

# The Blocked Feeding Tube

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**Mrs Johnson's NJ is blocked**



# Practical Exercise

- 1 blocked tube
- Box of tricks
- Available in the front
  - Crusher
- 15 minutes



# Tube blockage – How often?

- **23 – 35%**
- **Increased cost and trauma associated with replacement**
- **Delayed administration of nutrition and medication**

# Tube blockage – Why?

- **Interruption of feeds**
  - Stasis = clotting
- **Feed properties**
  - Coagulation of intact protein pH<5
  - High fiber = ↑viscosity = ↓flow rate
- **Aspiration of GRV**
  - Mixing of gastric juice with enteral formula

# Tube blockage – Why?

- **Medication administration**
  - Account for 15% of cases
  - Inadequate crushing
  - Acidic medications (pH<4) + formula = clots
  - Medication interactions and incompatibilities
- **Not flushing regularly**
- **Small lumen tube**

# Tube blockage - Prevention

- **Water vs Cranberry Juice**
  - 30 patients randomized to water or Cranberry flushes
    - Water – no occlusions
    - Cranberry juice – 73.3% of tubes occluded
- **Water vs Coke vs Cranberry Juice**
  - Efficacy of water similar to Coke
  - Cranberry juice inferior to both
- **Use of acidic beverages = controversial**
  - Denaturation of protein = clotting



# Tube blockage - Prevention

- **Regular flushing**
  - Bolus feeds
    - 30ml water after every feed administration
  - Continuous feeds
    - Flush every 4 hours
    - Flush after gastric residual measurement
- **Decrease blockage rates to 15%**

# Tube blockage - Prevention

- **Prophylactic pancreas enzyme flushes**
  - Pancreatic enzyme flushes vs water
    - 4% vs 16% tube occlusions
    - Time to occlusion significantly longer in pancreatic enzyme arm

# Tube blockage - Prevention

- **Medication**

- Never mix medication with tube feed
- Flush tube before and after medication administration
- Flush tube between medications with 5ml of water
- Crush medication to fine powder + disperse in 5ml of water

# Tube blockage – what to do?

- **Warm water and gentle pressure**
  - Push and pull plunger back and forth
- **10 000 IU Creon, crushed and dissolved, with 324mg sodium bicarbonate (or  $\frac{1}{8}$  t baking soda) in 5ml water**
  - Instill in tube
  - Wait 30 – 60 minutes
  - Smaller syringe = bigger pressure
  - Patency restored in 48.2% of cases

# Stiletto vs Elephant



$$(60\text{kg}/2) / 0.0001\text{m}^2 \\ = 3,000,000 \text{ n/m}^2$$



$$(3,000\text{kg}/4) / 0.1\text{m}^2 \\ = 125,000 \text{ n/m}^2$$

