UNCOMMON PRESENTATION OF COMMON DISEASES IN GERIATRIC POPULATION

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CASE 1

The first case is that of a 92-year old male who presented to the Emergency Department with three episodes of vomiting. He denied any chest pain, dyspnea, or diaphoresis.

Diagnosis:
Acute Non-ST Elevation Myocardial Infarction.

CASE 2

A 90-year-old female who fell in a Skilled Nursing Facility sustained a visible wrist laceration but was otherwise asymptomatic. The patient was sent to the Emergency Department for further evaluation and laceration repair

Diagnosis: Pneumothorax.

CASE 3

- An 89-year-old male who presented to the clinic with left wrist pain, erythema, and warmth. He denied any trauma to the wrist. He was diagnosed with cellulitis and treated with oral antibiotics for one week with no improvement in symptoms

Diagnosis: Gout.

CASE 4

A 75-year-old male who presented to the Emergency Department with nausea, vomiting, and left upper quadrant abdominal pain that started shortly after eating dinner. The patient had no fever, negative Murphy's Sign, and a normal white blood cell count

DIAGNOSIS: Cholecystitis with Cholelithiasis

DEFINITION OF ELDERLY

- The young old (60 to 69 years)
- The middle old (70 to 79 years)
- The very old (80+ years)

Ref: *Forman, D. E.; Berman, A. D.; McCabe, C. H.; Baim, D. S.; Wei, J. Y. (1992). "PTCA in the elderly: The "young-old" versus the "old-old"". Journal of the American Geriatrics Society.* ***40*** *(1): 19–22. doi:10.1111/j.1532-5415.1992.tb01823.x. PMID 1727842.*

PERCENTAGE OF ELDERLY POPULATION IN BANGLADESH

- **0-14 years:** 27.76%
- **15-24 years:** 19.36%
- **25-54 years:** 39.73%
- **55-64 years:** 6.93%
- **65 years and over:** 6.23% (2017est.)
- **Life Expectancy**,2010 was 67.7 yr

  2017 is 71.52 yr

Ref: ELDERLY POPULATION IN BANGLADESH: CURRENT FEATURES AND FUTURE PERSPECTIVES
BANGLADESH BUREAU OF STATISTICS (BBS)

