Florida Health Care Association
2013 Annual Conference

The Westin Diplomat Resort & Spa

Session #50 – Geriatric Failure to Thrive

Thursday, August 8 – 8:15 to 9:45 a.m.

Atlantic 2

Upon completion of this presentation, the learner will be able to:

- define geriatric failure to thrive;
- identify the four domains of geriatric failure to thrive; and
- discuss three interventions that are appropriate in case of undesired weight loss.

Seminar Description:

For elders residing in SNFs and ALFs, weight loss is a quality indicator and should stimulate the staff to intervene. In 25-35 percent of weight loss cases, no physical cause is identified. Geriatric failure to thrive is a multidimensional problem that requires a multidisciplinary approach. The domains are malnutrition, impaired physical function, depression and cognitive impairment. This program will discuss the steps to be taken in case of undesired weight loss in the elderly.

Presenter Bio(s):

Susan Waterbury, Clinical Service Director with Alpha Bridge Connections, has worked as a geriatric nurse practitioner since 2000. She received a master's degree as a Family Nurse Practitioner in 1999. She is certified as a Family Nurse Practitioner from the ANCC. She became certified as an Advanced Practice Hospice and Palliative Care Nurse in 2006. Susan provides primary and palliative care services to the elderly living in nursing facilities and assisted living facilities.
FAILURE TO THRIVE

TERM BORROWED FROM PEDIATRICS 1970’S
ABNORMAL GROWTH AND DEVELOPMENT
SIMILAR SYNDROME IN THE ELDERLY
GERIATRIC FAILURE TO THRIVE-DOMAINS

- IMPAIRED PHYSICAL FUNCTION
- COGNITIVE IMPAIRMENT
- DEPRESSION
- MALNUTRITION

ANOREXIA OF AGING

- AGE RELATED WASTING
  - PHYSICAL
  - SOCIOLOGICAL
  - PSYCHOLOGICAL
CACHEXIA

- PHYSICAL WASTING
- WEIGHT AND MUSCLE LOSS
- HYPERMETABOLIC STATE
- CHRONIC ILLNESS
  - CANCER, AIDS, COPD
- CAN'T BE REVERSED NUTRITIONALLY
- INFLAMMATORY PROCESS

SARCOPENIA

- AGE RELATED LOSS SKELETAL MUSCLE MASS
- LOSS OF STRENGTH
- DECREASED FUNCTION AND MOBILITY
- OCCURS AFTER AGE 60
- NUTRITIONAL DEFICITS

![Effects of atrophy on muscle](image)

Fig. 1
WEIGHT LOSS IN THE ELDERLY

• NURSING HOME QUALITY INDICATOR
  • UP TO 45% OF RESIDENTS OF NURSING FACILITIES ARE UNDERNOURISHED (1)
  • 5% WT LOSS IN 1 MONTH, OR 10% IN 6 MONTHS

• MALNUTRITION IN ELDERLY
  • PRESSURE SORES
  • FUNCTIONAL DECLINE
  • NEED FOR LONGER REHABILITATION
  • MULTIPLE MEDICAL COMORBIDITIES

“Unintentional Weight Loss in Long-Term Care: Predictor of Mortality in the Elderly”

BODY MASS INDEX - BMI

WEIGHT STATUS CATEGORIES

<table>
<thead>
<tr>
<th>BMI</th>
<th>WEIGHT STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELOW 18.5</td>
<td>UNDERWEIGHT</td>
</tr>
<tr>
<td>BELOW 22</td>
<td>HOSPICE</td>
</tr>
</tbody>
</table>

CRITERIA

• 18.5 - 24.9  NORMAL
• 25 - 29.9    OVERWEIGHT
• 30 & ABOVE   OBESE

Website: http://apps.nccd.cdc.gov/uscs/toptencancers.aspx#text
Accessed 6-2013

Top 10 Cancer Sites: 2009, Male and Female, United States—All Races

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Rates per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate</td>
<td>137.7</td>
</tr>
<tr>
<td>Female Breast</td>
<td>123.1</td>
</tr>
<tr>
<td>Lung and Bronchus</td>
<td>64.3</td>
</tr>
<tr>
<td>Colon and Rectum</td>
<td>42.5</td>
</tr>
<tr>
<td>Corpus and Uterus, NOS</td>
<td>25.1</td>
</tr>
<tr>
<td>Urinary Bladder</td>
<td>26.5</td>
</tr>
<tr>
<td>Melanomas of the Skin</td>
<td>19.4</td>
</tr>
<tr>
<td>Non-Hodgkin Lymphoma</td>
<td>18.9</td>
</tr>
<tr>
<td>Kidney and Renal Pelvis</td>
<td>15.7</td>
</tr>
<tr>
<td>Thyroid</td>
<td>13.2</td>
</tr>
</tbody>
</table>
DOMAINS

