Evidenced Based Practice Habits

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Also Known As

Sacred Cows of Nursing Practice

Objectives

- Analyze nursing practices that are based on habits instead of evidence
- Identify strategies for changing nursing practice regarding assessment and interventions that are based on evidence & best practice recommendations
- Describe planned changes in practice based on evidenced based recommendations
Disclosures
- LW/WKS article on nursing habits
- Planning committee for nursing 2014

Trendelenberg
- Historically developed to expose pelvic organs during surgery
- Widespread adoption as means to treat hypotension – WWI
  - Walter Canon reversed his position 10 years later but the practice continued
- So What is the PROBLEM with Trendelenberg position?

The Receptors
- Baroreceptors
- Sensitive to stretch
  - Detect changes:
    - Aortic arch
    - Carotid sinus
The Receptors

Baroreceptors
- Hypotension – Aorta and Carotid sinus detect too little stretch
- Stimulate SNS – Release of epi and norepi for vasoconstriction
- Nursing intervention – Trendelenberg

The Receptors

- Problems with Trendelenburg
- Baroreceptors are confused
- Trendelenburg Useful for Central Line Placement & Some Spinal Anesthesia Techniques
- Also used for central line removal
- Trendelenburg for Hypotension?
  - Question if Should Use at All
  - AJCC September 2005 Vol. 14 #5, 364-368

Verifying Feeding Tube Placement - Insertion

- Historically
- Air bolus
- pH testing
- May assist
  - Capnography monitoring
- Current recommendation
  - Radiographic confirmation
  - Mark the tube where it exits the nare or mouth for orally placed tubes
Verifying Feeding Tube Placement – After Feedings Started

- Daily
  - Assess patient
  - Review X-Ray if available
  - Confirm indelible mark at exit of nare or mouth hasn’t moved
  - Check Length of external portion of tube at regular intervals
  - Assess for sudden change in Gastric Residual Volume
  - Large amount: Could indicate tube migration from small intestine to stomach
  - Drop: Could indicate tube migration into esophagus

My patient must have bowel sounds before I can initiate feedings

RIGHT?

GI Function

- Role of Enteral Nutrition
  - Supports the functional integrity of the gut
  - Maintain tight junctions between intraepithelial cells
  - Stimulates blood flow
  - Maintains Villous height
  - Supports the immune function
Bowel Sounds Before Feeding?
- ICU & Post-operative GI dysfunction
- Mucosal Barrier Disruption
- Altered Motility
- Atrophy of the Mucosa & reduced mass of Gut Associated Lymphoid Tissue
- Bowel Sounds
  - Only indicative of contractility
  - Do NOT relate to mucosal integrity, barrier function or absorptive capacity

My patient must have bowel sounds before I can initiate feedings
WRONG!!!!

Early Enteral Nutrition
- Within First 24 – 48 hours of admission
  - Associated with less gut permeability
  - Diminished activation & release of inflammatory cytokines (TNF) and reduced systemic endotoxemia
  - Caution – Withhold EN if not fully resuscitated or stable
    - MAP < 60 mmHg
    - High Dose Vasopressor use
      - escalating with deteriorating VS
    - With or without large volume or blood product resuscitation
Gastric Residual Volume

How MUCH is TOO MUCH?

Monitoring Tolerance to Feedings

- Gastric Residual Volume - GRV
  - Does not correlate well
    - to incidence of pneumonia
    - measures of gastric emptying
    - incidence of regurgitation & aspiration
  - Aren't those the reasons we assess and hold the feedings?

- GRV of 200 – 500 ml should raise concern
  - Consider measures to reduce risk of aspiration
  - Automatic stoppage of the feedings not necessary

- GRV LESS than 500 ml in the Absence of signs of intolerance
  - Continue to feed
  - Monitor for intolerance
  - Reduce the risk of aspiration
Reduce Risk of Aspiration

- Head of Bed 30 – 45 degrees
- Continuous infusion for high risk patient intolerant to gastric feeding
- Promote motility
  - Prokinetic drugs (metoclopramide or erythromycin)
  - Narcotic antagonists (naloxone)
- Divert feeding to post-pyloric
- Use chlorhexadine mouthwash twice daily

Holding the Enteral Feeding

- When do you typically turn off feedings?

- What percent of calories does a patient who is enterally fed usually receive?

Volume Based Feedings

- Nurse Driven Protocol
  - 24 Hour volume to be delivered defined
  - Nurse determines goal infusion rate based on volume to be delivered
  - If stoppage of feeding occurs Nurse determines rate to restart to ensure total volume delivered
  - Specific orders for handling gastric residual volumes, frequency of flushes & conditions where feedings may be stopped or adjusted
  - Improves the overall amount of calories provided!
Managing Fecal Incontinence
What is the best intervention?