ELDERLY GROUP AGE DISTRIBUTION

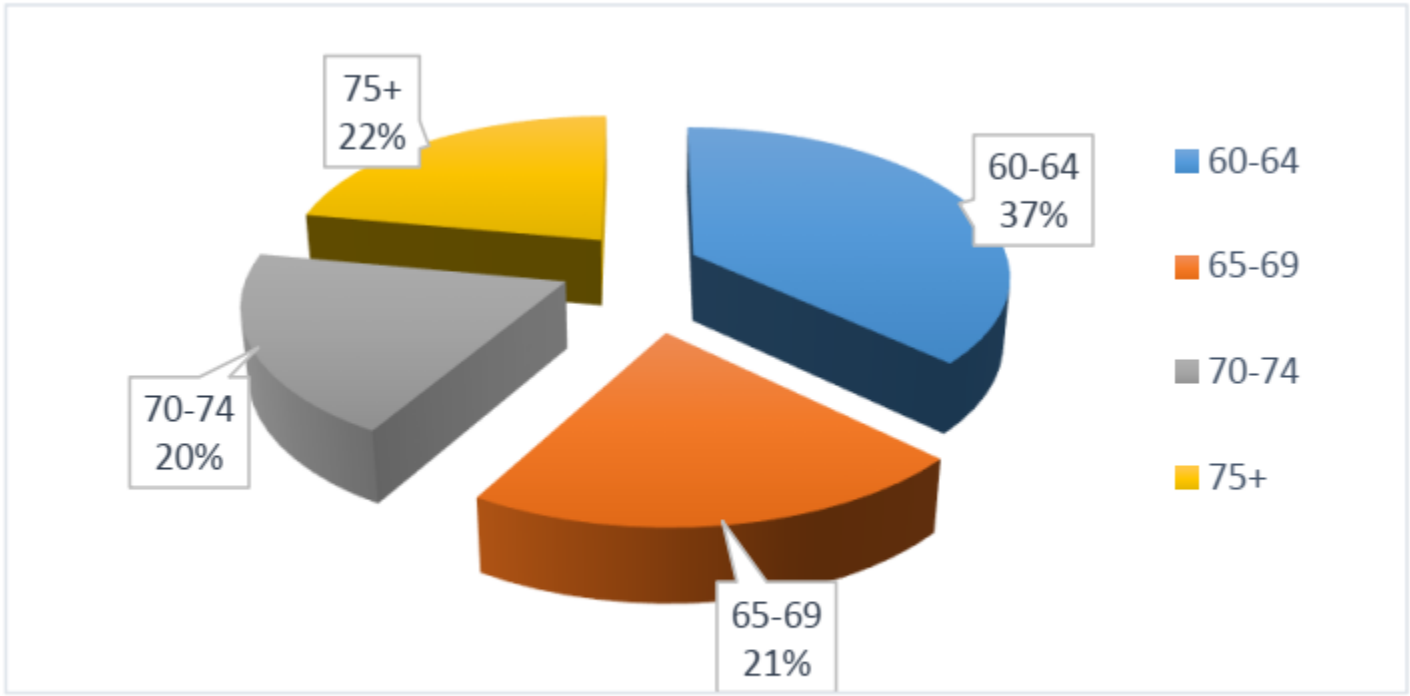


Figure 5.3: Percentage of elderly by age group

Ref: ELDERLY POPULATION IN BANGLADESH: CURRENT FEATURES AND FUTURE PERSPECTIVES
