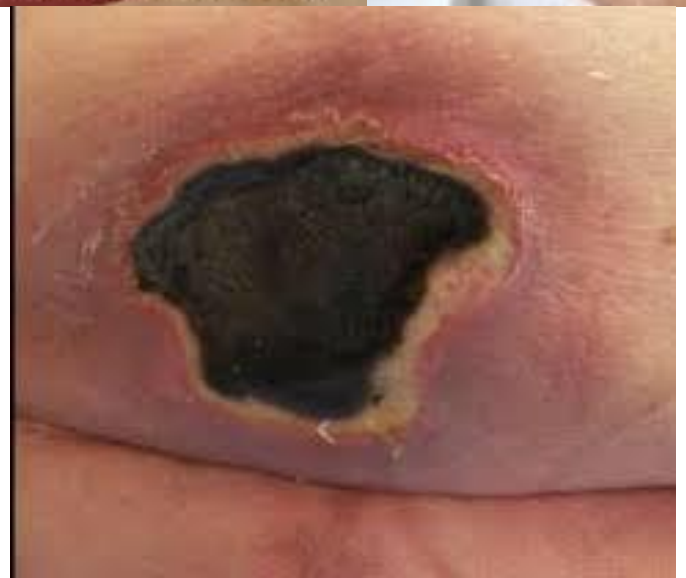

Assessment of mood and affect

- The clinical history of older persons should also include assessments of cognitive function, affect, and mood (depressive symptoms).
- Briefly, mood and affect can be screened for easily with tools such as the two-question depressive screen:
  ١. In the past month, have you been sad, blue, or down in the dumps?
  ٢. Have you lost interest in most things or been unable to enjoy them?
- More formal, systematic assessments should be undertaken if there is any question of depression.

Assessment of cognition

- Cognitive status can be screened for with short tests such as the Mini-Cog. The Mini-Cog combines the three-item recall and the clock-drawing test (CDT).
- It takes less than ۵ minutes to complete, is unaffected by language or education, and can be scored by untrained raters with minimal loss of accuracy.
- Knowing the cognitive status of an older adult also has important implications in decision making.

Polypharmacy

- Adverse drug reactions (ADRs) in elderly patients can be mistaken as part of physiological aging or an additional disease symptom.
- The differentiation of ADRs from physiological aging or disease symptoms requires utmost care, particularly when the ADRs are caused by reducing the number of drugs.
- This becomes difficult if a patient is taking semiregular-use drugs.

Results of our Mistakes

Case Report

- Development of geriatric syndromes after taking countermeasures for polypharmacy: an overlooked issue of quitting semiregular single-dose medicine

- Oxford Medical Case Reports, ۲۰۱۹;۰۰, ۱–۳

History

- Present illness: At the end of July ٢٠١٥, a ٧٨-year-old woman visited a general hospital for appetite loss, general fatigue and muscle weakness.
- PMH: Hypertension, Type II Diabetes Mellitus, Osteoporosis, Osteoarthritis, Insomnia, Bronchial Asthma and Skin Rash
- Geriatric conditions: hearing difficulties, mild cognitive impairment
- Drug history:
  - Metformin ٥٠٠ mg/day and Vildagliptin ١٠٠ mg/day
  - Amlodipine ٥ mg/day, Candesartan ٨ mg/day and Doxazocine ١ mg/day
  - Pitavastatin calcium ١ mg/day
  - Donepezil ٥ mg/day

History

- Because she was taking several drugs, her doctor stopped some medications, as these could cause ADRs.
- She was also directed to stop all over-the-counter and semiregular-use drugs.
- However, her symptoms did not improve.
- Over ٢ months, her weight reduced by ∼٢,٠–٥٠,٧ kg (body mass index: ٢٣,٢ kg/m٢).

History

- By the end of September, she developed mild fever and was admitted to our hospital, accompanied by her granddaughter.
- Her children took turns with her hospital visits, except when she was temporarily admitted to a nearby clinic.
- Although she had right knee osteoarthritis, she could walk independently.
- Pretibial and pedal edema was observed in both legs.

History

- She had a rash, a mild headache with no neck stiffness and a body temperature of ~ ۳۷,۵◦C.
- She had no diarrhea, vomiting or abdominal pain, and she defecated every other day without laxatives.
- There were no signs of upper respiratory tract infections. Her muscle strength was not sufficient to open a bottle cap.
- Pyramidal/extra-pyramidal signs and ataxia was not observed.
- She had no significant family history of disease

Laboratory Data

- White blood cell count: ۶,۳ × ۱۰۳/μL
- C-reactive protein: ۰,۲ mg/dL
- Eosinophilia: ۱۶,۶% [۱۰۴۶/μL]
- Hypokalemia: ۲,۸ mmol/L with
- serum sodium level: ۱۴۴ mmol/L
- Indications of malnutrition were observed: (albumin: ۳,۰ g/dL; total cholesterol: ۱۳۹ mg/dL; total lymphocyte count: ۲۹,۰% [۱۸۲۷/μL]).
- Procalcitonin level: ۰,۰۸ ng/mL.

