Lecture 4

Editing file

MED438
KING SAUD UNIVERSITY

PRIMARY HEALTHCARE TEAMWORK

Elderly Care : Concept and Principles

Objectives:

- ★ Define the elderly population
- ★ Understand the aging process
- ★ Understand the giant geriatric syndromes
- ★ Explain the meaning of healthy aging
- ★ Discuss the health risks in aging population
- ★ Recognize the common causes of dementia
- ★ Discuss the common preventive measures for elderly people

Color index:

Original text Important Doctor's notes Golden notes Extra

Who Is Old ?

There's no difference between the word "Old" and "Geriatric".
They differ only in on there origin (geriatric is latine name)

Elderly:

- 60 & + years of age (UN)
- 65 & + developed countries
- 50 & + African countries, birth certificates problem)
- The is no specific age for elderlies, but an age group made by insurance companies.

The typical "geriatric" patient :

- Chronic disease.
- Multiple disease (comorbidity).
- Multiple drugs (polypharmacy).
- Social isolation and poverty.
- Decrease physiological function.

Aging - definition

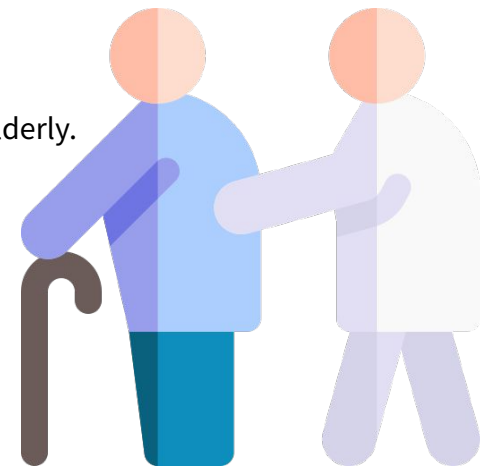
LOSS OF RESERVE

- Aging is a physiological process is associated with complex changes in all organs.
- It is the accumulation of biological changes over time leading to decreased biological functioning and impaired ability to adapt to stressors.
- Aging is a concern as this age group have many risk factors for comorbidities.

Who is the Geriatricians?

They are who **diagnose**, **treat** & **manage** diseases & conditions of the elderly.
It is a special approach for aging patients

- If there is lack of social support the geriatrician can help.
- Geriatrician role is to improve quality of life.
- Geriatric: is the medical term.
- Elderly: is the general term.



General principles of geriatric care:

- Multifactorial disorders are best managed by multifactorial interventions Atypical presentations need to be considered.
- Not abnormalities require evaluation and treatment.
- Complex medication regimens, adherence, problems, and polypharmacy are common challenges.

Geriatricians

Principles of Geriatrics

- Aging **is not a disease.** It occurs at different rates:
  - **Between individuals.**
  - **Within individuals in different organ systems**.
- Geriatric conditions are chronic, multiple, multifactorial.
- Reversible conditions are underdiagnosed and undertreated.
- **Function and quality of life are important outcomes.**
- Social support and patient preferences are critical aspects.
- Geriatrics is multidisciplinary issues.
- Cognitive and affective disorders prevalent and undiagnosed at early stages.
- Iatrogenic disease common and often preventable (37% of patients).
- Care is provided in multiple settings (like psychological care in patient with depression, which is common in geriatrics. Most of eldrly psychological problems are underdiagnosed).
- Ethical and end of life issues guide practice.

Normal Aging vs. Disease:

Normal Aging	Disease
■ "Crow's feet" ■ Presbycusis / Presbyopia ■ Seborrheic keratoses; loss of skin elasticity ■ Benign forgetfulness ■ Decreased blood vessel compliance ■ Increase in % body fat	■ Macular degeneration ■ Tympano-sclerosis ■ Basal cell CA (Carcinoma) ■ Dementia ■ Athero-sclerosis ■ Hypertension ■ Obesity

Common Geriatric Syndromes:

- Dementia[1] vs Delirium
- Frailty (loss of capacity)
- Sarcopenia (loss of skeletal muscle mass, function & quality)
- Falls & Gait and mobility impairment
- Polypharmacy the use of 5 or more medications
- Urinary Incontinence and Depression