BANGLADESH BUREAU OF STATISTICS (BBS

NUMBERS OF ELDERLY ARE GROWING

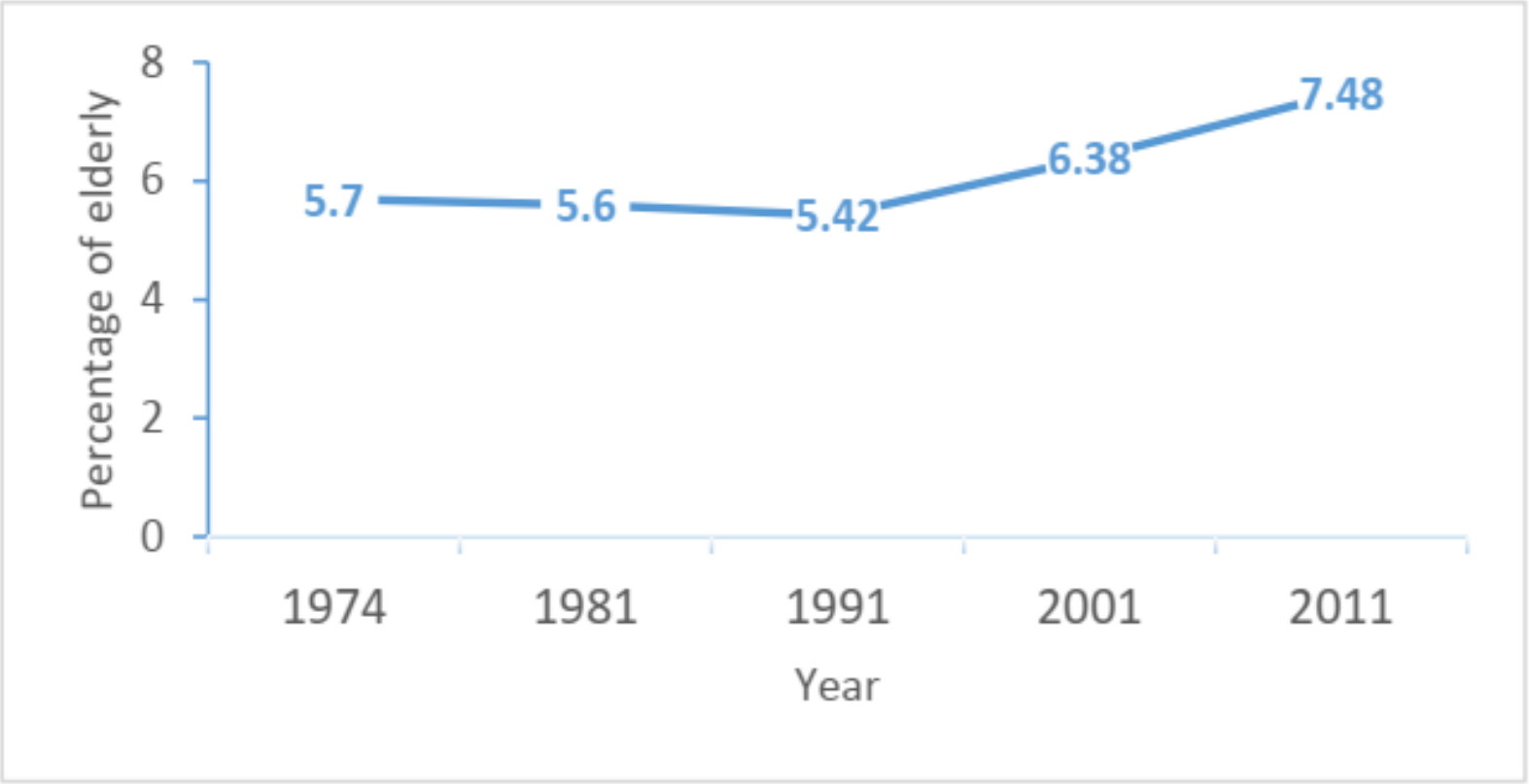
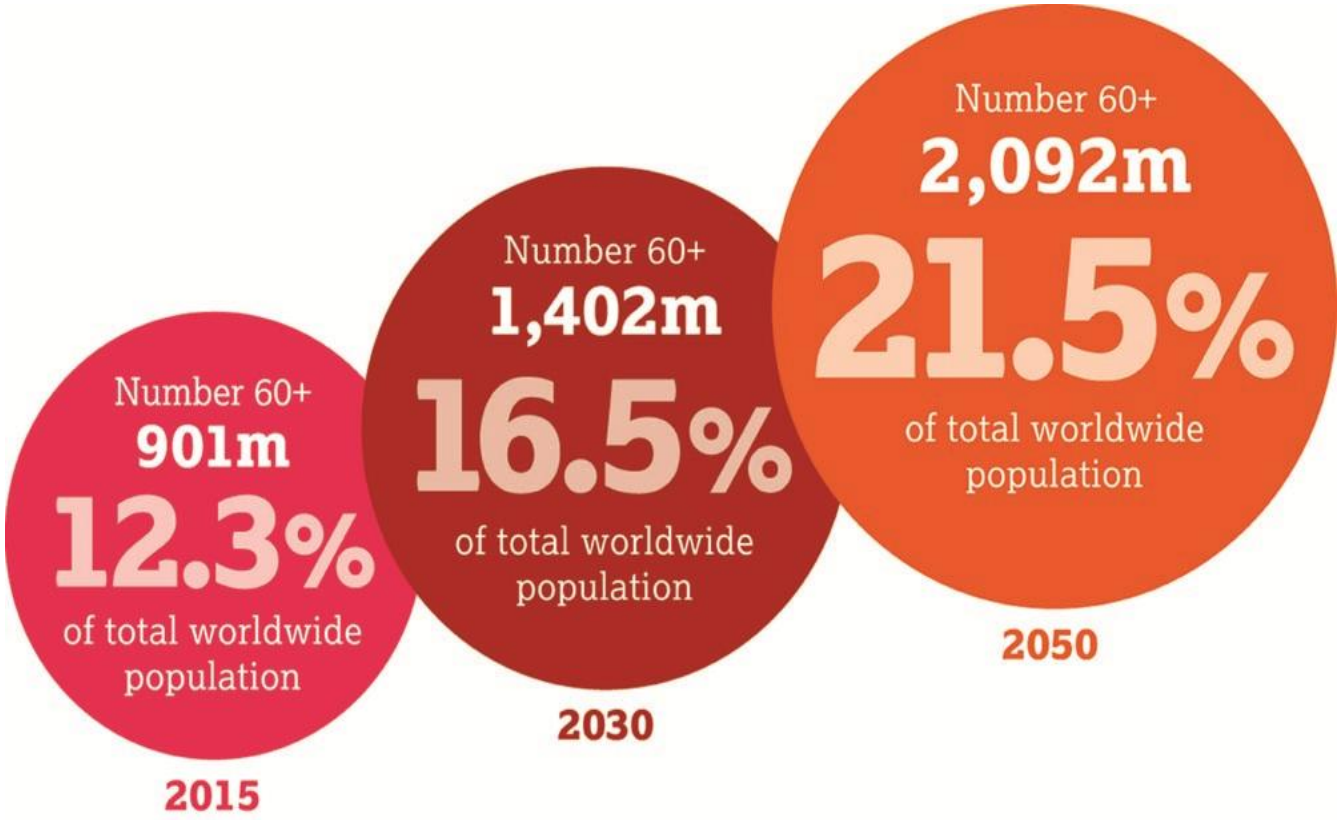


