Early Traumatic Amputee Recovery

Nancy Payne, RN, MSN, CWCN, CFCN
Limb Loss Clinical Nurse Specialist
Advanced Clinical Practice
Duke University Health System
Duke University Health System

• Our Core Value: Caring for Our Patients, Their Loved Ones and Each Other.

  – Teamwork
  – Integrity
  – Diversity
  – Excellence
  – Safety
Amputation Statistics

• In the US, there are approximately 2 million people living with limb loss

• 185,000 amputations in US each year
  – Congenital Amputations: ~ <1%
  – Tumor: <2%
  – **Traumatic: ~ 45%**
    • Males > Females
  – Dysvascular causes such as peripheral vascular disease (PVD), Diabetes Mellitus (DM) or Chronic Venous Insufficiency (CVI): ~ 54%
    • Over half of these are diabetic
Reasons for Traumatic Amputations

- Machinery
- Power tool/appliance
- Motor cycle
- Lawnmower
- MVA
- Gunshot wounds

- Natural disasters, war, and terrorist attacks can also cause traumatic amputations.
Limb Salvage vs Amputation

- Age old trauma dilemma
- Obviously, in some cases there is no choice
- Considerations:
  - First & foremost.......patient survival & safety
  - Time: how long will salvage take, months? Years?
  - How many surgical procedures?
  - Patient’s lifestyle...getting on with one’s life
  - What limb is involved and what level of potential amputation?
Decision-making in Trauma

“a salvaged upper extremity often functions better than currently available prosthetic replacements, while a salvaged lower extremity is often worse than prosthesis unless it can tolerate full weight-bearing, is relatively pain-free, and has durable skin and soft tissue coverage that does not break down when walking is attempted”

–Dr. Douglas Smith, University of Washington
Correct surgery, excellent nursing care, immediate rehabilitation/training, and a well-fitting prosthesis are all equally important!

Rehabilitation should be both:
• Physical
• Psychological
This may be the first thing they remember after the injury......
Communication among the interdisciplinary healthcare team, the patient, and with the patient’s family is essential.

1. Perioperative
2. Amputation surgery/dressing
3. Acute post surgery
4. Pre-prosthetic
5. Prosthetic Prescription/Fabrication
6. Prosthetic Training
7. Community Integration
8. Vocational Rehabilitation
9. Follow-Up
Preoperative

- Medical and physical assessment
- Patient/family education
- Discussion of phantom limb pain
- Short and long term goals
- Rehabilitation care should begin prior to the amputation when possible
  - Include PT/OT, Limb Loss Nurse, Peer visitor
Post Traumatic Stress Disorder (PTSD)

• Post-traumatic stress disorder (PTSD) is a mental health condition that's triggered by a terrifying event. Symptoms may include flashbacks, nightmares and severe anxiety, as well as uncontrollable thoughts about the event.

• Resolves with time- Many people who go through traumatic events have difficulty adjusting and coping for a while. But with time and taking care of yourself, such traumatic reactions usually get better.

• Unresolved- In some cases, the symptoms can get worse or last for months or even years. Sometimes they may completely shake up your life. In a case such as this, you may have post-traumatic stress disorder.

• Need professional help- Know your resources and refer
  – Currently Dr. K Applegate, Ph.D., Pain Management/Behavioral Health
  – 919-613-0444

Amputation Surgery/Dressing

- Edema Control
- Wound healing
- Elevation for several days, proper location of pillow, not under the joint
- Surgical management – retain the knee when possible
  - Requires less energy to walk
  - Prosthetic fitting easier to manage
Compression and protection
Wound Healing

• I. **Primary**: heals without open areas, infection, or wound complications.
• II. **Secondary**: small open areas that can be managed, and ultimately heal with dressing strategies and wound care.
• III. **Requires minor surgical revision**: skin and subcutaneous tissue (no muscle, no bone).
• IV. **Requires major surgical revision** involving muscle or bone: but heals at initial amputation "level."
• V. **Requires revision to a higher amputation level**: for example, a transtubial amputation that must be revised to either a knee disarticulation or a transfemoral amputation.

Amputation - traumatic | University of Maryland Medical Center
http://umm.edu/health/medical/ency/articles/amputation-traumatic#ixzz2eLHiQE3G
Acute Post-Surgical

- Pain control
- Peer visitor
- Joint ROM and strength of both lower and upper extremity
- Wound healing
- Phantom limb pain/sensation management
- Functional mobility training
- Equipment needs - walker/crutches/wheelchair
  - If Acute Rehab, they will order equipment
Discharge planning

• Starts on admission
• Surgeon- decisions for best level, saving most function, healthiest tissue
• Nursing- positioning, pain management
• Discharge planning
  – Acute Rehab- inpatient, 3 hours of 2 therapies daily (PT/OT)
  – SNF- not as many hours of therapies, skilled care
  – Home- ? Entrance- may need ramp, first floor bedroom
Peer visit

- “I remember thinking that living life with one leg was worse than not living life at all. I really, honestly did... [Then] a young boy with an artificial leg came into my hospital room for a visit. I don't remember what he said. I don't remember what he looked like. I was so transfixed on his prosthesis as he walked into my room. That's all I needed to give me the personal strength to go on...” Ted Kennedy, JR
Learning from others, sharing experiences and gaining valuable insight from others dealing with similar challenges are among the many goals and benefits this Support Group offers. We encourage both current and former patients, family members and caregivers to participate in this important educational group.

http://www.triangleamputeesupport.org/
Facebook: https://www.facebook.com/TriangleAmputeeGroup

For more information, please contact:
Nancy Payne, RN, CWON-C / nancy.payne@duke.edu / 919.688.0135
Stella Sieber / ssieber@niehs.nih.gov / 919.541.2179

Triangle Amputee Group (TAG) is a proud partner of the Amputee Coalition Support Group Network

http://www.amputee-coalition.org
Summary- Limb Loss CNS Role

- Service to any patient/family who may need amputation or has had an amputation
- Consult service via pager or Epic Limb Loss Consult
- Monday – Friday
- Outpatient, Inpatient
- Services reached- Trauma, Ortho Oncology, Vascular, Plastics, Endocrine, Medicine
- Support group- 2nd Tuesday, 6-7:30 at Stedman Center, Center for Living Complex
- Educate residents, PA, NP, nurses- amputations and Diabetic foot care
- Amputee Performance Clinic- Team approach
- Gap- better rounding, comprehensive, inclusive team input
Will Duke be Ready?

• Jeff Bauman, BAKA, "A Marathon Comeback" July 7, 2013

• http://www.nytimes.com/video/2013/07/07/sports/100000002316583/a-marathon-comeback.html (internet access only)