1- Dementia= loss of cognitive function + loss of abilities of daily activity

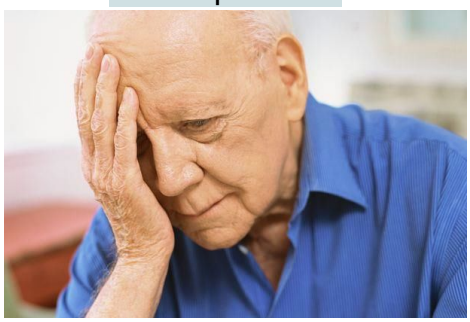
Elderly Care

Frailty[1]

Dementia[2]

Polypharmcy and iatrogenic

Mental problems



Agitation and anxiety

Risk of falls

Driving issues

Executive function

Loss of motivation[3]

Decline in quality of life: Saudi Elderly Study

- Chronic disease.
- Falls (more with DM (58%) & HTN (29%)).
- Sedentary lifestyle (69%;more in joint / bone pain (90%))
- Low physical activity (63%).
- Sleep disturbances.
- Sensory impairments-depression risk and
- Decreased self-sufficiency.

Assessment of old patients!

Comprehensive geriatric Assessment (CGA)

1- The patient feel exhausted with loss of weight and muscle power.
2- Delerium is an ACUTE conditions which require emergency, Dementia isn't
3- Must be distinguished from apathy, seen in patients with dementia, Loss of motivation is usually a normal process with aging

Approach & Assessment

Structured Approach

Multidimensional	Multidisciplinary
■ Functional ability ■ Physical health (pharmacy) ■ Cognition ■ Mental health ■ Socio-environmental	• Physician • Social worker • Nutritionist • Physical therapist • Occupational therapist • Family

Comprehensive geriatric assessment (CGA)

- Co-ordinated multidisciplinary assessment.
- Identify medical, functional, social & psychological problems.
- The formation of a plan of care including appropriate rehabilitation.
- The ability to directly implement treatment recommendations by the multidisciplinary team.
- Long term follow up.
- Targeting (age & frailty).

Frailty (tiredness and loss of weight)

Frail people suffer from three or more of five of following symptoms;

1. Unintentional weight loss (10 lbs, 5Kg or + in last yr).
2. Muscle loss.
3. A feeling of fatigue.
4. Slow walking speed and
5. Low levels of physical activity.

Vulnerable to significant functional decline, typically 75 years of age or older with multiple health conditions; acute and chronic; as well as functional disabilities.

Areas of Assessment

- Functional assessment.
- Mobility, gait and balance.
- Sensory and Language impairments.
- Continence, Nutrition.
- Cognitive/Behavior problems.
- Depression & Caregivers.

Supporting Elderly

Example of Assessment areas!

- Cognitive and affective disorders are prevalent and commonly undiagnosed at early stages: Delirium, multi-infarct dementia.
- Geriatric depression is often undiagnosed
- Iatrogenic illnesses are common and many are preventable:
- Polypharmacy, adverse drug reactions. The use of **five** or more medications is considered polypharmacy.
- Complications of hospitalization, falls, immobility, and deconditioning.
- Panadol is one of the common medication people use it's important to know the types to avoid iatrogenicity:
    - Panadol Night it has antihistamine, so be careful patients may fall due to drowsiness
    - Panadol Extra has caffeine so give it in day time
    - Panadol Plus has codeine this is opioid like and will cause constipation

EOL care (END OF LIFE CARE)

- **Advance directives are critical for preventing some ethical dilemmas.** مثل الوصية
- **Palliative care and end-of-life care are essential good QOL.**

An area for your notes

Supporting Elderly

Supporting the Normal Changes

Changes in Skin:

- Decrease in moisture and elasticity.
- More fragile- tears easily.
- Decrease in subcutaneous fat.
- Decrease in sweat glands -less ability to adjust body temperature.
- Tactile sensation decreases- not as many nerves.
- May bruise more easily.
- Patient has new onset skin itching ? Check his drugs & he might need further investigations as it's usually not due to dryness.

Changes in Vision:

- Decreased peripheral vision.
- Decreased night vision.
- Decreased capacity to distinguish color. (Hence they like clothes with certain colors)
- Reduced lubrication resulting in dry, itchy eyes.

Changes in Hearing:

- Sensitivity to loud noises.
- Difficulty locating sound.
- More prone to wax build up that can affect hearing.

Changes in Smell and Taste:

- Decreased taste buds and secretions.
- Decreased sensitivity to smell.