Figure 3.1: Trend in percentage of elderly population in Bangladesh

IN 2050


Number 60+
901m
12.3%
of total worldwide population
2015
Number 60+
1,402m
16.5%
of total worldwide population
2030
Number 60+
2,092m
21.5%
of total worldwide population
2050

GERIATRIC SYNDROME

Many elderly persons have simultaneously occurring chronic degenerative disorders. Because of these characteristics of geriatric disorders, typical symptoms of illnesses are *often absent in elderly patients*, and they often present with atypical symptoms such as *confusion, fall, general weakness, malaise, incontinence, and immobility, commonly known as "geriatric syndrome".*

Ref: Yu Jin Jung1, Jong Lull Yoon2, Hak Sun Kim1, Ae-Young Lee1, Mee Young Kim2, Jung Jin Cho2 Atypical Clinical Presentation of Geriatric Syndrome in Elderly Patients With Pneumonia or Coronary Artery Disease Print ISSN 2508-4798 On-line ISSN 2508-4909

ATYPICAL PRESENTATIONS

Atypical presentations usually include one of 3 features:

- Vague presentation of illness,
- Altered presentation of illness,
- Nonpresentation of illness (i.e.underreporting)

OBJECTIVE

- Early recognition and management of atypical presentation potentially results in *positive health outcomes* by prompting accurate diagnosis, reducing the risk of new comorbidities, reducing hospital length of stay, and improving quality of life.
- *Failure to recognize* atypical presentations may lead to worse outcomes, missed diagnoses, and missed opportunities for treatment of common conditions in older patients.

RISK FACTORS OF ATYPICAL PRESENTATION

The most common risk factors include:

- Increasing age (especially age 85 years or older)
- Multiple medical conditions (“multimorbidity”)
- Multiple medications (or “polypharmacy”)
- Cognitive or functional impairment

CAUSES OF AYPICAL PRESENTATION

- Atypical presentations may be the end product of idiosyncratic, complex interactions between cognitive and functional impairment, multiple comorbidities, and communication problems with acute illness or an exacerbation of a chronic disease in facing age-related physiological changes .

- Impaired homeostasis associated with age-related physiological changes and multiple pathologies .

POTENTIAL QUESTIONS TO UNCOVER COMMON SYMPTOMS CHARACTERISTIC OF AN "*ATYPICAL*" PRESENTATION OF ILLNESS.

SYMPTOM	QUESTION
• Acute confusion (ie, delirium) • Anorexia (change in appetite) • Absence of fever • Absence of pain, or pain in alternate location • Generalized weakness • Fatigue • New urinary incontinence	Is the patient usually quiet and nonconversant or is this a change? • Has there been any weight loss? • Are there any new medications that were started when the symptoms started? • In the past, when patient has had an infection, what signs has the patient had? • I see the patient is in a wheelchair, can the patient walk, or is this a new change?

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ILLNESS PRESENTATIONS IN OLDER ADULTS

DISORDER	TYPICAL" PRESENTATION	ATYPICAL" PRESENTATION
Pneumonia	Cough, SOB, Production of Sputum	Absence of the usual symptoms, malaise, anorexia, confusion
Myocardial infarction	Severe, substernal chest pain, SOB, nausea	Mild or no chest pain, confusion, weakness, dizziness
Urinary Tract Infection	Dysuria, frequency, hematuria	Absence of dysuria, confusion, incontinence, anorexia
Thyrotoxicosis (hyperthyroid emergency)	Rapid heart rate, restlessness, agitation, tremor	Lethargy, cardiac arrhythmias, fatigue, weight loss

Emmett, K.R. (1998). Nonspecific and atypical presentation of disease in the older patient, Geriatrics, 53(2), 50-60

O'Neill, P.A. (2002). ***Caring for the older adult: A health promotion perspective.*** **Philadelphia: W. B. Saunders Company**

ILLNESS PRESENTATIONS IN OLDER ADULTS

DISORDER	TYPICAL" PRESENTATION	ATYPICAL" PRESENTATION
Acute appendicitis	Right lower quadrant abdominal pain, fever, tachycardia	Diffuse abdominal pain, confusion, urinary urgency, absence of fever or tachycardia
Infection	Fever, tachycardia, elevated white blood cell count	Temperature normal or below normal, Absence of tachycardia, Slightly elevated white blood cell count
Depression	Sad mood, increased sleep time, fluctuations in weight	Confusion, apathy, absence of subjective feeling of depression

