



PATIENT CARE THEORY 2

UNIT 9, PART 2: Gerontology - Care

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A blurred, high-angle photograph of the front of a white paramedic ambulance. The word "PARAMEDIC" is visible in large, dark letters on the side of the vehicle. The ambulance's red and yellow emergency lights are illuminated, creating a bright glow. The background is a soft, out-of-focus grey.

ASSESSMENT & MANAGEMENT OF ALTERED LOA



STROKE

Strokes

- ❖ 85% of stroke victims are elderly
- ❖ affect a person's identity
- ❖ elderly have less physical and psychological reserve to cope with the illness
- ❖ risk factors include
 - hypertension
 - hx of TIA's
 - atherosclerosis
 - diabetes
 - high cholesterol

Assessment & management of altered LOA

- ❖ ABCD
- ❖ evaluate blood sugar
- ❖ evaluate for meds/drugs/alcohol
 - e.g. query accidental narcotic overdose in Ca pt
- ❖ evaluate for trauma
 - e.g. look for late signs of basilar skull #
- ❖ evaluate for stroke
- ❖ other metabolic disturbances



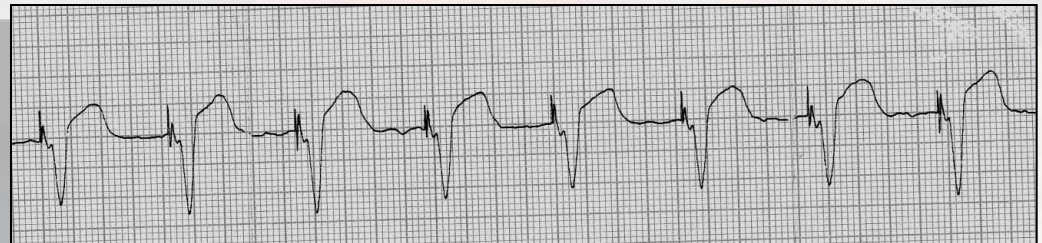
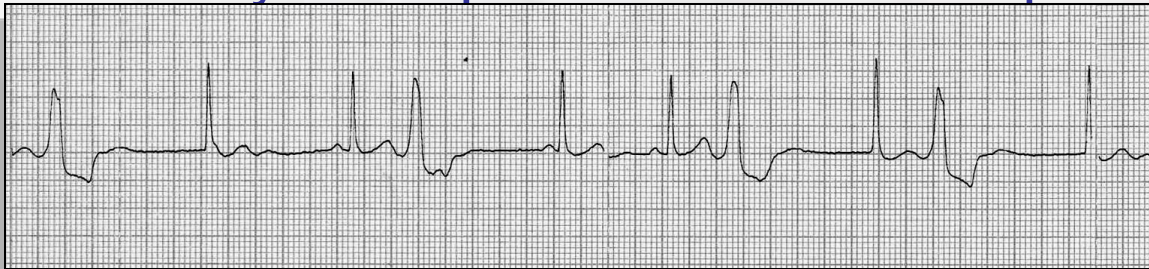
CARDIOVASCULAR

Cardiovascular Changes

- ❖ Loss of elasticity of large arteries
- ❖ Increased peripheral vascular resistance
- ❖ Systolic and diastolic hypertension
- ❖ Left ventricular hypertrophy as a compensatory mechanism
- ❖ Less ability to maintain CO with increased heart rate ($CO = HR \times SV$)
 - Often they're on medication (e.g. beta blocker) that diminish their ability to mount a sympathetic response to blood loss

Cardiovascular Changes

- ❖ Less blood enters the left ventricle passively
- ❖ Higher dependence on atrial kick
- ❖ More likely to have dysrhythmias
 - e.g. becomes a challenge to distinguish between chronic vs acute ectopy
- ❖ May be dependant on cardiac pacemaker



Cardiovascular Changes

- ❖ Diseases affecting the cardiovascular system
 - hypertension
 - diabetes
 - atherosclerosis
- ❖ Life style factors also have a major impact on the elderly patient's cardiovascular system
 - sedentary lifestyle
 - obesity
 - alcohol use
 - poor diet
 - smoking



RESPIRATORY

Respiratory System

Slow, subtle changes (begin as early as age 30)

- ❖ Decreased chest wall compliance
- ❖ Loss of lung elasticity
- ❖ Air trapping
- ❖ Reduced strength and endurance of respiratory muscles

Respiratory System

- ❖ Functional reduction in vital lung capacity (up to 50% by age 65)
- ❖ Decrease in effective cough reflex and cilia activity
- ❖ These changes leave the elderly patient at higher risk for pneumonia and recurring lung infection

Respiratory System

- ❖ Other factors affecting pulmonary function include
 - Kyphosis
 - Chronic exposure to pollutants
 - Long-term smoking
 - Disease processes