Changes in Elimination :

- Bladder atrophy --> inability to hold bladder for long periods.
- Constipation can become a concern because of slower metabolism may improve with water.
- Men can develop prostate problems causing frequent need to urinate.
- Incontinence may occur because of lack of sphincter control.

Supporting Elderly

Supporting the Normal Changes

Changes in Bones and Joints:

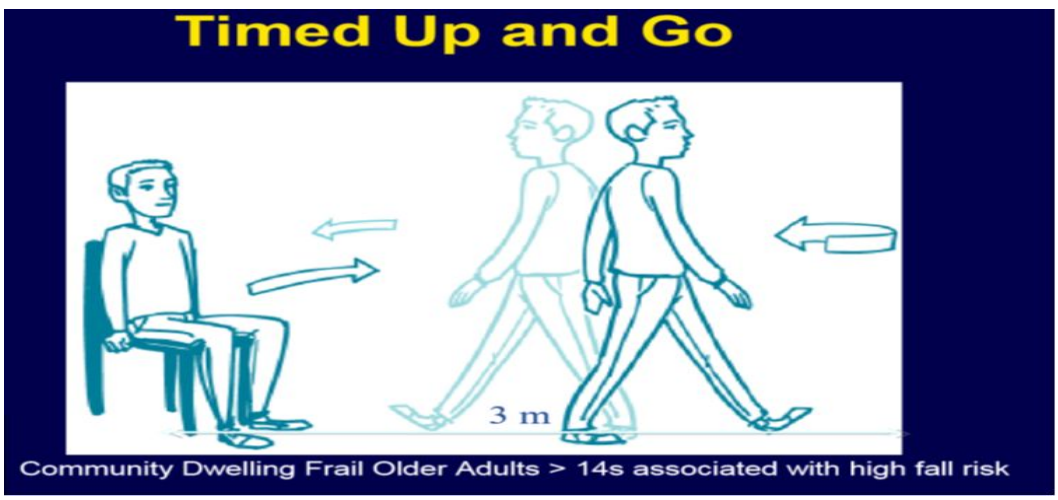
- Decreased height due to bone changes.
- Bones more brittle – risk of fracture (they have higher risk of osteoporosis, screening should be considered).
- Changes of absorption of calcium.
- Pain from previous falls or broken bones.
- Joints less lubricated – may develop arthritis.

Changes in Cognitive Ability:

- **Don't lose overall ability to learn new things but there are changes in the learning process.**
- Harder to memorize lists of names and words than for a younger person.
- Sensory and motor changes as well as cognitive ability may affect ability to respond hard to know which is which.
- Normally There is **NO** loss of cognitive function with aging.

Physical Assessment

- Timed Up and Go exam: Patient is told to stand up without hand support and walk 3 meters and come back to the chair. If it took him more than 14 seconds he's at a higher risk for falling. (10-14 seconds is considered moderate risk, higher than 14 is considered a high fall risk)