- IMPAIRED PHYSICAL FUNCTION
- COGNITIVE IMPAIRMENT
- DEPRESSION
- MALNUTRITION


IMPAIRED PHYSICAL FUNCTION

- SKILLED THERAPY ASSESSMENTS AND INTERVENTIONS
- MEDICAL CONCERNS MAY INTERFERE WITH REHABILITATION
  - DIZZINESS, MEDICINE SIDE EFFECTS, UNCONTROLLED PAIN, BALANCE PROBLEMS
- RECOMMEND ADAPTIVE OR ASSISTIVE DEVICES
- REFERRALS TO NEUROLOGY, RHEUMATOLOGY AND ORTHOPEDICS

ASSESSMENT OF PHYSICAL FUNCTION

<table>
<thead>
<tr>
<th>PHYSICAL THERAPY</th>
<th>OCCUPATIONAL THERAPY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• STRENGTH, MOBILITY, BALANCE, AND SAFETY AWARENESS</td>
<td>• FUNCTIONAL ABILITIES, ACTIVITIES OF DAILY LIVING, ABILITY TO FEED SELF, ABILITIES AND LIMITATIONS OF THE UPPER BODY</td>
</tr>
<tr>
<td>• ASSISTIVE DEVICES SUCH AS WALKERS, CANES, WHEELCHAIRS AND SPLINTS</td>
<td>• CONTRACTURE MANAGEMENT AND PREVENTION, SPLINTS, WC POSITIONING SPECIALTY CHAIRS, ASSISTIVE DEVICES TO ASSIST WITH EATING</td>
</tr>
<tr>
<td>• THERAPEUTIC EXERCISES, PAIN MANAGEMENT, GAIT AND AMBULATION TRAINING</td>
<td></td>
</tr>
</tbody>
</table>
SPEECH THERAPY

- BEDSIDE SWALLOWING EVALUATION
  - VFSS VIDEOFLUOROSCOPIC SWALLOW STUDY
    - MODIFIED BARIUM SWALLOW
  - FEES FIBEROPTIC ENDOSCOPIC EVAL SWALLOW
- TREATMENT OF DYSPHAGIA
  - EXERCISES, RECOMMEND FOOD AND FLUID CONSISTENCIES
    - PUREED OR MECHANICAL SOFT DIET
    - THICKENED LIQUIDS
  - TREATMENT OF DYSPHAGIA
    - EXERCISES, RECOMMEND FOOD AND FLUID CONSISTENCIES
    - PUREED OR MECHANICAL SOFT DIET
    - THICKENED LIQUIDS

SIGNS OF DYSPHAGIA OR ASPIRATION

- COUGHING OR CHOKING ASSOCIATED WITH EATING
- EXCESSIVE SWALLOWING
- THROAT CLEARING, GARGLING SOUND
- WET VOICE
- SENSATION THAT SOMETHING IS STUCK IN THROAT
- FOOD OR LIQUID SPILLING FROM THE MOUTH
- SNEEZING
- FOOD POCKETING IN MOUTH
- RECURRENT PNEUMONIA
- CHEST OR LUNG CONGESTION
- DESATURATION WHILE EATING

DYSPHAGIA

- SPEECH THERAPY
  - PROVIDES TREATMENTS
  - DETERMINES FOOD CONSISTENCY
  - RESTORATIVE DINING
  - EVALUATES ASPIRATION RISK
- NEUROMUSCULAR ELECTRICAL STIMULATION
  - ELECTRODES PLACED ON THE NECK TO RETRAIN THE SWALLOWING MUSCLES
  - HELPS PATIENTS ACHIEVE A STRONGER SWALLOW
GASTRIC FEEDING TUBE
• COMMONLY SEEN IN NURSING HOMES
• MEDICATIONS, NUTRITION AND HYDRATION
• ROUTINELY USED FOR NEUROLOGIC ILLNESS
  • PARKINSON’S DISEASE, STROKE, ALS
• NOT RECOMMENDED FOR ADVANCED DEMENTIA
  • NO EVIDENCE THAT A FEEDING TUBE IMPROVES QUALITY OF LIFE OR SURVIVAL
• FEEDING TUBE COMPLICATIONS
  • ASPIRATION
  • INFECTION
  • TUBE DYSFUNCTION

