FISTULAS
Having the guts to care for them

Outcomes

1. State four aspects of fistula assessment
2. Name three goals of fistula site care
3. Discuss how to assemble a multidisciplinary team to care for a patient with a fistula
The Path of Least Resistance

- Abnormal connection between two locations
- Named by direction of flow

Classifications

- **Organ Involvement**
  - Simple: short, direct tract
  - Complex: abscess with multiple organs
  - II: opens into base of wound

- **Output amount**
  - High: >500mL/24hrs
  - Medium: 200-500
  - Low: <200

- **Organ of origin**
  - I: Abdomen/esop/gastro
  - II: Small bowel
  - III: Large bowel
  - IV: EAF

Morbidity & Mortality

- Sepsis
- Malnutrition
- +/- Fluid & Lyte

- **Predictive Factors**
  - Infection
  - High Output

- **Mortality**
  - 77%

- **Predictive Factors**
  - Albumin >3.5mg/dL
  - 0%

Knowledge and Compassion Focused on You
CAUSES

Iatrogenic 75-85%  
- Technical error; injury of bowel  
- “bad bowel”  
  - Vascular  
  - Tension  
- Breakdown of anastomosis

SPONTANEOUS  
- IBD, malignancy, perf divertic; appendicitis, ischemia

FRIENDS?

Foreign Body  
Radiation Rx  
IBD/Ischemia  
Epithelialization  
Neoplasms  
Distal Obstruction  
Sepsis

BE CAREFUL

BAD FRIEND
Disaster Management

- Stabilize the patient
- Nutrition
- Assess anatomical mapping
- Plan the treatment
**STABILIZE**
Sepsis Management

- Catabolic state
  - decreases nutrition and immune response significantly decreasing closure rates
- Limits surgical/radiologic closure techniques
- Identify source
  - d/c antibiotics ASAP

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**NUTRITION**

Closure rates are twice as high in patients receiving adequate supplemental nutrition

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**Anatomical Mapping**

- CT
  - Early evaluation, pathology
  - May not detect small
  - For known: can determine cause
- MRI
- Ultrasound
  - (fluid collections but not diagnosis)
Plan the Treatment

- Medicine
- Surgery
- Radiology
- Nursing

Medical Management

- Vigilant nutritional, fluid&lyte balance
- PPIs/H2Channel Blockers
- Antacids
  - sucralfate
- Somatostatin (consider renal clearance)
  - Decreases output, increases rate spontaneous closure
  - Does NOT decrease mortality
- Anti-diarrheals

Effluent Management

High Output
- NPWT, 350-600mmHg
  - 46% spontaneous closure
  - 98% controlled output
    - 45% had no output within 7 days
    - 57% decreased to less than 500mL
    - 41% no improvement in amount but effluent was managed
Spontaneous Closure

- 30% without any invasive intervention
- 60-70% within 4-7 weeks (non-surgical, conservative tx)
- Esophageal
- Long, narrow

Gastric
High-flow
St, duodenum/jejun
Maturation/granulation
Short, wide

Treatments

- Fibrin seal
- Fistula Plug
  - External opening in open wound or externally exposed bowel
- Infliximab
- Electrical stimulation
- HBO

Surgery

- No sooner than 6-8 weeks
- Purulence or fecal contamination
  - Delay
  - No anastomosis
- ONLY hope for closure
  - distal obstruction; foreign body in tract; epithelialized lined tract; previous irradiation; Crohn’s; large abscesses
the RIGHT surgery at the RIGHT time

• Entire bowel must be mobilized (decreases reoccurrence from 34-18%)
• 6-8 hr minimum
• Diversion increases success

- Image of surgical site showing incision and drains.

- Additional images of surgical tools and hands performing surgery.

- Photograph of recovery site with medical bandages and dressings.

- Medical equipment and attire visible in the background.
INTERVENTIONAL RADIOLOGY
Once you find it, drain it

- Initial stabilization
- Diagnosis
  - Fluoroscopy guided tubing: fistulography
- Treatment
  - Once you find it, drain it
  - Repeated evals; decreasing catheter size
  - Go through healthy skin

Presentation

- Fever
- Localized erythema
- Induration
- Progressive, local discomfort
- Lyte imbalance
- AMS
Nursing Considerations
Goals of Care

• Protect the skin
• Contain the drainage
• Qualify & quantify
• Control the odor
• Involve Patient and Family in care
• Ease of Care-prepare for discharge
• Costs Containment
• Educate Patient and Family

Fistula Assessment

• Location- Internal or External; Proximity to tubes, stomas, incisions
• Size/Description- Length, width, depth
  - “mature”, within wound, not visible
• Condition of surrounding skin- Intact, macerated, denuded, bleeding, weeping
• Description of the surrounding tissue- firm/induration, soft, folds and creases, wound!

Effluent Assessment

• Volume: (high >500ml/day or low output)
• Effluent: bile, fecal, urine, purulent
• Consistency and Content: liquid, semi-formed, undigested food, medication tablets
Car accident

- New fistula after minor car accident
- Asked the question: Why would you develop?
  - Congenital defect requiring multiple surgeries - had no fascia
  - NEVER stop at poucing - this helps to stabilize, but need to get root of problem
- These patients need to be in hospitals that have teams capable of caring for all their

REFERENCES