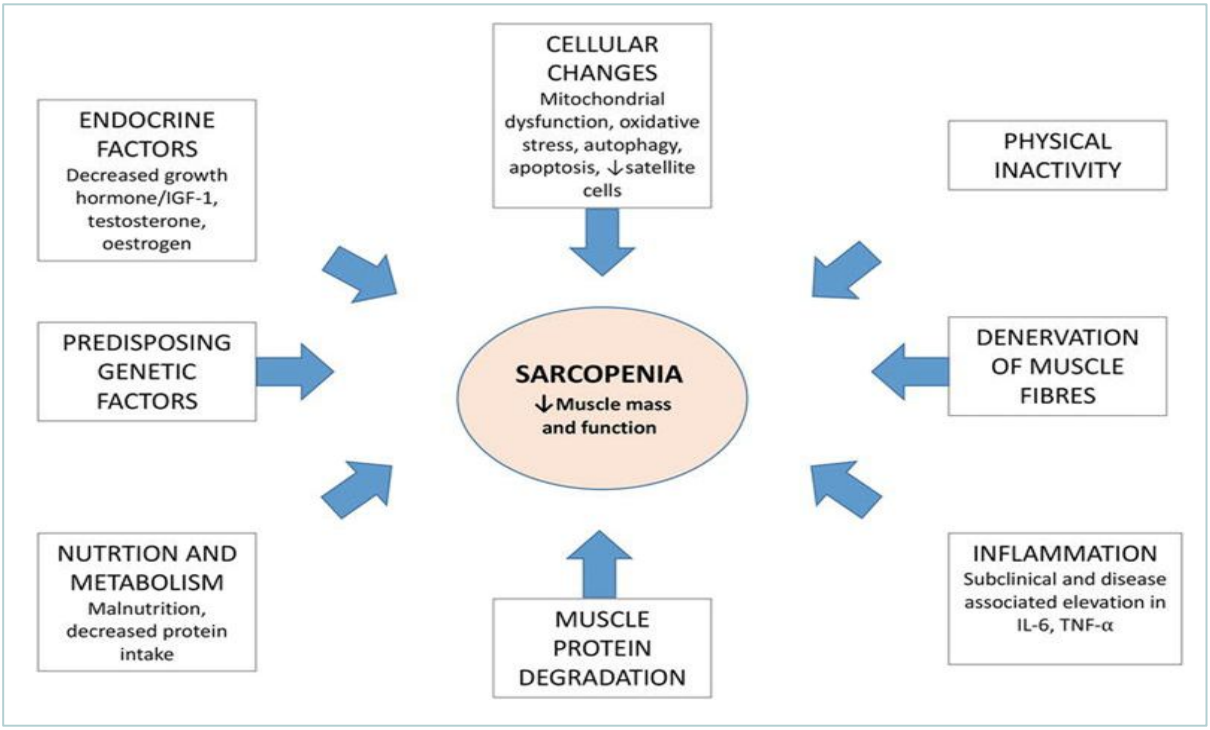


Decline Assessment

Sarcopenia

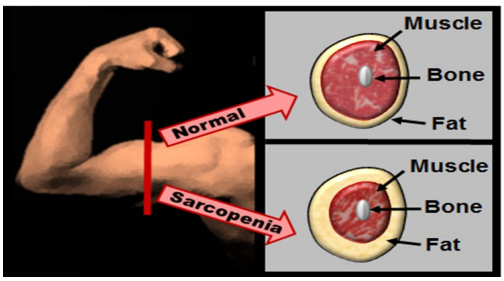
Sarcopenia: low muscle bulk and characterized by:

- Decrease in muscle mass: Assessed by MRI or muscle scan.
- Decrease in muscle function.
- Decrease in muscle quality: Assessed by speed function test.



Functional Ability

- Functional status **refers** to a person's ability to perform tasks that are required for living.
- Two key divisions of functional ability:
  - **Activities of daily living (ADL).**
  - **Instrumental activities of daily living (IADL).**

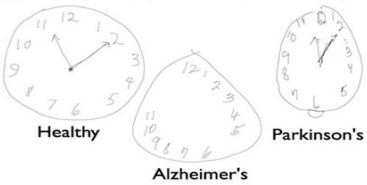


Functional Assessment

- **Activities of Daily Living (ADL):**
  Feeding, dressing, ambulating, toileting, bathing, transfer, continence, grooming and communication.
- **Instrumental ADL (IADL):**
  Cooking, cleaning, shopping, meal prep, telephone use, laundry, managing money, managing medications and ability to travel.

Assessments & Falls

Cognitive Assessment



There are many tools to assess the cognitive function of elderly:

- **MOCA** (Montreal Cognitive Assessment) A result of 26 or more is considered normal
- **MMSE** (The Mini-Mental State Exam) A result of 25 or more is considered normal
- **Clock** Drawing test

Cognitive ability tests refers to a set of potentials and cognitive skills that individuals have, which enable them to interpret the relationships between objects and actions; and assess different situations.

Healthy Aging & Physical Exercise

- Healthy Aging is by physical exercise which **Reduce fall risk by 47%**
- Exercise strengthen the thigh muscles which help in balance and reduce falling
- **The most important advice for elderly**

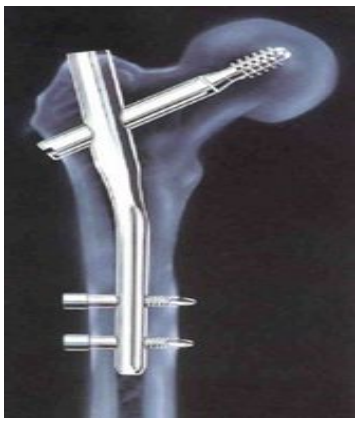
Prevention of Fall

Ambulatory Adults > 65 (30%) per year
Fractures may leads to:

- Death
- Injury
- Fractures 10-15%
- Hip 1-2% Most serious
- Long lie
- Fear of falling

Which eventinaly lead to reduce activity/ independence (25%)

Causes



Extrinsic:

Environment.