COGNITIVE EVALUATION
• MMSE-MINI MENTAL STATUS EVALUATION
  • BASELINE MEASURE
  • TRACK PROGRESS OR DECLINE
• SCORING EXAM
  • 25-30 NORMAL
  • 21-24 POINTS MILD
  • 10-20 POINTS MODERATE
  • ≤ 9 POINTS SEVERE

CLOCK DRAWING TEST
• ASK THE PATIENT TO DRAW
  PICTURE OF A CLOCK AND SET THE HANDS TO A CERTAIN TIME
  • 1 POINT FOR ALL THE NUMBERS BEING IN THE CORRECT ORDER
  • 1 POINT FOR THE NUMBERS BEING CORRECT
  • 1 POINT FOR THE TWO HANDS OF THE CLOCK
  • 1 POINT FOR THE CORRECT TIME
  NORMAL SCORE= 4
Aprahamian I, et al. The accuracy of the Clock Drawing Test compared to that of standard screening tests for Alzheimer’s disease: results from a study of Brazilian elderly with heterogeneous educational backgrounds. Int Psychogeriatr. 2010 Feb;22(1):64-73
COGNITIVE IMPAIRMENT

• REVIEW RESULTS OF MMSE AND CLOCK DRAWING TEST
• EVALUATION FOR DEMENTIA THERAPY: CHOLINESTERASE INHIBITORS
• MEDICAL CONDITION OR MEDICATION SIDE EFFECTS
• CONSIDER REFERRAL TO NEUROLOGY, PSYCHIATRY, AND SOCIAL WORKER
• REVIEW ANY BEHAVIOR PROBLEMS

GERIATRIC DEPRESSION

• DEPRESSION/SUICIDE
• ASSESSMENT FOR DEPRESSION CRUCIAL FOR WEIGHT LOSS
• MAY AFFECT PHYSICAL FUNCTIONING
• MULTIPLE LOSSES
  • DEATH OF SPOUSE, PEERS OR CHILDREN
  • LOSS OF INDEPENDENCE
  • CHRONIC MEDICAL ILLNESS
  • FINANCIAL DEPENDENCY
• MAY FEAR THE STIGMA OF PSYCHIATRIC ILLNESS

SIGNS/SYMPTOMS GERIATRIC DEPRESSION

• CONFUSION
• FORGETFULNESS
• APATHY
• LACK OF INTEREST IN PERSONAL HYGIENE
• UNEXPLAINED PHYSICAL SYMPTOMS
• DISRUPTION IN SLEEP
• CHANGES IN APPETITE
• PSYCHOMOTOR CHANGES
• THOUGHTS OF DEATH
• SUICIDAL IDEATION
DEPRESSION

- ONGOING EVALUATION FOR S/S DEPRESSION AND SUICIDAL IDEATION
- EVALUATE EFFECTIVENESS OF ANTIDEPRESSANT THERAPY
- MONITOR FOR ADVERSE DRUG REACTIONS
- ADJUSTMENT OF PSYCHIATRIC MEDICATION
- CONSIDER REFERRALS TO SOCIAL WORKER, PSYCHIATRIST, AND PSYCHOLOGIST

INTERVENTIONS FOR WEIGHT LOSS

- DIETICIAN REFERRAL
  - PERFORM NUTRITIONAL ASSESSMENTS
  - RECOMMEND VITAMINS, LIQUID SUPPLEMENTS, PROTEIN
  - ADD NUTRITIOUS-HIGH CALORIE SNACKS
  - VITAMIN, MINERAL, AND PROTEIN REPLACEMENT
  - BASELINE AND ONGOING LABORATORY TESTS
- TREATMENT OF UNDERLYING MEDICAL CONDITIONS
  - GASTROESOPHAGEAL REFUX
  - ESOPHAGEAL STRICTURE
NUTRITIONAL THERAPY

- Discontinuation of restricted diets
- Therapeutic and restrictive diets do not promote adequate energy intake
- Food preferences
- Oral nutritional supplements
  - Liquid nutritional supplements, shakes, puddings, or magic cup between meals
  - Fortified foods
  - Goal to increase energy consumption
  - Involve families in feeding and meal time

ASSESSMENT OF MEDICATION REGIME

- Over the counter medications
- Medicine side effects
- Evaluate for unnecessary meds
  - Can any medicines be discontinued
  - Does risk outweigh benefit
  - Medication compliance
    - Discontinue meds not taken
- Does patient require crushed or liquid meds?

POLYPHARMACY

- Multiple medications may cause side effects, adverse reactions or interactions
- Aging changes
  - Absorption
  - Distribution
  - Metabolism
  - Excretion
- Elderly patients often take multiple medicines
- Nursing home quality indicator >9 medicines
MORE IS NOT ALWAYS BETTER!