Respiratory System

- ❖ You respond to a 78 y/o male who is “unwell”.
- ❖ daughter tells you “he hasn’t been himself for the past week”
- ❖ He stays at home – he normally walks to the corner store every day and to the local recreation centre twice a week
- ❖ Assessment:
 - Appears tired; no recent cough or fever, pt denies SOB
 - Chest: good = A/E and clear to bases
 - HR 94, RR 20, BP 156/70, SpO₂ 91%, pupils 3x3+, GCS 15, Temp (tympanic) 36.4
 - Diagnosis?
 - _____



INTEGUMENTARY

Skin

- ❖ Increased dryness
- ❖ Roughness
- ❖ Wrinkling
- ❖ Reduced cell replacement and repair
 - Leads to longer healing times
- ❖ Reduced subcutaneous fat amount
 - Lesser ability to limit heat loss
 - Reduced protection of body from trauma

Skin

- ❖ Increased incidence of decubitus ulcers in the bedridden elderly patient
- ❖ Pressure sores can develop within 30 minutes of being placed on a backboard in an elderly patient
- ❖ Pressure sores can also develop in the nare or corner of the mouth when an endotracheal tube is in place
- ❖ Higher incidence of malignant and benign tumors

Pressure sore



This image displays a well-defined, superficial decubitus ulcer.





GASTROINTESTINAL

Gastrointestinal System

- ❖ Reduced taste sensation
- ❖ Loss of teeth leading to impaired chewing and possible foreign body obstruction
- ❖ Higher incidence of gastroesophageal reflux disease
- ❖ Higher risk of peptic ulcer disease
- ❖ Increased risk of mesenteric infarct in patients with a history of atrial fibrillation → bowel obstruction
- ❖ Fecal impaction / diarrhea
- ❖ Higher incidence of narcotic constipation

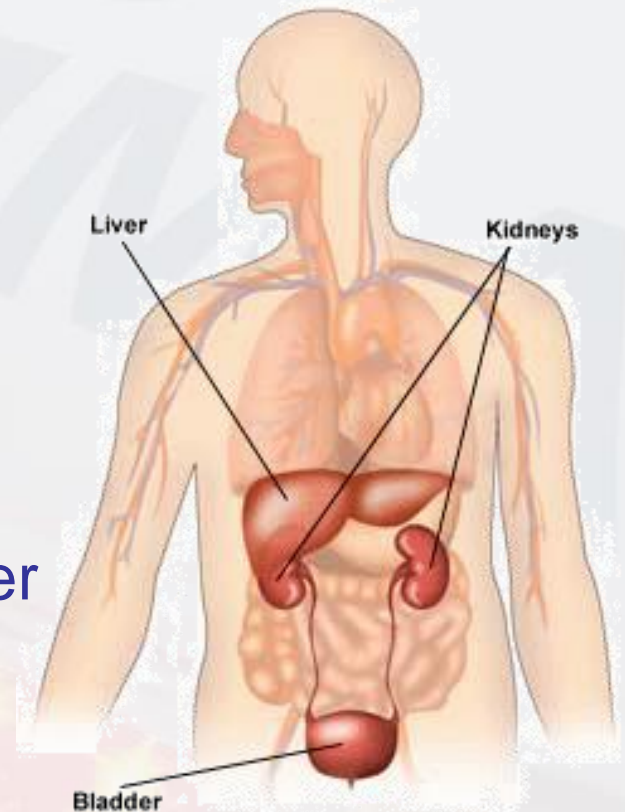


HEPATIC - ENDOCRINE

Hepatic and Endocrine

Hepatic Changes

- ❖ Decrease in hepatic blood flow
- ❖ Decrease in hepatic weight and function
- ❖ Can decrease ability to eliminate some drugs
- ❖ Some medications can cause liver damage



Hepatic and Endocrine

Endocrine Changes

- ❖ Metabolic Changes
- ❖ Hyperglycemia more common
- ❖ Poor nutrition and low calorie intake
- ❖ development of diabetes



TEMPRATURE REGULATION

Temperature Regulation

- ❖ Susceptible to variations in environmental temperatures
- ❖ Diaphoresis occurs at higher core temperatures
- ❖ ANS response is diminished causing a decrease in shivering
- ❖ Medications and pathologies can also limit the response to extremes in temperature

A faded, high-angle photograph of the front of a white paramedic ambulance. The words "PARAMEDIC" and "AMBULANCE" are visible in large, light blue letters on the hood. The ambulance's headlights and emergency lights are illuminated, casting a warm glow. The background is a soft, out-of-focus grey.

RENAL - GENITOURINARY

Renal and Genitourinary

- ❖ Reduction in the number of functioning nephrons
- ❖ Reduced renal blood flow by up to 45%
- ❖ Possible increase in waste products in the blood
- ❖ Water conservation is affected which predisposes elderly to dehydration
- ❖ Glomerular filtration rate is decreased by 50% by age 90 which effects the ability to excrete medications

Renal and Genitourinary

- ❖ Micturition syncope (increased vagal tone) – especially in men
- ❖ Incomplete emptying of the bladder (in men, prostate enlargement restricts bladder emptying)
 - Trips to the bathroom at night can lead to falls
- ❖ Increased risk of urinary tract infection
- ❖ Many of these factors as well as other factors contribute to incontinence

A white ambulance is shown from a low, front-quarter perspective. The word 'PARAMEDIC' is printed in large, dark letters along the side of the vehicle's body. Below it, the word 'JUBA' is also visible. The ambulance has red emergency lights on the front and side. The background is a plain, light-colored surface.