Risks of Fecal Incontinence

Management of Fecal Incontinence
- Liquid Stool
- Bowel management system
Saline for Endotracheal Suctioning

- What is the thought process for instilling saline prior to suctioning?

In a laboratory study of endotracheal tubes that had recently been removed from patients in the intensive care unit, the amount of bacteria evacuated from the end of endotracheal tubes was 5 times greater when a bolus of normal saline was administered through the endotracheal tube before the suction catheter was introduced than when a suction catheter alone was passed through the endotracheal tube.

Saline for ET suction

No Study has shown benefit
No Credible, Scientific information supports its use

Just SAY NO
Renal Dose Dopamine

- Historically Thought
  - Improves renal blood flow so it must improve renal function
  - Increases urine output

Evidence

- Does not improve renal function
- Considered harmful to the renal system
- DO NOT USE renal dose dopamine to improve renal function!!

N-Acetylcystenine

To Prevent Contrast Induced Acute Kidney Injury
N-Acetylcysteine
- Oxygen Free Radical Scavenger
- Thought to prevent contrast induced kidney injury
- Given prior to contrast procedure such as cardiac catheterization or angiogram
- No evidence to support its use

Managing Agitation
Benzodiazepine's...RIGHT?

What is Delirium?
- Cognitive impairment associated with inattention
- Assessment Tools
Benzo's and Agitation

- Shown to be associated with the development of delirium
- Especially lorazepam
- May worsen agitation instead of reducing it
- Shown to have longer length of stay and ventilator days

Preventing Delirium

- Early Mobility
- Day Night Routines
- Encourage sleep
- Correct metabolic abnormalities
- Avoid benzodiazepines
- Use analgesia first for agitation/pain
- Assess for it!

Telemetry Lead Placement

Does it matter where the leads are placed?
Does it matter what lead I monitor?
The limb Leads

Left shoulder

Right shoulder

Precordial Leads

V1 – 4th ICS Right Sternal Border
  Anterior Septal
V2 – 4th ICS Left Sternal Border
  Anterior Septal
V3 – 4th to 5th ICS In between V2 and V4
  Anterior
Precordial Leads
- V4 – 5th ICS Mid Clavicular Line
- Anterior Lateral
- V5 – 5th ICS Anterior Axillary Line
- Lateral
- V6 – 5th ICS Mid Axillary Line
- Lateral

The Chest Leads

Lead Placement
- Purpose of monitoring determines which leads to monitor!
- Detection of dysrhythmia and conduction disturbances
- Monitoring the ST Segment
- Monitoring the QT interval
Lead Placement

- 3 lead vs 5 lead systems
- 3 lead not as accurate for determining aberrancy from ectopy
- If a 3 lead system use Modified Chest Lead 1 or Modified Chest Lead 6
- Setting up MCL 1 or MCL 6

MCL 1 & MCL 6

- MCL 1
  - right arm electrode on left shoulder,
  - Left arm electrode at V1 position,
  - Left leg electrode at V6 position.
  - After repositioning the leads, for MCL 1, select lead I,
- MCL 6
  - right arm electrode on left shoulder,
  - Left arm electrode at V1 position,
  - Left leg electrode at V6 position.
  - After repositioning the leads, for MCL 1, select lead II,

Lead Placement

- Dysrhythmia Monitoring and Differentiation
- Ectopy vs. Abberancy
- 3 Lead – MCL 1
- 5 lead – V1 or V6
- Atrial Fibrillation and Flutter
- II, III or aVF
Lead Placement

- ST – Segment Monitoring – Early Identification
  - Right Coronary Artery
  - III or aVF
  - Left Anterior Descending or Circumflex
  - V3
  - Activity induced Ischemia – Location unknown
  - V5
  - BEST Lead combinations
    - III and V3 or III, V3 and V5
  - Or Select leads based on previous ischemic event

Lead Placement

- Q-T Interval Monitoring – Prevent Torsades!
  - Identify which lead has most defined T wave – preferably on the 12 lead
  - V3, V4, or II
  - Axis Deviation
    - I and aVF
  - New onset or advancing bundle branch block

Lead Placement

- Best Combinations
  - One Lead = V1 or V6 or MCL1 or MCL 6

  - Two Leads
    - Dysrhythmia = V1 & III
    - ST Segment = V3 & III
    - Dysrhythmia and ST segment = V1 or V6
      - Plus aVF or III
References


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