- Concomitant use of multiple medications
- Hazards of polypharmacy
  - Lack of adherence
  - Overtreatment
  - Adverse drug reactions
  - Interactions
  - Incorrect dose and administration regimes.

TREATMENT PLAN- GFTT

- Holistic view of geriatric patient
- All domains
- Physical examination
- Diagnostics and laboratory tests

MULTIDISCIPLINARY TEAM

- Medical specialists
- Nursing staff
- Social workers
- Physical, speech, and occupational therapists
- Dietician
- Pharmacist

PHARMACOLOGIC THERAPY

- Causes for unintentional weight loss must be fully assessed and treated
- Evaluated on individual basis
- Medicines commonly used are not FDA approved
- Eldertonic is a B-complex vitamin elixir with zinc, manganese, and magnesium in an alcohol base
  - Dose: 15cc 2-3 times daily, 30 minutes before meal
  - Modest appetite improvement
MEGESTROL ACETATE (MEGACE)

• SYNTHETIC PROGESTIN AND ANTINEOPLASTIC AGENT PRODUCT
• ORIGINALLY USED FOR CANCER PATIENTS
• FOUND TO HAVE SIDE-EFFECT OF WEIGHT GAIN
  • USED IN CANCER AND AIDS TO STIMULATE APPETITE
  • USE IN GERIATRIC WEIGHT LOSS IS NOT FDA APPROVED
• POTENTIAL TO INCREASE HYPERCOAGULABILITY LEADING TO THROMBOEMBOLISM
  • DVT
  • PE
• RESEARCH STUDIES

UNDERWEIGHT COPD PATIENTS TREATED WITH MEGESTROL ACETATE

• SUBJECTS: 128 COPD PATIENTS, AVERAGE AGE 67
  • GOAL OF WEIGHT GAIN, STIMULATION OF VENTILATION, IMPROVEMENT OF RESPIRATORY MUSCLE STRENGTH
• TREATMENT GROUP RECEIVED 800MG MEGESTROL ACETATE DAILY
  • STATISTICALLY SIGNIFICANT WEIGHT GAIN IN THE TREATMENT GROUP
  • MEGESTROL ACETATE ASSOCIATED WITH VENTILATORY IMPROVEMENT


Mirtazapine (Remeron)

• ATYPICAL ANTIDEPRESSANT
• NORADRENERGIC AND SPECIFIC SEROTONERGIC EFFECTS
• GERIATRIC DOSE IS 7.5MG AT BEDTIME
  • MAY BE INCREASED 45MG
  • SIDE EFFECT: SEDATION
• HAS NOT SHOWN EFFICACY FOR WEIGHT GAIN IN NON-DEPRESSED PATIENTS
• MAY BE USEFUL IN SLEEP DISTURBANCE, ANXIETY

Dronabinol (Marinol)

• CLASS 2 DRUG
  • A DERIVATIVE OF MARIJUANA
  • FDA APPROVED TO TREAT WEIGHT LOSS IN AIDS PATIENTS
  • 2.5MG, 5MG AND 10MG
  • DRY CAPS CAN BE CRUSHED
  • MAY IMPROVE DISTURBED BEHAVIOR IN ALZHEIMER'S PATIENTS
• PRECAUTIONS IN USE IN LIVER DISORDERS OR SEIZURE DISORDERS
• SIGNIFICANT CNS SIDE EFFECTS
  • SOMNOLENCE, EMOTIONAL LABILENESS, AND EUPHORIA.
ANABOLIC STEROIDS

- In geriatrics, the side-effects may prohibit use.
- Adverse reactions may include hyperglycemia, aggression, agitation, psychosis, and osteoporosis.
- Other approaches for malnutrition:
  - Testosterone, growth hormone, and essential amino acids.
  - More clinical research is needed.

LET'S REVIEW

- Undesired weight loss is not a normal part of aging.
- In up to 35%, no physical cause is found.
- Palliative care/hospice referral may be indicated:
  - Undesired weight loss, BMI <22
  - Global decline in physical, psychological function
  - Decline that doesn’t respond to treatments

CONCLUSION

- More research is needed to determine effective pharmacologic treatments for undesired weight loss in the elderly.
- Safety, efficacy, dosages, risks.
- Correction of vitamin deficiencies.
- Treatment of underlying medical conditions.
- Multidisciplinary approach.
- Nursing facilities must develop programs to improve nutritional intake and prevent weight loss.
- Early detection and treatment.
Geriatric Failure To Thrive

? QUESTIONS & ANSWERS