The Role of Occupational Therapy with the Lower Extremity Amputee Patient

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Food for Thought

- https://www.youtube.com/watch?v=96kI8Mp1uOU
What are some causes of LE amputations?

- Trauma
- Diabetes
  - Ulcers
  - Wounds
- Peripheral Vascular Disease
  - Poor circulation
Where would an OT encounter a LE amputee?

- Acute
- Inpatient Rehabilitation
- Outpatient Rehabilitation
  - Although rare for OT
Exercises

- Which exercise or muscles are most important for a lower extremity amputee patient?
Essential exercises

- Bridging supine on mat
- Working on long sitting
  - Why is this important? For which ADL?
- Tricep exercises
- Stretching hip flexors of affected limb
  - Why is this important?
  - In prone
  - Supine at edge of mat
- Quad exercises
Patient Positioning

- Why is positioning important?
Patient positioning

- **Below knee**
  - Knee contracture most likely
    - Laying in prone
    - Leg supported in extension when in wheelchair

- **Above knee**
  - Hip flexion/abduction contracture most likely
    - Laying in prone
    - Minimize time in wheelchair
ADLs- LE dressing

- How would you teach a LE amputee to dress their lower body?
LE Dressing - Acute injury

- Safest option
  - Supine in bed
    - Bridging or rolling side to side

- Additional option
  - Hip hiking
  - Difficult
    - Especially for obese patients

- High level patients
  - Standing
ADLs-LE dressing – Post prosthesis

- Dress prosthesis first prior to donning it
- Sound limb is then dressed
- Don prosthesis
ADLs- Toileting – Pre Prosthesis

- Includes pull up/pull down/wipe
  - Safest option
    - Alternating hip hikes while seated on commode
  - Standing to pull up/down
    - Grab bars essential
- Most difficult task for most new amputee patients
Practice when there is no need to actually toilet.

Skills include removing appropriate clothing, re-donning socket if necessary and rearranging clothes as needed.

- Suction wearers may lose suction
Transfers

- What are some options for how an amputee patient can transfer?
Transfers

- Sliding board
- Stand pivot
- Squat pivot
- Single leg ambulation
Transfers

- Which transfers would you practice in an inpatient rehabilitation setting?
Transfers

- Car
  - Can an amputee patient drive pre-prosthesis?
- Toilet
  - Grab bars, commode (drop arm)
- Shower
  - Shower chair, grab bars, long handled sponge, non slip mats, removable shower head
- Floor
- Bed
Floor Transfers

- Best to practice prior to having a fall
  - Tricep bumping
    - Use intermediate step if needed
  - Lunge to wheelchair
Fall recovery

- Why is it so common for amputee patients to fall?
Fall Recovery

- Adjustment period
- Phantom sensation
- Decreased balance
- Impulsivity
- Need for independence
Desensitization

- Preparation for prosthesis
  - Rub
  - Tap
  - Use wands
  - Massaging
  - Wrapping
Why is desensitization important?

- Reduce pain
- Prepare for prosthesis
- Adjust to new body image
- Distraction from phantom pain
- Ace wrapping while in rehab
  - As tolerated
  - Before staple/stitch removal
Ace Wrapping

- Typically done by PT
- OT can do as well
- Figure 8 wrapping
Protection of Limb

Ampushield – Hanger uses

Helpful with patients likely to fall

Protects incision
Adjustment

- Multi-disciplinary approach
  - May recommend Psych consult
  - Support group
  - Peer support visitor
Community Outings

- Individualized or in a group
- Increase comfort with being in public
- Socialization
- Practice in “real life” setting
Home Evaluations

- Why would a home evaluation be recommended?
Home Evaluations

- Typically recommended for patients with a change in mobility status
  - Highly likely for our new amputee patients
- Most go from ambulation to primarily wheelchair mobility at discharge
Case Study - KF

- Quadruple amputee
  - Acute
  - Environmental control
    - Mouth stick – TV/phone
  - Transfers
  - Core strength
  - Temporary UE prosthesis
  - Adaptive equipment
    - Universal cuff attachment
    - Goosenecks – hold cup/phone
Case Study - Results

- Supine to sit
- Rolling side to side
- Able to shift weight with sliding board transfers
  - Mina- SPV bed to wheelchair with SB
- Able to eat with setup
  - Universal cuff attachment
- Able to brush teeth with setup
  - Use of prosthesis
Case study

- 69 year old male
- Right above knee amputation
  - Non weight bearing on this limb
- Severe peripheral arterial disease
  - Non healing right lower limb open wounds
- Hypertension, diabetes
  - How would this affect his wound healing?
How would this patient get up from the floor into a wheelchair if he fell?
Camp No Limits
Camp No Limits

- 9 locations
- Children with limb deficiencies
  - Congenital or traumatic
  - Upper or lower or multiple
- Adult mentors with amputations
- Volunteer as OT
Any Questions?