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EXAMPLES OF ATYPICAL PRESENTATION OF ILLNESS IN OLDER ADULTS

ILLNESS	ATYPICAL PRESENTATION
Infectious diseases	Absence of fever Sepsis without usual leukocytosis and fever Falls, decreased appetite or fluid intake Confusion Change in functional status
"Silent" acute abdomen	Absence of symptoms (silent presentation) Mild discomfort and constipation Some tachypnea and possibly vague respiratory symptoms
"Silent" malignancy	Back pain secondary to metastases from slow-growing breast masses Silent masses of the bowel
"Silent" myocardial infarction	Absence of chest pain Vague symptoms of fatigue, nausea and a decrease in functional status Classic presentation:SOB.
Nondyspneic pulmonary edema	Typical onset may be insidious with change in function, food or fluid intake, or confusion
Thyroid disease	Hyperthyroidism presenting as "apathetic thyrotoxicosis" (ie, fatigue and a slowing down) Hypothyroidism presenting with confusion and agitation
Depression	Lack of sadness,appetite changes,gastrointestinal symptoms, constipation, sleep disturbances ,Hyperactivity may misinterpreted as normal consequence of aging.

DEHYDRATION

The most common fluid and electrolyte problem in older adults.

CAUSE:

- Decreases in total-body water,
- Alterations in thirst perception,
- Reduced renal function leading to decreased urine-concentrating ability
- **Vital signs**:not revealing due cardiac conduction disturbances or medications such as β blockers may mask the usual tachycardic response .

- **Skin turgor** : unreliable
- **Intake–output charts**: inaccurate in the setting of incontinence.
- **Oral dryness**: may be misleading.
- ***Presence of Constipation or Orthostatic hypotension.***

THE ACUTE ABDOMEN

- 40% of older patients are *misdiagnosed*
- May lack a fever, and instead present with *hypothermia.*
- May lack an elevated white count
- Have *reduced rebound* secondary to decreased abdominal wall musculature.
- In cholecystitis, only 25% of adults actually present with biliary colic;
- Because of *delayed presentations* and difficult diagnosis, the mortality rate and complications of the acute abdomen are much *greater in older adults* .

INFECTION

- Older adults generally have a lower basal body temperatures due to reduced muscle and meal-induced thermogenesis; therefore a temperature >37.3°C may be more likely to be indicative of infection.

- Rather than present with dysuria and frequency, both older men and older women may instead present with confusion, incontinence, and anorexia.

- Pneumonia can present with the absence of cough, incomplete radiographic findings or shortness of breath and instead present with *general malaise and confusion*.

- a *left shift is usually observed* and indicative of infection .

CARDIOVASCULAR DISEASE

- Myocardial infarction can present as mild pain or a complete absence of pain, and can occur in the *absence of dyspnea.*

- Presents as ***new-onset fatigue, dizziness, or confusion***.
- Preexisting neuropathy can lead to a baseline alteration in pain perception

- A relative lack of physical activity can make it easy for clinicians to miss.

DEPRESSION

The prevalence of depression among patients older than age 65 years in medical outpatient clinics ranges from 7% to 36% and increases to 40% in those who are hospitalized.

COGNITIVE IMPAIRMENT

- In Alzheimer disease, memory and language are the domains primarily affected.

- Changes in behavior, visuospatial function, or executive function, for example, although not as typical in early Alzheimer disease, can be hallmark of early frontotemporal dementia.

LITARATURE REVIEW

ELDERLY PATIENTS WITH AN ATYPICAL PRESENTATION OF ILLNESS IN THE EMERGENCY DEPARTMENT

A retrospective observational study was conducted in *Medical Center Slotervaart, Amsterdam* in patients of 80 years and older admitted to the emergency department between 1 *June 2013 and 7 May 2014* showed following results:

- Total number of patients fulfilling inclusion criteria 388 .
- The *mean age* was 86 years, and the proportion of female patients was 60%.
- In 53% of the patients there was an *atypical presentation* of the illness.
- 15% showed none of the usual symptoms for the underlying disease

- A cognitive disorder was present in 30% & approximately the same number had communication problems.
- *Neurological disease* (15%), *infectious disease* (16%) and *fracture* (12%) were the most frequent causes of emergency.
- In 99% of the atypical presentations the patient had a geriatric syndrome, with *falling by far the most frequent symptom (71%).*
- New urine *incontinence* was seen in 3%, *functional decline* in 11% and *cognitive decline* in 29%.
- In 66% of these cases the cause of the geriatric syndrome was clear

- Compared with patients with a typical illness presentation, patients with an atypical presentation were more likely to have *a longer stay in hospital* .