Intrinsic:

Age: Gait/Balance Disorder, Sarcopenia, Vestibular, Orthostatic Hypotension, Special Senses –Vision/Hearing.

Disease : Dementia, Depression, Drugs, Foot problems, Incontinence.

Assessments and falls

Home Safety

It's important to ensure home safety by removing rugs,litters and having good lighting and bars in the bathroom

Summary

Health Maintenance in the Elderly

- Recommend primary and secondary disease prevention screening.
- Review all medications. These are some medication its better to be cautious. with in the geatric age group, ex. Nitrate, NSAIDs, Steroids, Insulin.
- Control all chronic medical problems.
- Optimize function.
- Verify the presence of an adequate support system.
- Discuss and document advanced directives.
- It's Important to do primary and secondary prevention.
- Important vaccines: pneumococcal, influenza, hepatitis.

The 2015 Beers criteria: Selected drugs to avoid in older adults

Drug class (example)	Recommendation	Rationale	Quality of evidence	Strength of recommendation
First-generation antihistamines (diphenhydramine)	Avoid	Highly anticholinergic	Moderate	Strong
Antiparkinsonian agents (benztropine)	Avoid	Not recommended for prevention of extrapyramidal symptoms with antipsychotics; more-effective agents available for treatment of Parkinson disease	Moderate	Strong
Antispasmodics (hyoscyamine)	Avoid	Highly anticholinergic	Moderate	Strong
Antidepressants (amitriptyline)	Avoid	Highly anticholinergic	High	Strong
Antipsychotics (conventional or atypical)	Avoid except for schizophrenia, bipolar disorder, or short-term use as antiemetic during chemotherapy	Increased risk of stroke and death in persons with dementia	Moderate	Strong
Skeletal muscle relaxants (methocarbamol)	Avoid	Most muscle relaxants are poorly tolerated by older adults	Moderate	Strong
Benzodiazepine (lorazepam)	Avoid	All benzodiazepines increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle crashes in older adults	Moderate	Strong
Nonbenzodiazepine and benzodiazepine hypnotics (zolpidem)	Avoid	Adverse events similar to those of benzodiazepines in older adults	Moderate	Strong
Proton pump inhibitors	Avoid using for > 8 weeks unless for high-risk patients	Risk of *Clostridium difficile* infection, bone loss, and fractures	High	Strong

Based on information in reference 58.

Prevention and Promotion

- **Smoking in middle age is a risk factor.**
- **Exercise.**
- Calcium & vit.D supplement.
- Vaccines (influenza).
- Treatment of HTN & management of risk factors.

Lecture Quiz

Q1: You are concerned that one of your 65-year-old patients is developing dementia. Which of the following, if present, would lead you to suspect dementia rather than delirium or depression?

A) Acute onset of symptoms
B) Difficulty with concentration
C) Signs of psychomotor slowing
D) Good effort with testing, but wrong answers
E) Patient complaint of memory loss

Q2: You are seeing a 65-year-old woman with a history of diabetes and hypertension. She is overweight and does not exercise regularly. You are concerned that she may have renal failure, given her risk factors. Which of the following is the best test to detect the presence of renal insufficiency in this patient?

A) Her blood urea nitrogen (BUN) level
B) Her serum creatinine level
C) Her BUN to creatinine ratio
D) Her calculated or estimated glomerular filtration rate (GFR)
E) Her urine microalbumin level

Q3: You are evaluating a 74-year-old woman for the recent onset of incontinence. She has diabetes, controlled by diet but with recently increasing sugars, and hypertension, controlled with a combination of lisinopril/hydrochlorothiazide. She has complained of constipation recently and has not had a bowel movement for 3 days. Microscopic analysis of her urine is positive for bacteria, but she does not report dysuria, urgency, or frequency. Which of the historical features mentioned is inconsequential in the workup of her incontinence?

A) Hyperglycemia
B) Diuretic use
C) Constipation
D) Bacteriuria
E) Postmenopausal state

Answers: Q1:D | Q2:D | Q3:D

THANKS!!

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We are all ears!