Laboratory Data

- Corrected total serum calcium : ۱۱,۰ mg/dL
- Zinc deficiency was not observed
- Thyroid hormones were within normal range
- Hemoglobin A۱c: ۶,۴%
- Fasting Blood Glucose: ۱۰۵ mg/dL
- Blood Urea Nitrogen: ۵,۰ mg/dL
- Creatinine levels: ۰,۶۰ mg/dL
- Transaminase and Biliary enzyme activity were normal.
- Autoantibodies were negative
- Urine was clear.
- Occult blood was not detected in her stool.

Paraclinic

- Chest x-ray was normal.
- Electrocardiogram showed sinus arrhythmia (۷۵ bpm).
- Abdominal ultrasonography, computed tomography and upper gastrointestinal tract endoscopy showed no significant abnormalities.
- MMSE: ۲۴/۳۰, and immediate recall failure was observed.
- GDS: ۶/۱۵
- Brain MRI showed only bilateral hippocampal atrophy.

Intervention

- Immediately after admission, we stopped donepezil ٥ mg/- day as it was found to be prescribed for ٢ months.
- However, improvement was negligible to alleviate malnutrition.
- There were no other potentially inappropriate medications (PIMs) or risky combinations in her regular drugs.

Intervention

- As fever was sustained at ~ ۳۷,۵◦C, and we performed lumbar puncture; cerebrospinal fluid and laboratory tests were normal.
- One month after the patient's admission, her granddaughter informed that the patient sometime visited a clinic and obtained ointments and medicines to relieve itching, which she managed herself.
- Based on doctor's instruction, in July ۲۰۱۵, the family had taken these drugs away. Shortly afterwards, she developed mild fever

Investigation

- We asked the concerned doctor what types of medicines he had prescribed.
- She had been taking an antihistamine (d-crolefeniraminmarein acid) containing a steroid (betametazone ۰,۲۵ mg/tablet) almost every other week for ۱۰ years, without anybody’s knowledge.
- There seemed to be no non-adherence to the drug.

Diagnosis

- Based on the information provided, they speculated that her symptoms were related to adrenal insufficiency, derived from quitting semiregular use of this steroid-containing agent.

Evaluation

- One month after admission, we performed the adrenocorticotropic hormone (ACTH) loading test.
- Peak cortisol level was ١۶,٠ μg/dL after ٩٠ min, which was slightly lower than standard, indicating mild adrenal insufficiency.
- Fortunately, her appetite and pyrexia began to recover when the test was performed.
- Two months after admission, fever lysis was achieved without the initiation of steroid medications.

Evaluation

- Eosinophilia and hypokalemia gradually improved toward the date of discharge.
- On her visit to our outpatient clinic after discharge, we found that muscle strength and cognition had recovered, even though we did not restart cholinesterase inhibitors.
- Likewise, it was unnecessary to restart medications for diabetes mellitus and dyslipidemia.
- We restarted olmesartan ۱۰ mg/day a few days after admission, during the hospital stay and after discharge.
- No additional antihypertensive drugs were required.

Result

- Based on her symptoms, clinical course and recovery without additional treatment, infectious, malignant and autoimmune diseases were unlikely.
- The ACTH test results indicated that secondary adrenal insufficiency occurred from quitting semiregular use of a steroid-containing antihistamine agent.

Result

- We conclude that appetite loss, which was caused by multiple factors (i.e. hot climate, initiation of cholinesterase inhibitor), and subsequent cessation of steroid-containing agent has triggered mild secondary adrenal insufficiency.
- We asked her family to fix a person in charge of her health and warned them to consult a specialist when symptomatic treatment is not effective.

Result

- We described an elderly woman on polypharmacy who developed appetite loss, muscle weakness and general fatigue from multiple factors, mainly secondary adrenal insufficiency caused by quitting one semiregular single-dose medicine.
- Reducing polypharmacy, even semiregular-use drugs, should be performed carefully, especially when multiple prescribers are present.

Result

- The detection of ADRs becomes difficult if symptoms are like those of geriatric syndrome.
- Distinction becomes even more difficult if the symptoms are derived from semiregular use medicines and if stopping the prescription is the cause.
- Adrenal insufficiency manifests symptoms that can be confused with geriatric syndrome or multimorbidity.