MUSCULOSKELETAL

Musculoskeletal System

- ❖ Loss of height by as much as 2 to 3 inches
- ❖ osteoporosis
- ❖ kyphosis (increase in curvature of the thoracic spine)
- ❖ decreased muscle mass particularly in sedentary people
- ❖ increased susceptibility to falls
- ❖ more serious fractures from simple falls





ASSESSMENT & MANAGEMENT

Assessment & management of altered LOA

- ❖ **A:** Assess airway carefully
 - Dysphagia is common post stroke → A/W obstruction, aspiration
- ❖ **B:** Assess breathing carefully
- ❖ lung disease/infection is common
 - SpO₂ done prior to O₂ therapy
 - Pneumonia is common +/- fever or cough
 - May be the terminal event – be alert for sepsis
- ❖ **C:** CVS disease is common
 - AMI can present without chest pain
- ❖ **D:** neuro status requires attention to detail

Assessment & management of altered LOA

❖ **Medication**

- buffet of medication
- Meds taken at appropriate intervals or doses?
- conflicts between meds – i.e. drug interactions
- Decreased hepatic / renal function → toxic levels

❖ Learn the drug classifications

❖ Know common prescription medication

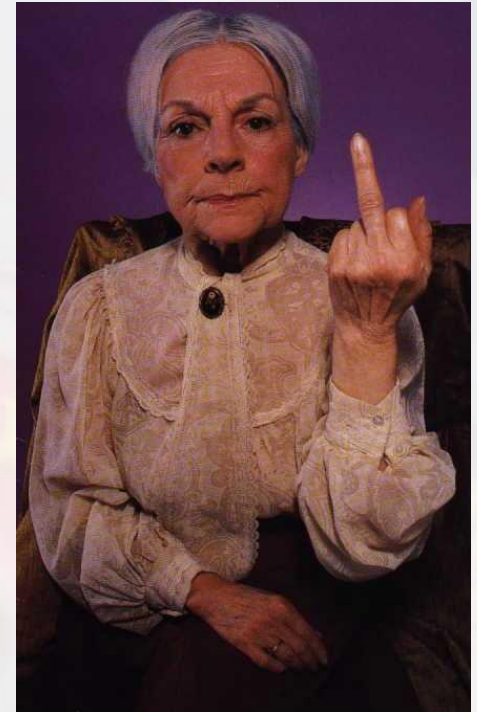
- Identify medical history

Assessment & management of altered LOA

- ❖ Pay attention to vague or seemingly benign symptoms
- ❖ Watch for delirium, sepsis and other serious issues
- ❖ identify and manage life threats
- ❖ R/O shock and hypoxia
- ❖ Monitor SpO₂
- ❖ Oxygen prn
- ❖ monitor ECG
- ❖ Obtain a 12 Lead ECG prn
 - MIs may occur with vague or misleading symptoms
- ❖ evaluate acute vs chronic changes

Hostility in the Elderly

- ❖ Refusal of care is not uncommon
- ❖ This requires greater diligence in providing sound and persuasive medical advice
- ❖ You may need assistance from a BHP



Don't Underestimate the elderly

Nine oldsters booted out of nursing home — for trying to have an orgy!

LONDON — A group of nine two-legged oldsters were booted out of an old folks' home — after they tried to have an orgy in the institution today.

The unidentified oldsters, who ranged in age from 75 to 84, had apparently planned the sophisticated after hours party for the night, according to British Department of Health documents transmitted for the news agency by Daily News, London.

"They somehow got it in their heads to celebrate the 50th birthday of one of the women with a kind of 'sex party,'" said the documents.

"This may sound harmless or amusing," he added, "but the nursing home is a responsible institution. We cannot tolerate this sort of conduct."

By MARK HOFFER
Daily News Staff

The nursing home made a concerted effort to keep the party out of its area and no details are difficult to come by.

But according to British papers, the oldsters' party broke down last night, after midnight, on October 20. The nine elderly couples and six nursing aides were caught and taken to the police station.

"They tried to have an orgy," a nursing home official was quoted as saying in a London article. "They'd go

into the room and have sex. They'd go into the room and have sex."

The nursing home was not as far as all the oldsters were taken. The nursing home was not as far as all the oldsters were taken.

When they were taken to the police station, they were taken to the police station. They were taken to the police station.

"They didn't get too far — I guess I was taking care of the girls — while in the police station," the official said.

But they were all taken to the police station. They were taken to the police station.

References

1. Straus, SE: *Introduction to evidence-based geriatric medicine: Can We Provide Evidence-Based Care for the Elderly?* EBM 1997;26:164 and ACP Journal Club 1997;127:A-19. Accessed March 4/07: <http://www.cebm.utoronto.ca/syllabi/gm/intro.htm#1>



QUESTIONS?