- The *overall mortality rate* one year after hospital admission was 31%.

- *Atypical disease* presentation is more common in the frail elderly (59%) than in non-frail elderly (25%).

- Impaired higher functions related to dementia or delirium are present in 25% of patients aged over 75 years.

- *These conditions can decrease the accuracy of the diagnosis* of the main symptoms and mask potentially serious diseases In that study *‚falling accounted for 71% of patients with an atypical presentation.*

Elderly patients *often cannot recall* the fall because of *syncope* with memory loss or existing cognitive disorder.

A few important limitations …

- **First**, the *retrospective nature* of the study *restricted data* to those routinely collected. Important unmeasured factors The *underreporting* of geriatric conditions.

- **Second,** potential *recording bias* may exist on retrospective analysis of *medical records.*

- **Thirdly,** study *focused on patients' leading symptom*, which may *underestimate the true prevalence of atypical presentation of other co-existing diseases*.

ATYPICAL CLINICAL PRESENTATION OF GERIATRIC SYNDROME IN ELDERLY PATIENTS WITH PNEUMONIA OR CORONARY ARTERY DISEASE

Annals of Geriatric Medicine and research 2017;21(4)

Many elderly persons have simultaneously occurring chronic degenerative disorders. Because of these characteristics of geriatric disorders, typical symptoms of illnesses are often absent in elderly patients, and they often present with atypical symptoms such as **confusion, fall, general weakness, malaise, incontinence, and immobility, commonly known as "geriatric syndrome".**

- The study was conducted **at 4 university hospitals in Korea** between *January 2014 and December 2016* over 6000 patients.

- Retrospectively reviewed the medical records of all patients aged ≥ 60 years diagnosed with *coronary artery disease (CAD) or pneumonia.*

- Found 5 common diseases of Atypical presentation:

  Infectious disease,Cardiovascular,Acute Abdomen,Hyperthyroidism,Depression.

- Among the participants, 24.8% of CAD and 18.8% pneumonia patients had atypical presentations.

- Both CAD and pneumonia patients presenting atypical symptoms were older than the typical symptom group.

Atypical symptoms in CAD and Pneumonia：

CAD	PNEUMONIA
Dyspnea(50.2%)	general weakness (27.3%)
General weakness (9.8%)	mental changes (25.4%)
Dizziness (9.2%)	poor oral intake (6.5%)
Syncope (6.3%)	Hemoptysis (5.7%)
Mental changes (4.5%)	myalgia (4.4%)
Nausea (2.0%)	

- Have asymptomatic symptom ratios ranging from 4.7% to 33% with poorer clinical outcomes.

- **Dyspnea** is the most common among the atypical symptoms, accounting for 26%-49% of all cases

- DM has been considered the biggest factor related to atypical symptom of CAD

- 2 diseases, i.e., **cancer and dementia**, showed a significant increased atypical symptoms

- 35% of patients with infectious diseases presented atypical symptoms, and pneumonia was the most common (30%)

- In older patients, the lack of a febrile response:

  -Problems with maintaining body temperature.

  -Immune system dysfunction .

  - Hypothalamus' diminished sensitivity to pyrogens .

  -Failure to produce and conserve body heat .

As a retrospective study, one of its *major limitations* is:

- *information* related to atypical symptoms was *extracted from only chief complaints* in medical records .

- Unable to examine *the role of other factors*, such as alcohol consumption, smoking, lifestyle, education, socioeconomic status, religiousness, or other medications.

CONCLUSION

- As the population ages, *increasing numbers of adults with geriatric syndromes* and multiple medical conditions will present to hospitals with serious illnesses in the absence of typical clinical features.

- Recognition of common serious illnesses in the setting of atypical presentations in older patients is becoming an *increasingly essential skill in clinical diagnosis and treatment.*

- By becoming more familiar with these common, health care clinicians *can optimize the care of older adults* and more effectively *train future health care clinicians* to do the same.

- In *Medical education*,teaching about atypical Geriatric illness offers an unique opportunity to introduce key geriatric principals to trainees at all levels.

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Young men,Hear an old man to whom old men hearkened when he was young*....*

---Augustus,the 1st Emperor of Roman Empire

THANKS A LOT